Presidential Address

New York—a bellwether for thoracic surgery

James R. Malm, M.D.,* New York, N. Y.

New York is blessed and cursed by the presence of two entities and images both bearing the same name. One refers to the great collection of skyscrapers, harbors, money, power, and culture called New York City, and the other is the all-encompassing region of 49,000 square miles known as New York State. Each supports and requires the other for balance, survival, and sanity. Those who see New York as ribbons of cement will benefit from a trip to upper New York State and the Adirondack Forest Preserve, with over 2½ million acres of land, protected as forever wild, by provisions of article 14 of the state constitution since 1895. It is an enchanting world of mountains, natural forest, wildlife, lakes and streams, a natural model for over 100 years of preservation and safeguard of our natural heritage. Our story begins in this part of the world, so enchanting in the summer, so challenging in the winter.

Edward Trudeau, born in New York in 1848, was a natural athlete with a passion for the outdoors. As a young man, he spent many happy months in the Adirondack Mountains near Saranac Lake, New York, hunting, hiking, and fishing. In 1865 his older brother, Francis, became gravely ill with tuberculosis, and Edward devoted himself full-time to his care until Francis’ death. A decision to study medicine followed shortly thereafter, and he enrolled in the College of Physicians and Surgeons at Columbia University in 1868. Soon after graduation and marriage, he developed a rectal abscess and cervical adenitis, both of which were later to be identified as tuberculosis in origin, a direct consequence of his long contact with his brother. Within a year, he was running daily fevers, lost weight, and had extensive tuberculosis in his left lung. It was apparent to all that he had a fatal disease. Previous hunting and fishing trips in the Adirondack Mountains had instilled in him a deep love for the wild, and he wished to spend his last days there. With a longing for rest and peace in the great wilderness, he returned to the Saranac Lake area, where he was cared for by former mountain guides. Under Paul Smith’s guidance and his wife’s cooking, Trudeau began to gain weight, his fever receded, and he even enjoyed hunting and fishing from a canoe. After a dramatic improvement, he returned to New York briefly, with prompt recurrence of his symptoms.

It was, therefore, decided to send him and his family to establish permanent residence in Saranac, and as his health improved he started a horse and buggy practice. An increasing number of tuberculosis patients came to the Adirondacks, many seeking Dr. Trudeau’s consultation and the benefits of the region on the disease. Stimulated by these patients’ needs, he read everything he could find on tuberculosis including Koch’s epoch-making paper on the etiology of tuberculosis in 1882.
Motivated by a desire to grow the bacillus in the guinea pig as a first step to finding something to kill or modify it, he established a laboratory in his home (Fig. 1) with the assistance of a New York City bacteriologist, Dr. Michael Prudden. "One of my greatest problems", he said, "was keeping my guinea pigs alive in the winter because they would freeze to death in our cottages no matter what type of heat I could provide."

As more patients came to the area, Dr. Trudeau recognized the need for a place to provide proper care and to establish a sanitarium. Two patients were accepted in February, 1885, to the Little Red Cottage, which still stands restored at the Trudeau Institute, a reminder of the atmosphere of hope and confidence to all who came for "cure." The program of rest, fresh air, and good nutrition not only served the patient but also, by removing the sick from the usual surroundings, resulted in isolation from family and thus prevented spread of infection. Thus the first private tuberculosis sanitarium in America became a model and a stimulus for the vast sanitarium treatment programs in the United States, very much as the sanitariums in Europe developed 20 years before, as so vividly portrayed in Thomas Mann's *The Magic Mountain.* The rich, poor, and famous entered the program at Saranac Lake. Dr. John Alexander wrote a classic text, *The Surgery of Pulmonary Tuberculosis*, published in 1925 while a patient at Trudeau. He was encased in a body spica for Pott's
disease of the spine and wrote on a specially constructed overhead writing board to facilitate his work. The Trudeau Sanitarium held up to 1,300 inpatients during the peak of the period and a total of 300 clinics were established in New York State alone. It was this large backlog of patients who needed surgical management of their tuberculosis, with the introduction of pneumothorax, phrenic crush, and thoracoplasty, that rapidly caught the imagination and challenge of a group of New York surgeons who made major contributions to the treatment of tuberculosis and thoracic surgery.

Dr. James Alexander Miller graduated from the College of Physicians and Surgeons in 1889 to pursue the practice of medicine (Fig. 2). He devoted his summers to practice in the Saranac Lake area in the Adirondacks, where his friendship with Dr. Trudeau generated a lifelong interest in tuberculosis after his cure there. He was appointed on the General Medical Service at Bellevue Hospital in New York City in 1903, but he became interested in tuberculosis and patients' needs with the stimulus, encouragement, and guidance of Dr. Trudeau.

At that time, the Tuberculosis Service at Bellevue was known as an outlying service that included alcoholic, prison, erysipelas, and the medical psychopathic wards. One house officer, one intern, and two elderly nurses on duty covered a service of 400 beds. There were standing orders for cough mixture and one quarter grain of morphine for cases of hemorrhage. A regular half ounce of whiskey three times a day for every patient was available so that patients signing out were uncommon and survivals were rare. Dr. Miller spent his life in the movement to provide adequate patient care, education of the public, and guidelines for efforts to improve the management of tuberculosis. He early enlisted the aid of a surgeon, Dr. Adrian V. S. Lambert, who was appointed to Bellevue surgical staff in November, 1903 (Fig. 3).

Dr. Lambert graduated from the College of Physicians and Surgeons and decided on a career in surgery, despite the loss of his right eye as a result of an infection during his internship. He became a leader in the use of collapse therapy for the treatment of tuberculosis, stressing the importance of removal of the first rib for effective chest collapse and particularly in the treatment of tuberculosis empyema. Five years after his first
After the successful donation of blood, both vessels were tied, the baby promptly stopped bleeding, and the father's hand healed without incident. Not only was this the first transfusion in New York, but it was the first time that melena neonatorum had been cured. This procedure was performed 4 years before Landsteiner identified the four blood types and 25 years before the cure for the disease, vitamin K, was identified.

Dr. Lambert was shy of public recognition and attention, but at that time a wave of antivivisection had arisen to the Albany legislature. Dr. Lambert brought his 1-year-old child to Albany and told the tale of how her life had been saved by Carrel's experimental work. This dramatically ended any serious legislative efforts in New York to rule out vivisection at that time. Dr. Carrel subsequently was awarded the Nobel Prize in medicine in 1912 for his many contributions in experimental surgery, the first such award to come to America.

Among the group of New York surgeons interested in thoracic surgery was Dr. Willy Meyer (Fig. 5). He was born in Germany and trained with Trendelenburg, and he was prominently mentioned in Professor Borst's honored guest's address at last year's meeting of this Association. In June, 1913, at the American Medical Association meeting in Minneapolis, Minnesota, Dr. Meyer delivered the fifth and last paper in the surgical section, entitled "Extrathoracic and Intrathoracic Esophageplasty in Connection With Resection of the Thoracic Portion of the Esophagus for Carcinoma." There was no discussion of this important paper. Dr. Meyer found it difficult to accept such a total lack of response toward thoracic surgery. Besides, type A surgeons are the same around the world; they like to be heard, praised, and discussed. He made the decision that a society must be instituted at which these important problems in thoracic surgery could be freely and thoroughly discussed. He envisioned a society for thoracic surgery rather than thoracic surgeons to include internists, anesthesiologists, physiologists, and radiologists.

Four years later, Dr. Meyer invited a group of his friends with the specific aim of forming a New York Society for Thoracic Surgery. A second and equally important task was inviting a large group selected from across the United States and Canada, consisting of those who had demonstrated sufficient interest in thoracic surgery, to collaborate in founding a society of national scope. After due discussion and consideration, the New York Society for Thoracic Surgery was adopted, and Dr. Willy Meyer was elected its first president. This society, of course, is alive and well today, meeting three times a year. Dr. Meyer's first suggestion after its founding was the formation of The American Associa-
New York—bellwether for thoracic surgery

The American Association for Thoracic Surgery

PROGRAMME of the Meeting of 1918

The Association Meets in the English Room of the Congress Hotel, Chicago, Ill., on Monday, June 10th, 1918

Officers.

President
DR. SAMUEL J. MELTZER

Vice-President
DR. WILLY MEYER

Secretary and Treasurer
DR. NATHAN W. GREEN
152 West 16th Street, New York City

Committee.

DR. EDWARD R. BALDWIN, Summer Lake, N.Y.
DR. RUDOLPH MATAS, New Orleans, La.
DR. SAMUEL ROBINSON, Stowe, Vermont, Col.
DR. CHARLES L. SCHLOEDER, Boston, Mass.

General Meeting at 9:30 A. M., in the English Room.

Morning Session, 10:00 a. m.

1. President's Address.
   By DR. SAMUEL J. MELTZER, New York.

2. Short Business Meeting.

   By DR. WILLY MEYER, New York.

4. Afternoon Session, 2:00 p.m.

5. Development of Experience in the Cardiac Disease Working in the War (Deseatization Hospital).
   By Dr. HUBERT CLAIRWATER, New York.

6. Remarks Concerning the Employment of the C India Solution in Cases of Empyema.
   By DR. CHARLES L. SCHLOEDER, Boston.

7. What Shall Be Done with the Upper Chronic Empyema of the Chest Cavity: With Present Use of the C India Solution (For Case Illustrating Paper).
   By DR. E. V. F. W. BECK, Chicago.

8. Topic for Discussion—"The Operative Treatment of Chronic Empyema" (Subject of Question).
   By DR. NATHAN W. GREEN.
   On MALCOLM GARTON, DR. WILLY MEYER, and DR. EUGENE H. O'DONOHUE.

9. Presentation of Photographs, Reports, and Cases.
   By DR. E. V. F. W. BECK.

10. The Non-Sliding Operations of Thorax.
    By DR. E. V. F. W. BECK.

11. Case Reports.

Fig. 6. The program of the first meeting of The American Association for Thoracic Surgery, June, 1918.

ideas and interests in thoracic surgery, a motion was made that The American Association for Thoracic Surgery be formed. The motion was seconded and carried, and the first president of the Association was Dr. Samuel J. Meltzer, Jr. He was an internist and physiologist, who was a strong proponent of the positive-pressure intratracheal form of respiratory support during thoracic surgery. The charter members included Dr. James Alexander Miller, who had done so much for the organization for the treatment of tuberculosis at Belle-
The first meeting was held in Chicago in 1918. The first item on the agenda was a presidential address, followed by a short business meeting (Fig. 6). A review of the evolution of thoracic surgery in the past 14 years was then given by Dr. Willy Meyer. Dr. Meyer said at the outset of his address that Dr. Halsted of Baltimore and Dr. Henry Janeway of New York had each been asked to assume that task, but unfortunately their heavy workload would not permit them to accept presenting the review. He said that the Council had then charged him with giving the review. With all his other work to be fulfilled, he stated, he had found it simply impossible to prepare notes, and he asked his audience to be satisfied with his extemporaneous efforts. He subsequently gave a talk that covers 14 typewritten pages and was a brilliant review and a presidential address in itself. In regard to cardiac surgery, he did say that surgery of the heart, aorta, and pulmonary artery is still part of the music of the future. He did, however, acknowledge Rehn's first bold attack on the heart with the first successful closure of a stab wound, Trendelenburg's work with pulmonary embolus, and Carrel's and Jeger's experimental work in the treatment of some forms of valvular heart disease. He said it may not be utopian to imagine that the surgeon's knife may in the future in some way or another reach the places of trouble and bring help in cases of stenosis of the bicuspid or tricuspid valve. He concluded by saying that the outlook for thoracic surgery is wonderful. Anyone who started working in intrathoracic surgery would never give it up, and he predicted a constantly increasing number of men who will enter upon this fascinating work. The rest of the Association's progress is history. It now has 900 members with 2,500 registrants at this annual meeting. We have stayed somewhat from our original mandate, namely, electing members from other disciplines interested in thoracic surgery, but the Association's meetings continue to be of the highest scientific quality and the discussions remain spirited if not provocative. I am sure that Dr. Willy Meyer never presented a paper again that did not receive due attention and appropriate discussion.

World War I drained New York of many surgical and medical talents, but Dr. James Alexander Miller continued his fight to educate the public and officials on the true nature of tuberculosis, namely, that it was a social, economic, public health, and medical problem. It was not until 1926, however, that authorities saw fit to form a specific service for the care of tuberculosis patients at Bellevue. A surgical facility was made available for the treatment of tuberculosis, and Dr. Adrian Lambert performed an eleven rib thoracoplasty that signaled the birth of thoracic surgery at Bellevue Hospital. In 1933, Harry Hopkins, a former tuberculosis

Fig. 7. Dr. Dickinson W. Richards (left) with Dr. Courmand (right) and their protégé, Dr. Alfred Fishman, with whom I (J.R.M.) spent a research period.
patient and close advisor of President Roosevelt, arranged for Dr. Miller to visit President Roosevelt and explain the needs for tuberculosis care. The president responded by arranging for the use of federal funds for erection of a new tuberculosis pavilion at Bellevue Hospital, which was opened in 1938, and Dr. Adrian Lambert initiated the first thoracic surgical training program in New York. Dr. Herbert Maier was the first thoracic surgical resident on the service, and both men became president of The American Association for Thoracic Surgery. The service was staffed by attendings from all three services covering Bellevue, Columbia, Cornell, and New York University.

In 1930, Dr. Miller had established a Medical Residency on Chest Tuberculosis Service at Bellevue Hospital on the Columbia Division, appointing a young French scientist, Dr. Andre Courand, to begin training. Before that appointment, Courand was sent to the Tuberculosis Service at the Trudeau Sanatorium for a 4 month period. A few years later, Dr. Courand was to present his first scientific paper at a national meeting at the Trudeau Sanatorium. In 1932, Dr. Miller asked Courand, then chief resident of the chest service, to develop a pulmonary function laboratory at Bellevue Hospital. Dr. Miller and Dr. Adrian Lambert encouraged Dr. Lambert’s nephew, Dr. Dickinson W. Richards, to take Dr. Courand under his expert tutelage, a relationship that would expand over a 41 year period (Fig. 7). A research plan was developed to treat the heart-lung and circulation as a single system for gas exchange. Methods for measuring pulmonary function and calculating pulmonary blood flow were established to qualitatively and quantitatively normal and abnormal pulmonary physiology. They worked closely with thoracic surgeons and Dr. Frank Berry, a surgeon at Bellevue, and reported their first studies on patients undergoing thoracoplasty at the Trudeau Institute in 1938. Dr. Courand often said that the importance of his results were quickly appreciated by surgeons, including Dr. Evarts Graham, who was a frequent correspondent.

A simple method to obtain mixed venous blood gas was necessary to continue the physiologic studies. Stimulated by Forssmann’s self experiment with right-sided heart catheterization, they began by placing catheters in the right atrium in human cadavers, dogs, and chimpanzees, and in 1940 in humans. For cardiac and thoracic surgery, their work with cardiac catheterization and the publication in 1949 of Dr. Courand’s textbook, “Cardiac Catheterization in Congenital Heart Disease” co-authored with Dr. Janet Baldwin, a pediatrician, and...
Army's push to the Rhine. Dr. Berry recorded his autobiography on an oral tape history recorded by The Columbia University Library. He mentioned his meetings and his admiration for Dr. Pete Churchill, consultant to the European theater, as well as military surgeons, our historian and past president, Dr. Lyman Brewer and Paul Samson. Dr. Berry remained in Germany with the Allied occupation forces for a year after the war in the section of Health, Education, and Welfare to help rebuild the German Health System and to reinstate medical schools and hospitals. Professor Sauerbruch, then 70 years old and still professor at The University of Berlin, invited Drs. Berry and Churchill for dinner. He stated that the war had isolated Germany from the mainstream of thoracic surgery and that surgical removal of part of a lung or a whole lung was unheard of. He was charged with aiding the Nazi cause as advisor to the Wehrmacht and receiving a medal for an operation on former President Von Hindenburg. Dr. Berry saw the charges were ridiculous and was instrumental in clearing the old, unhappy Prussian who had helped so many of our founding members.

Dr. Berry then returned to Bellevue in 1946 as both chief of the First Division General Surgery and director of the Chest-Surgical Service. In 1952, he was invited by President Eisenhower to be assistant secretary of defense for Health and Medical Affairs. Many of us remember Dr. Berry for devising the “Berry Plan,” which provided mechanisms for residents to complete their training and still meet their military obligations during the Korean War.

Dr. Robert Wylie (Fig. 9) assumed the directorship in 1954, and it was under his direction that the service became one of the most sought after thoracic training programs in the country. The attending surgeons included Dr. Adrian Lambert, Dr. Herbert C. Maier, and the colorful Dr. J. Maxwell Chamberlain. With the advent of closed heart surgery, the residency was expanded to include a rotation on the Chest-Surgical Service at the Columbia-Presbyterian Medical Center under the leadership of Dr. George H. Humphreys, chairman of the Department of Surgery and pioneer in cardiac surgery in New York (Fig. 10). This program provided the unique opportunity for senior resident responsibility, and 26 residents completed this thoracic training program before Columbia's affiliation with Bellevue ended in 1967. My classmate from the College of Physicians and surgeons, Dr. Albert Starr, was among these residents and served as president of the Society of Thoracic Surgeons this year.

The introduction of open heart surgery in 1953 had a profound impact on our specialty in New York. OV...
recorded his led by The J his meet- till, consul- us military Dr. Lyman mained in for a year- ーション, and し a Professor at The Churchill l Germany and that e lung was Nazi cause medal for nberg. Dr. was instru- 1n who had

46 as both d director invited by of defense rememb h provided sin and e Korean

otorship in e service c training includ- r, and the adven- dined to ice at the lead- an of the c surgery ided the xility, and program ended in tians and residents Thoracic

night at least 30 cardiac teams had been organized to perform open heart surgery. The common denominator in the group was an enthusiasm in a new branch of thoracic surgery, the ability to purchase a heart-lung machine, and strong pressure by the hospital board of trustees to enter this prestigious field.

The patient population was almost exclusively those with congenital heart disease. The Bureau for Handicapped Children of New York City had established a precedent of paying for the hospital care for patients with congenital heart disease utilizing closed heart techniques. It was therefore logical that they would assume the costs for those undergoing open heart surgery. It quickly became evident that there was a wide variation in the quality and number of cases being performed in the programs throughout the New York metropolitan area, and the then commissioner of health of the city of New York, Dr. Leonia Baumgartner, requested consultation from the medical profession to establish standards for the care of rheumatic fever and for closed and open heart surgery. She felt very strongly that the recommendations should come from professional deliberations rather than bureaucratic dictums.

Dr. George H. Humphreys, director of the Surgical Service at Columbia Presbyterian Medical Center, was appointed chairman of a 14 member committee and served in this post until his retirement in 1969. The committee was strictly advisory to the city and subsequently to the New York State Commission of Health through The Bureau of Hospital Services and New York State Department of Health. Multidisciplinary teams were formed that periodically reviewed hospital programs including an on-site visit. In New York City in 1961, the first annual report questionnaire was devised to obtain information about the activities of cardiac diagnostic and surgical centers. This formed a unique 25 year view of the cardiovascular surgical case load trend. The experience from 1961 to 1977 was previously reported by Dr. Sylvia Griffiths, who contributed material to this portion of my dissertation.

Cardiovascular surgical case load in New York City from 1961 through 1985 is shown in Fig. 11. These data are now collected from 14 hospitals performing surgery for acquired heart disease and, of these, eight are approved for pediatric cardiac surgery. The dramatic rise in the number of coronary artery bypass operations being performed after 1970 is well known. It reached its peak in New York City in 1983, at which time nearly 4,870 operations were performed. For the first time, in 1984, there was a drop in the number of cases to 3,976,

Fig. 11. Cardiovascular surgical caseloads in New York City from 1961 to 1985.
Table I. Current factors influencing volume of open heart operations for congenital heart disease in 16 hospitals in New York State (1980-1985)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total caseload</th>
<th>Reoperations</th>
<th>No. from abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>827</td>
<td>33</td>
<td>?</td>
</tr>
<tr>
<td>1981</td>
<td>919</td>
<td>36</td>
<td>?</td>
</tr>
<tr>
<td>1982</td>
<td>1,070</td>
<td>66</td>
<td>130</td>
</tr>
<tr>
<td>1983</td>
<td>1,075</td>
<td>63</td>
<td>162</td>
</tr>
<tr>
<td>1984</td>
<td>1,087</td>
<td>59</td>
<td>170</td>
</tr>
<tr>
<td>1985</td>
<td>1,170</td>
<td>80</td>
<td>179</td>
</tr>
</tbody>
</table>

Table II. Age distribution of patients undergoing open heart operations for congenital heart disease at 16 hospitals in New York State in 1985

<table>
<thead>
<tr>
<th>Age</th>
<th>No.</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 yr</td>
<td>243</td>
<td>22</td>
</tr>
<tr>
<td>1-21 yr</td>
<td>741</td>
<td>67</td>
</tr>
<tr>
<td>&gt;21 yr</td>
<td>1,105</td>
<td>11</td>
</tr>
</tbody>
</table>

almost similar to the 1985 figures of 3,998. Approximately 1,000 percutaneous transluminal coronary angioplasties were performed in New York City in 1984, and this figure has risen to 1,700 in 1985. This first decline in coronary artery bypass procedures noted in the past 15 years may be related to the extended use of percutaneous transluminal coronary angioplasty or to a regional redistribution of cases, as successful open heart programs have developed in surrounding states. The number of isolated valve cases has remained about the same: since 1970, approximately 1,000 valve cases annually. Six hundred multiple procedures or complex operations for acquired disease have been performed and are not reported on the graph.

The case load of operations for congenital heart disease is characterized by the lower two lines. The closed triangle line indicates open heart procedures for congenital heart disease and the open triangle line, closed procedures. It is in general a straight line over time since 1973. The birth rate in New York City fell to 106,000 in 1979 and was 113,300 in 1984.

The tables summarize the experience with operations for congenital heart disease, open and closed, as reported from 16 hospitals within New York State from 1980 to 1985, when specific questions were inserted in the annual report. There is a small incremental increase in the total case load (Table I), which can be explained in part by an increase in the number of reoperations performed and more especially the number of patients who are arriving from abroad. The age distribution has not been unchanged for the past 3 years, namely, 22% of the patients are under 1 year of age (Table II). This figure is similar to that for 1977, which is surprising, as one would have expected an increasing number of infants to be undergoing correction. The most frequent defects are atrial and ventricular communications and tetralogy of Fallot, making up nearly half of the operative experience (Table III). Finally, the three most frequent closed heart procedures are ductus ligation, coarctation repair, and, interestingly, the Blalock-Taussig shunt, which is still widely used, particularly its polytetrafluoroethylene modification, for complex cyanotic congenital heart disease (Table IV). The annual case load distribution among 16 hospitals is shown, with five hospitals doing between 25 and 49 cases (Table V) and only two doing more than 100 cases per year. Fifty cases is the minimum case load suggested by The New York State Department of Health for approval to perform operations for congenital heart disease if the program is also approved for acquired heart disease. There was no correlation between case load and operative mortality, which may be more a function of a case load selection and referral than quality of care. These data would suggest that, despite careful state regulation, there are a large number of hospitals performing a relatively small number of operations for congenital heart disease. The implications here for optimal patient care and particularly for training pediatric cardiac surgeons in the future are of great concern. A number of these programs are attached to university hospitals or are regionally isolat-
Table III. The three most frequent diagnoses among patients undergoing open heart operations for congenital heart disease in 16 hospitals in New York State in 1985 (total, 1,170 cases)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>No.</th>
<th>% mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrial septal defect (second degree)</td>
<td>226</td>
<td>0.9</td>
</tr>
<tr>
<td>Ventricular septal defect</td>
<td>138</td>
<td>2.9</td>
</tr>
<tr>
<td>Tetralogy of Fallot</td>
<td>134</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Table IV. The three most frequent diagnoses among patients undergoing closed heart operations for congenital heart disease in 16 hospitals in New York State in 1985 (total, 640 cases)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patent ductus arteriosus</td>
<td>233</td>
</tr>
<tr>
<td>Blalock-Taussig shunt*</td>
<td>131</td>
</tr>
<tr>
<td>Coarctation of aorta</td>
<td>113</td>
</tr>
</tbody>
</table>

*Including polytetrafluoroethylene.

Table V. Annual caseloads (1985)—open heart operations for congenital heart disease in New York State

<table>
<thead>
<tr>
<th>No. of cases</th>
<th>No. of hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 to 49</td>
<td>5</td>
</tr>
<tr>
<td>50 to 74</td>
<td>5</td>
</tr>
<tr>
<td>75 to 99</td>
<td>4</td>
</tr>
<tr>
<td>100+</td>
<td>2</td>
</tr>
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</table>

*The continuing need for all in this field to maintain intellectual integrity and to prepare for changes in our specialty and our medical system. We must avoid the undisciplined introduction of subjective elements into our perception of patient care and avoid allowing desires and aversions to penetrate our irresolute goal for the best care of our patients within the system. In addition, we must maintain a sense of belonging to a large medical-surgical scientific community, thus sharing our interests, observations, and discoveries freely. A close working relationship must be maintained with medical and basic science disciplines. With a half-life of biologic knowledge at the amazing rate of 4½ to 5 years, it is critical to maintain the high level of continuing education by attending and participating in local and national meetings.

If I were asked what I thought of the future of thoracic and cardiac surgery, I would say it is unlimited and filled with opportunities for young, energetic, and imaginative surgeons. I am constantly amazed at the quality of abstracts submitted by members and potential members of this organization to our annual meeting and by the quality of applications for membership. The training background, interest, and productivity of these men is truly outstanding.

There is a surgical instrument called the Berry-Lambert peristeal elevator on the Columbia Chest Service (Fig. 12). Although still in use today, this particular old instrument is the symbol of leadership and
is engraved with the names from Berry to Wylie to Malm. There is ample space for new names, and for it is in here that opportunities arise from the leaders of tomorrow. The pioneers of cardiac surgery are now passing the responsibility for progress and direction to new leadership. With this knowledge, it will be to capable hands, well prepared for the challenges ahead.

Now what does this have to do with my title, "New York—A Bellwether for Thoracic Surgery"? For those intellectually curious, a bellwether refers to a ram that has a bell around its neck, which was used by shepherders to hold the herd together and provide direction. I would say if you are interested in trends in thoracic and cardiac surgery, past and present and in the future, and if my rambling account has had any message, you would do well to keep an eye on New York!

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