

## THE NECESSITY AND BEST METHODS OF REGULATING THE PRACTICE OF MEDICINE.

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*Gentlemen:* In reviewing the question of medical education in the United States the student of history will readily conclude that the facilities afforded pupils of medicine have been painfully inadequate, and that the minimum of requirements in a vast majority of colleges have been well below that standard which affords the public a profession possessing a degree of skill and ability commensurate with the safety of its people. It has been the policy of the authorities controlling these institutions of learning to maintain a standard below recognized safety. In addition to the very low curriculum, the resources of most colleges have been inadequate, and the clinical instruction most deficient. It is but recently that a majority of the colleges in this country have attempted a system of regular laboratory instruction. A study of the causes leading to this dilemma are many; among the most frequent may be mentioned the following: First, the history of pretended medical education in this country covers a period of little more than a century. The people possessing those elements of hurry and restlessness observed in all new communities.

Secondly, it has not been the policy of this government to liberally support university or higher education; a form of education reaching a high degree of perfection in the British Isles and Continental Europe, and embracing in its scope all special lines of advanced instruction, such as law and medicine.

Thirdly, the people being governed by a republican form of government, the policy has naturally been liberal in respect to freedom of action and choice of avocation; not infrequently this policy has been at a sacrifice of the best interests of a credulous public. In a monarchical form of government it is very much easier to restrict or control the action of its people.

Fourthly, in consequence of the late Civil War covering a period of four years, a half million young men found themselves penniless, with limited education and without avocation or a profession. Many thousand had secured a superficial knowledge of the art of medicine and surgery, from their war experience, and naturally, as a result, a horde of brave but uncultured men turned their attention to the profession of medicine. In consequence, the number of medical colleges in the United States doubled in a short space of time, and the list of matriculates increased at a much greater ratio. Notwithstanding the wonderful increase in population and resources of this country, in a period of a few years the proportion of physicians increased far beyond the legitimate demands of the public.

Fifthly, there has been a noticeable absence of that concert of action so necessary between the different schools of instruction to secure uniformity of system in education, or uniformity in the attempts at the elevation of the standard of medical instruction. There has been no restriction to the unlimited multiplication of the number of medical colleges.

There has been no attempt to dictate the character of instruction by legislative control. There has been but little attempt to regulate the character of instruction even by the faculties themselves. In consequence thereof, the profession and public in the last few years have been casting about for a means or remedy to avert a disaster that seemed to imperil the very existence of the noblest of the learned professions. It became apparent to the observing and thinking that the profession of medicine was being degraded in its personnel, and but little respected by the people themselves. A condition was fast approaching whereby we were placed in quite as ridiculous a position as is described by Moliere in the fourteenth century. It required but a casual study of the situation at this time, to conclude that but one of two methods were available for the correction of the present evil. The first was, that the power to raise the standard of medical education in the United States was vested wholly in the various faculties of medical instruction and by concerted and business-like action they could readily comply with the most reasonable demands of the profession and the public, and in doing so, not materially injure their own interests in bringing about the much needed reform.

Secondly, that in failure thereof, the only alternative was in a resort to some restrictive legislation compelling the various colleges to raise their standard of instruction, both as applying to their preliminary entrance examination and curriculum of professional study. A sincere attempt was made by representatives of a few colleges in a period of time from 1876 to 1882, and there resulted from this effort the lamentable history of the American Medical College Association. The disruption of this Association was brought about by the treachery of a few representatives of colleges whose policy was governed entirely from a commercial basis. The disruption of this Association at the time was considered a great professional calamity, and the friends of higher medical education soon cast about for some method of bringing order out of chaos.

It was determined that the best means of controlling this evil was through efficient medical legislation. As a result members of the profession scattered throughout different portions of the country attempted to secure legislative enactments creating State boards of medical examiners. In a majority of these instances the attempts were met with defeat at the hands of the different legislatures, and a majority of the bills that had become laws were painfully defective, as could only be expected in any new form of legislation. The first act that was recognized as being efficient, and at all restrictive, was that of the States of Illinois and West Virginia. Immediately following we have substantially the same act in force in the States of Missouri, Iowa, Minnesota and Dakota.

This form of legislation permitted men to become legal practitioners by submitting a diploma issued by a regularly chartered medical institution. The act further provided that diplomas may be refused or revoked for unprofessional or dishonorable conduct.

The profession soon recognized and were convinced that the so-called Illinois act, if properly enforced would exercise a wholesome and restraining influence upon medical colleges and rid the public of the infamous practices of the itinerant charlatan. Those

of us whose painful duty it was to enforce the above named medical law, know too well, the Herculean task we had undertaken. The barriers seemed insurmountable, and our only solace was the realization that our cause was just.

It was my province to act as Secretary of the Minnesota board for a period of five years, or during the life of the first practice act. This act was substantially a copy of the act now in force in Illinois and several other States.

My experience and observation soon convinced me that we had upon our list of recognized colleges a large number of schools whose alumni were not safe practitioners. Any attempt to discipline these institutions was met in a most belligerent spirit, or by an influence well suited to the ward politician or political black-mailer.

I became firmly convinced that the principle of recognizing the diploma of colleges was not the correct one. I soon agitated the propriety of the amendment or entire repeal of the Minnesota act, or the securing of a new act calling for a personal examination of each and every person wishing to practice medicine in the commonwealth. The propriety of determining the fitness of men to practice medicine by means of a personal examination was recognized and acknowledged to be the proper method by the State Board of Minnesota. At a conference of Boards of Medical Examiners held in Chicago, in 1885, I urged the propriety of concerted action in an attempt to secure uniformity of legislation by an act in the several States, calling for an examination of each candidate for a license and providing, as in the Illinois act, the privilege of refusing or revoking licenses for unprofessional or dishonorable conduct. The consensus of opinion at this conference plainly indicated that it would be a step in advance, if we possessed legislation granting the privilege of examining all students wishing to commence the practice of medicine. The majority of those present, however, were of the opinion that the opposition would be so pronounced as to ensure defeat. The members of the Minnesota Board, however, concluded to ask the legislature for further legislation, and I was instructed to draft a bill for submission at the forthcoming session. The bill was the same as the one now in force in Minnesota and several other States. It became operative with us July 1, 1887. It established a minimum of time to be spent at medical lectures before a person would be permitted to apply for an examination to determine his fitness to practice medicine. It further provided for an examination of all persons wishing to commence the practice of medicine in any of its branches in the State. It likewise granted the privilege to refuse or revoke licenses for unprofessional or dishonorable conduct.

It was the first draft of a bill to become law which called for a minimum of time to be spent at lectures before commencing the practice of medicine. This feature of the bill has proven eminently satisfactory in Minnesota, and has been copied in the statutes of several other States. Its effect has been most salutary upon several of the medical colleges of this country, and as a result thereof, nearly every institution of this country whose term of lectures were less than six months have extended the duration of the same to comply with the statutory requirements of these States. At the present time, parties wishing to commence the practice of medicine in the following

named States are required to prove their fitness therefor by undergoing an examination: Minnesota, North Dakota, Montana, Washington, North Carolina, Alabama, Florida, Virginia, New Jersey, New York, Nebraska, Maryland and Utah.

Nearly all of this legislation has been accomplished in a period of the last five years, and the present indications are that in the near future a majority of the States of the Union will secure quite adequate legislation. The agitation of this reform has met with quite bitter opposition from some sources; the principal opposition, however, coming from the authorities of the various medical colleges. This opposition has been most futile, as the situation of the profession in this country was readily recognized by the legislators, and because of the further fact that no rational argument could be rendered against the constitutionality or propriety of some form of restrictive legislation.

The necessity of restricting the practice of medicine has been recognized by all nations of civilized people from time immemorial. Every European country possesses most stringent practice acts and have for centuries. The so-called police power has likewise been recognized for centuries.

Traces of forensic and state medicine are as old as institutions of civil society. The Jews recognized mortal wounds. The Egyptians provided that no woman pregnant with child should suffer afflictive punishment. The Romans even from the period of Numa grounded many of their laws upon the authority of physicians. The Caroline Code, under Charles V., was established in 1532. The first traces of the exercise of police power as applied to the practice of medicine is found in Italy, in 1237. Here a license to practice was granted by the University of Salino after a study of philosophy for a period of three years and of medicine for a period of five years. This license was only obtainable after undergoing a satisfactory examination. Shortly after this date licenses were likewise granted in England.

The first degrees in medicine were presumably granted in 1384. The first efficient law regulating the practice of medicine in England was enacted in 1511. The progress of medicine during the seventeenth century has been ably described by Macauley in Volume 1, Page 310 of his history.

"Medicine," he says, "which in France was still in abject bondage and afforded for Moliere an inexhaustible subject of just ridicule, had in England become an experimental and progressive science, and every day made some new advance in defiance of Hippocrates and Galen. The attention of speculative men had for the first time been directed to the subject of sanitary police." An investigation reveals the fact that efficient regulation of medical practice and higher medical education progressed, hand in hand, from the period of time mentioned by Macauley down to the present time. The courts have universally affirmed the legality or constitutionality of the various laws regulating the practice of medicine in the different countries of Europe. In this country, the United States Supreme Court has recently rendered a decision affirming the constitutionality and general features of medical practice acts. A large number of the Supreme Courts of the different States have likewise affirmed the constitutionality of the different medical practice acts. In a few instances, in the lower courts, where decisions have emasculated the

power of State Boards of Medical Examiners, it has been due to the faulty wording of the act itself, rather than to any unconstitutional features that may be found in this form of legislation.

In a paper read by me at the session of the American Medical Association, held in 1888, I advocated a greater uniformity of medical legislation by the various States. This discussion led to the appointment of a committee, with instructions to formulate the general features of a practice act that would be suitable for adoption in any of the different States of the Union. As chairman of that committee, I submitted the draft of a bill at the next session of the Association possessing the essential features of the act now in force in the State of Minnesota. The report of the committee was unanimously accepted and adopted, together with resolutions urging upon the profession of different States the propriety of at once attempting the establishment of efficient medical practice acts in the different States of the Union. I am gratified to observe that in nearly all instances where medical practice acts have recently been obtained, the essential features of the Minnesota act have been adopted.

The question of medical legislation should be considered from two standpoints, to-wit: That of the regulation of medical practice, and the regulation of medical education. In the performance of the first function Boards should consider that it is simply their duty to protect the public from the imposition of charlatans, and the grave errors certain to arise from the practices of uneducated men. The duties of the State Licensing Board end here. If the act is so worded as to likewise regulate medical education in the commonwealth, it is eminently proper that a minimum of requirements should be established, and the Boards authorized to exercise a general supervision pertaining to the character of instruction in all colleges whose alumni become applicants for the privilege of practicing in the State. I sincerely question the propriety of one Board performing both of these duties. Basing my opinion upon extensive observation and experience, I believe that the best interests of the public will be subserved by assigning the duties of the State Licensing power to the various State Boards of Health. The Medical Licensing power is purely a police power, and were these duties assigned to Boards of Health, it would assure greater prestige and influence in the community. I believe the regulation of all forms of education should be vested in a central power consisting of a single Board to be known as a State Bureau of Education with power to regulate all educational institutions granting degrees, together with the power of granting charters, and revoking the same; particularly should this apply to all institutions wishing to afford the community any of the various forms of higher or special education. Under existing circumstances, in a vast majority of the States of this country, three or more persons can form a corporation, and become incorporated by application to the Secretary of State and grant degrees *ad libitum*. Of the personnel of these Boards it is immaterial providing the parties be reputable and intelligent practitioners of medicine. It is my opinion that the mixed Boards, such as exists in Minnesota, Illinois, Iowa, Montana, Missouri, North Dakota and several other States of the Union, render better service to the public than in the few instances where separate Boards have been

created in compliance with the demands of the several schools of practice. In the States possessing mixed Boards who conscientiously perform the duties of a public servant, I have yet to hear of any clashing or jealousy among the members thereof. I believe the best interests of the people will be subserved by the maintenance of a clause in each of these acts providing for the refusal or revocation of a license to practice when guilty of unprofessional or dishonorable conduct. I question the propriety, however, of Boards exercising this power except in most flagrant cases.

If John Smith is disposed to occupy the first page of a newspaper in calling the attention of the public to the fact that he confines his attention entirely to diseases of the genito-urinary organs, I believe this indiscretion alone should not cost him the right to practice medicine, upon the contrary, should he claim in the public press that he can cure what is recognized by the profession as an incurable disease, such as consumption or cancer, it is the duty of the Board to step in between the credulous public and the dishonorable practitioner and deprive the impostor of his professional rights. It is, likewise, the duty of the Board to refuse or revoke a license for persistent and chronic inebriety, criminal abortion and repeated gross immoralities.

As honorable and intelligent physicians, we recognize the great sin of advertising in any manner. In view, however, of the outspoken sentiment in favor of any restriction in this direction, I presume it is better to allow the fool his course, at least until he reaches that point in his career that his practices imperil the safety of the public.

I am pleased to submit some statistics of the work accomplished by several State Boards of Medical Examiners. My statistics are from States where the law requires a personal examination of the applicant's fitness to practice. These examinations include all the essential branches of the field of medicine. They afford a most convincing argument in behalf of efficient medical legislation.

I trust I may not be considered presumptuous if I assert that in the administration of their delicate and untried trusts, it has been the policy of these Boards to be somewhat lenient, and to license many whom they knew possessed very inadequate instruction. A part of their duties have been to educate both the profession and the public to the propriety of this form of legislation. Notwithstanding this policy we are informed that 24.8 per cent. of all applicants for a license to practice have been rejected as unsafe practitioners.

My statistics are based upon returns from the following named States, to-wit: Alabama, North Dakota, North Carolina, Virginia and Minnesota. Table number one indicates the number of different persons, examined, passed, rejected, percentages, etc. Total number examined 1950; total number classified, 1746; total number unclassified, 204. The unclassified represents foreign and extinct colleges and undergraduates. Total percentage licensed .752 per cent. (Table No. 1 not published owing to space required.)

The following data are compiled from the records of the different Boards of Examiners. The comparison indicates the result of the examinations of graduates of the graded three course institutions and those that previous to 1890 conferred degrees after attendance upon two courses of instruction. The above

TABLE II.

The following table indicates the result of the examination of 183 students, graduates of colleges requiring three courses of instruction before receiving the degree of M.D.:

State.	Univ. Penn.		Univ. Mich.		Univ. Minn.		Harvard.		Chicago Med.		Col. Phys. and Surg. New York.	
	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.
Alabama . . . . .	10	0	2	0	53	3	3	0	15	0	6	0
Minnesota . . . . .	18	0	37	0	53	3	3	0	15	0	8	0
North Carolina . . . . .	3	0	1	0	53	3	3	0	15	0	4	0
North Dakota . . . . .	4	0	2	0	53	3	3	0	15	0	6	1
Virginia . . . . .	4	0	2	0	53	3	3	0	15	0	6	1
Totals . . . . .	35	0	42	0	53	3	10	0	15	0	24	1

Total number of different persons examined . . . . . 183

" " " " " passed . . . . . 179

" " " " " rejected . . . . . 4

Total percentage of persons passed, 97.2 per cent.

TABLE III.

The following table indicates the result of the examination of 435 students, graduates of colleges formerly issuing degrees upon attendance of two courses of lectures:

State.	Univ. N. Y.		Jefferson.		Rush.		Belle-vue.		Phys. and Surg. Baltimore.		Univ. Louisville.	
	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	Rejected.
Alabama . . . . .	13	0	15	3	3	1	12	0	12	1	14	4
Minnesota . . . . .	2	1	3	2	12	9	4	3	69	25	3	4
North Carolina . . . . .	34	0	39	2	2	3	17	3	69	25	3	4
North Dakota . . . . .	1	1	0	0	0	0	0	0	42	15	2	3
Virginia . . . . .	14	6	20	8	0	0	11	0	42	15	2	3
Totals . . . . .	63	8	80	15	15	10	44	6	123	41	19	11

Total number of different persons examined . . . . . 435

" " " " " passed . . . . . 343

" " " " " rejected . . . . . 92

Percentage passed, 78.8 per cent.

Difference in favor of Table II, .191 per cent.

colleges were selected, being those indicated by the report of the Illinois Board of Health as matriculating respectively the greatest number of students in the year 1890.

The above tables indicate that graduates of the three course graded colleges rarely fail before the various State Boards of Medical Examiners. Table No. 2 indicates 183 examinations with four failures; table No. 3, 435 examinations with 91 failures. The practice of medicine is fairly well regulated at the present time in about one-half of the States. The present indications are that the wave of reform will extend, and in the near future include all the States. The friends of medical legislation include the masses of the profession and the representatives of the better colleges of the country. Its enemies principally include the representatives of those colleges governed by commercial interests and charlatans.

Up to the present time the number of medical colleges has increased out of all proportion to the increase of population. Of 130 schools, less than a dozen are endowed. The number of practitioners is greatly in excess of the legitimate demands of the people. We are reliably informed that in a period of time ending with the decade of 1890, the colleges of the United States matriculated 115,355 students, and graduated 40,996. This is an average of 4,000 yearly; in my opinion more than twice as many as the requirements of the people demand.

As a final argument in behalf of adequate medical legislation, I beg to submit the following statistics,

based upon the proportion of physicians to the number of inhabitants in a few of the European countries:

## RATIO OF PHYSICIANS TO POPULATION.

Sweden . . . . .	1 to 7,000	of population.
Italy . . . . .	1 to 3,500	" "
Germany . . . . .	1 to 3,000	" "
Austro-Hungary . . . . .	1 to 2,400	" "
France . . . . .	1 to 2,000	" "
United States . . . . .	1 to 600	" "

The above figures explain themselves and comment seems unnecessary.

Basing my opinion upon observation of the workings of the Minnesota law in its last five years' experience, I am fully satisfied that efficient legislation will reduce the number of physicians to a number commensurate with the needs of the people, and the people themselves be better and more honestly served. Minnesota has a less number of physicians per capita than any State of the Union; St. Paul a less number than any of the larger cities of the United States. The result in this State is wholly due to efficient legislation, and the product of the act has been to enhance the welfare of both the profession and public.

Briefly, gentlemen, my conclusions upon the question of medical legislation can be summarized as follows, to wit: First, The regulation of medical practice and medical education is constitutional, and the demands therefore imperative. Secondly, That a distinct line of demarkation should exist between the so-called licensing power, and the regulation of medical education. Thirdly, That the licensing power should include in every State the following essentials:

a. That the evidence of the candidate's fitness to practice medicine should be established by his undergoing an examination upon all the important branches of medicine.

b. That there is absolutely no necessity for a series of questions that in the least conflict with the views of the various schools of practice.

c. That power should be granted to revoke or refuse license for unprofessional or dishonorable conduct.

d. That the exercise of this power upon the part of the different Boards should only be resorted to in palpably flagrant cases.

e. That the public interests will be best subserved by the so-called mixed Boards.

f. That the power vested is best executed by the State Sanitary Police, or rather, the different State Boards of Health.

g. The duties of the act belonging to that department of law known as the State Police Power, therefore the appointing power should be vested in the Governor.

h. Appointees should be men of recognized ability and standing in the various communities.

4. I am satisfied that the influences of efficient medical legislation will have a most salutary effect upon the character of the instruction afforded the students of medicine in this country, and that the faculties of the various colleges, in the future, will not be so notoriously lax in regard to the conferring of degrees.

5. It is likewise essential that medical education should be restricted or regulated in the various States, and that, in my opinion, there should be created a central authority consisting of a Bureau of Education, that this Bureau should have power to refuse or

revoke charters, and should exercise a restrictive influence as to the character of education conferred, and that the authority should apply particularly to special schools of education, such as law and medicine.

6. That said Board should establish regulations pertaining to the granting of charters to medical colleges. The charters should not be granted unless all necessary laboratories were thoroughly equipped, that facilities for clinical instruction were unquestioned, and that applicants for charters should satisfy the Board of their undoubted ability to support the institution financially, without being dependent upon the fees of its students for its sustenance.

In a recent report of the Commissioner of Education of the United States, he forcibly directs the attention of the public to the very inadequate equipment of the medical colleges of this country. We are informed in this report that there are two million, six hundred and seventy-two thousand dollars invested in grounds, buildings and apparatus for the medical schools of the United States. The amount of productive funds for these schools is only two hundred sixty-six thousand, one hundred and ninety dollars, and the annual income from investments, only twenty-two thousand. He states "when we examine the facilities and demands of this country with those of the British Isles and Continental Europe, we necessarily conclude that the foreign schools exact too much, or that our system is painfully crude and lax." The Commissioner of Education further remarks, "that considering the enormous amount of knowledge that has been accumulated respecting the proper treatment of disease, its prevention, and its nature, the impression becomes irresistible that we have been influenced by our national impatience and haste in this matter, as well as in many others, and that we have allowed the student to dictate the length of time of study instead of obliging him to spend enough time to receive it properly and retain it securely. Applied to the profession of medicine there is but one inference to draw from the above data, we can only conclude that the facilities for securing a thorough medical education in this country are indeed inadequate. The present high character of the masses of the profession in the United States is not so much due to the facilities of college training, as to the individual character of the profession. The vast majority of the profession of this country, now in practice, received their degrees of M.D. after an attendance upon but two courses of medical instruction, of not more than twenty weeks duration each; many look back upon their medical college career as unimportant epochs, and think of those days as a work of confusion. The instruction afforded under this system of medical education was hurried, superficial and most inadequate to our wants. The course consisting rather in calling the attention of the student to the art of medicine, than to the teaching him of the sound principles upon which is governed the great field of active practice. This system of instruction was a delusion. Our experience confirms us in the opinion, that if the student does not become grounded in the essential principles of medicine in his college days, he never will. Except in a few rare instances a physician does not acquire histology, anatomy, physiology and chemistry, after receiving his degree of M.D. The few that have become proficient in later professional life have been placed at a very great disadvantage.

We are pleased to observe at this time a disposition to foster and support a higher system of education among the masses. The present disposition in the various States of the Union is towards a complete divorcement of the public school system from church or other influences, and affording to the public a system of education fully equal in quality, and as extensive in scope as can be obtained in any civilized country. This disposition is particularly noticeable in several of our Western States. We see here millions of dollars spent annually in the support of university education, and the facilities for instruction in several of these institutions are quite unsurpassed. We already have our University of Michigan, with its 2,800 students; the University of Minnesota, with its 1,300 students, and closely following, that of Wisconsin, Iowa, Texas and Nebraska.

The growing tendency of the State to foster higher education carries with it much encouragement for the profession of medicine. It means a medical department in connection with many of these institutions that are independent, and directly supported by the State. I am pleased to see a disposition in many of our colleges to connect themselves with universities. A medical college connected with a university has few objections and many advantages. As we pass the fourth centennial epoch in our history, we can look forward with most sanguine expectations in all that pertains to medicine. We invite our critics to forget the past and only look to the present and future. Present appearances plainly indicate that we are on the eve of a new departure in medical education in this country. The older system of medical education is a thing of the past; let us forget it quickly and look to the future.

In conclusion, I again appeal to the profession of this country, and particularly to you, gentlemen, the most intelligent representatives of the profession of medicine in America, to renew your zeal and continue in your efforts until the battle for higher medical education in America is actually won, and the good name of the profession of medicine rescued from disgrace.

THE STATE SOCIETY OF ARKANSAS elected the following officers at its late meeting: President, J. T. Jelks, Hot Springs; First Vice-President, A. C. Jordan, Pine Bluff; Second Vice-President, J. C. Wallis, Arkadelphia; Third Vice-President, J. W. Case, Batesville; Fourth Vice-President, G. D. Huddleston, Lamar; Secretary, L. P. Gibson, Little Rock; Assistant Secretary, W. B. Lawrence, Batesville; Treasurer, A. L. Breysacher, Little Rock; Librarian, R. B. Christian, Little Rock.

TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE will hold its fourth annual session in Chattanooga, Tenn., October 25, 26 and 27, 1892. The membership is not strictly limited to the profession from the States named in the title of the Society, but men of eminence from other States may be elected. Under the vigorous management of its present corps of officers, it is needless to assure our readers that the coming session will be a great success. The mention of the names of Dr. W. E. B. Davis, of Rome, Ga., as President; Drs. D. H. Howell, J. C. Shepard, and J. P. Stewart, as Vice-Presidents; Dr. Frank Trester Smith, of Chattanooga, as Secretary; Dr. W. L. Gahagan, of Chattanooga, Tenn., as Recorder, etc., give surer ties of active work and successful results. Papers for the session are already promised by the president, by Drs. I. N. Love, of St. Louis; J. W. Cowan, of Tullahoma, Tenn.; E. B. Ward, of Selma, Ala.; J. M. Head, of Zebulon, Ga.; John L. Howell, and J. N. Masters, of Knoxville, and C. S. Briggs and Richard Douglas, of Nashville.

LAST ONE HUNDRED ABDOMINAL SECTIONS FOR REMOVAL OF OVARIAN TUMOR AND DISEASED UTERINE APPENDAGES.  
BY R. STANSBURY SUTTON, M.D., PITTSBURGH, PA.

Medical Attendant.	Patient.	Age.	Ovariectomy, Double or Single	Removal of Appendages, Double or Single	Weight of Tumor.	DESCRIPTIVE REMARKS.	Date.	Place of Operation.	Result.
Drs. Robertson and Floyd	Miss R.	27	Double	Double	...	Chronic salpingitis and ovariitis. Adhesions. Tate knot	April 26, '87	Private hospital	Recov'd.
Dr. Williamson	Mrs. D.	36	Double	...	12 lbs.	Multilocular cyst of right ovary. Pedicle tied and burnt. Left ovary cystic	Nov. 5, '87	"	"
Dr. Phillips	Mrs. M.	27	Single	...	30 "	Parovarian cyst. Forty square inches anterior abdominal adhesion	Nov. 9, '87	"	"
Dr. Floyd	Miss S.	31	Single	...	...	Left chronic ovariitis and salpingitis. Right ovary removed one year previous	Nov. 17, '87	"	"
Dr. Boal	Mrs. B.	31	Double	...	20 lbs.	Multilocular dermoid cyst. Second ovary cystic. Pedicles tied and burnt	Mar. 21, '88	"	"
Dr. Sykes	Miss W.	32	"	...	30 "	Non-adherent cyst. Second ovary cystic. Patient very feeble	May 10, '88	"	"
Dr. McDonnald	Mrs. H.	27	Single	...	25 "	Non-adherent cyst. Pedicle tied and burnt	Oct. 11, '88	"	"
Dr. Ross	Mrs. S.	47	Double	...	...	Prolapsed ovaries; pelvic pain; mental aberration. Last cured by operation	Oct. 30, '88	"	"
Dr. McDonnald	Mrs. L.	35	"	...	...	Unbearable dysmenorrhœa. Ovaries and tubes buried in adhesions. Abdomen very fat	Nov. 3, '88	"	"
Dr. Stewart	Mrs. H.	20	Single	...	...	Left chronic ovariitis and salpingitis	Nov. 7, '88	"	"
Dr. Purlington	Mrs. S.	58	Single	...	30 lbs.	Ruptured multilocular cyst. No adhesions. Drainage	"	"	"
Dr. Williamson	Mrs. McC.	24	Double	...	...	Married two years; sterile; dysmenorrhœa; convulsions. Salpingitis and ovariitis	Nov. 13, '88	"	"
Dr. Rough	Mrs. R.	33	"	...	...	Sterile; had had pelvic abscess. Operation had been recommended by me, five years previous, when single	Dec. 1, '88	"	"
Drs. Porter and Fish	Mrs. H.	26	"	...	...	In bed greater part of time for five years. Pelvic abscess one year before	Dec. 3, '88	"	"
Dr. Williamson	Miss P.	23	Single	...	...	Imperforate vagina; infantile, unicornuate uterus. Normal ovary and tube on right side. None on left	Dec. 11, '88	"	"
Dr. Bell	Mrs. B.	46	"	...	8 lbs.	Cysts on both sides; left pediculated. Right malignant	Feb. 18, '89	"	"
Dr. Sloan	Mrs. G.	50	"	...	25 "	Multilocular cyst. Pedicle tied and burnt	Feb. 19, '89	"	"
Dr. Hunter	Mrs. A.	24	"	...	5 "	Tumor. Extensive adhesions	April 7, '89	"	"
Dr. Stewart	Mrs. H.	21	Single	...	...	Right ovariitis and salpingitis; 2nd operation	" 15, '89	"	"
Dr. Klingensmith	Mrs. L.	23	Double	...	...	Had had pelvic abscess, pelvic peritonitis, menorrhagia. Ovaries and tubes adherent	" 27, '89	"	"
Dr. Williamson	Mrs. H.	25	Double	...	40 lbs.	Parovarian cyst. Second ovary cystic	May 7, '89	"	"
Dr. Clark	Miss S.	27	Double	...	...	Ovariitis and salpingitis. Pedicle tied and burnt. Drainage	" 9, '89	"	"
Dr. O'Brien	Mrs. B.	29	"	...	...	Gonorrhœal salpingitis	June 12, '89	"	"
Dr. Sutton	Mrs. A.	30	"	...	...	Long, persistent pelvic pain. Pain cured, but cause undetermined	" 22, '89	"	"
Dr. Robinson	Mrs. M.	29	"	...	...	Uterine hemorrhages and great pelvic pain. Ovaries and tubes adherent. Not cured	July 8, '89	"	"
Dr. Simpson	Mrs. W.	28	"	...	...	Sterile; ovaries cystic; chronic salpingitis	Sept. 10, '89	"	"
Dr. McCard	Mrs. A.	41	"	...	...	Bleeding fibroid. Subsequent reduction in size of tumor	Oct. 6, '89	"	"
Dr. Ackerman	Mrs. L.	29	"	...	...	Pyosalpinx	" 19, '89	"	"
Dr. Patton	Mrs. S.	28	Single	...	15 lbs.	Multilocular ovarian cyst. Ligatured	Nov. 2, '89	"	"
Dr. Williamson	Miss B.	36	Double	...	...	Bleeding fibroid. Two hæmostatic forceps left on deep pelvic vessels for 24 hours	" 28, '89	"	"
Dr. Green	Mrs. M.	42	Single	...	...	Suppurating, universally adherent dermoid; patient septic when operated; died of shock	Dec. 19, '89	"	Died.
Dr. Waples	Mrs. C.	56	"	...	...	Intraligamentous cyst	Feb. 3, '90	"	Recov'd.
Dr. O'Brien	Mrs. S.	34	"	...	20 lbs.	Cyst	" 12, '90	"	"
Dr. Williamson	Miss T.	22	Double	...	...	Patient insane; confined in straight-jacket; ovariitis and salpingitis; insanity cured	" 25, '90	"	"
Dr. Knox	Mrs. S.	37	"	...	...	Old pelvic inflammation; appendages adherent to omentum and intestines; drainage	" 27, '90	"	"
Dr. Storer	Miss H.	21	"	...	...	Severe hæmorrhages; interstitial fibroid	" 27, '90	"	"
Dr. Dean	Miss C.	30	Double	...	...	Dermoid size of orange, encapsulated by adhesions to omentum, intestines, uterus, tubes and pelvic floor; drainage	Mar. 5, '90	"	Died.
Dr. Pershing	Mrs. B.	41	Double	...	...	Old invalid; ovaries and tubes completely embedded in adhesions; drainage; cured	" 10, '90	"	Recov'd.
Dr. Blaby	Miss L.	15	Single	...	35 lbs.	Multilocular cyst; pedicle tied and burnt	" 22, '90	"	"
Dr. Benham	Mrs. B.	51	"	...	40 "	Fibro-cystic tumor of right ovary; extensive adhesions	" 23, '90	"	"
Dr. Johnston	Miss McD.	44	Double	...	...	Chronic salpingitis and ovariitis	April 9, '90	"	"
Dr. Walker	Mrs. O.T.	27	"	...	...	Ovariitis, salpingitis and pelvic peritonitis	" 21, '90	Home	"
Dr. Stewart	Mrs. H.	60	Single	...	50 lbs.	Suppurating multilocular cyst; frequently tapped; had phlegmasia dolens	May 3, '90	Private hospital	"
Dr. Tressel	Mrs. H.	30	Double	...	...	Salpingitis and ovariitis	" 29, '90	"	"
Dr. Klingensmith	Mrs. K.	53	Single	...	...	Unilocular cyst; extensive adhesions; stitched incision; drainage; cured	June 2, '90	"	"
Dr. McCreedy	Mrs. G.	23	Double	...	...	Bleeding fibroid; ovaries and tubes diseased	" 7, '90	"	"
Dr. Sutton	Mrs. S.	43	"	...	...	Multiple fibroids	" 10, '90	"	"
Dr. Laidley	Mrs. R.	46	"	...	...	Uterine hæmorrhages; interstitial endometritis	" 12, '90	"	"
Dr. Bell	Mrs. M.	30	"	...	...	Chronic neurasthenic invalid; interstitial salpingitis; cured	" 18, '90	"	"
Dr. Bell	Miss W.	22	"	...	...	Round ligaments shortened by Dr. Gill Wylie one year prior. N. G. Chronic salpingitis	" 19, '90	"	"
Dr. Sharpneck	Mrs. B.	46	Single	...	71 lbs.	Multilocular cyst; Brown's clamp and cautery; drainage	Sept. 4, '90	"	"
Dr. Pollock	Mrs. D.	58	"	...	...	Multilocular dermoid cyst	" 6, '90	"	"
Dr. Kirker	Mrs. T.	65	Double	...	...	Cancer of both ovaries and omentum; all removed	" 9, '90	Home	"
Dr. Banks	Mrs. L.	48	Single	...	18 lbs.	Parovarian cyst; Brown's clamp and cautery	Oct. 22, '90	Private hospital	"
Dr. Bell	Mrs. G.	27	Double	...	...	Chronic salpingitis and ovariitis	" 25, '90	"	"
Dr. McComb	Mrs. K.	22	"	...	...	"	"	"	"
Dr. Clark	Mrs. A.	27	"	...	...	Persistent dysmenorrhœa, neuralgia, involutionism; cured	Nov. 7, '90	"	"
Dr. McCreedy	Mrs. R.	26	"	...	...	Chronic salpingitis and ovariitis	" 10, '90	"	"
Dr. Frew	Mrs. Y.	43	"	...	...	Sterile; persistent pelvic pain; chronic salpingitis; ovaries atrophied and adherent	" 24, '90	"	"
Dr. Simpson	Mrs. W.	21	"	...	...	Dysparunia, sterile, nausea, amenorrhœa for two years previous; infantile uterus	Dec. 10, '90	"	"



LAST ONE HUNDRED ABDOMINAL SECTIONS FOR REMOVAL OF OVARIAN TUMOR AND DISEASED UTERINE APPENDAGES—  
(CONTINUED.)

Medical Attendant.	Patient.	Age.	Ovariotomy, Double or Single	Removal of Appendages, Double or Single	Weight of Tumor.	DESCRIPTIVE REMARKS.	Date.	Place of Operation.	Result.
Dr. Banks . . . . .	Miss McT. . . . .	25	Single	Double	101 times	Soft myoma of right ovary; 65 pints acetic fluid in cavity; drainage; had been tapped 101 times	Dec. 13, '90.	Private hospital . . .	Recov'd.
Dr. Gyer . . . . .	Miss T. . . . .	37	Double	Double	101 times	Bleeding fibroid	Jan. 3, '91.	"	"
Dr. Kirker . . . . .	Mrs. J. . . . .	50	Double	Double	101 times	Ruptured, multilocular, intraligamentous cyst	" 11, '91.	Home . . . . .	"
Dr. Clover . . . . .	Mrs. K. . . . .	47	Single	Double	101 times	Cancer of ovaries, liver, omentum and intestines; 4 gals. fluid in abdomen. Operated under protest	Feb. 18, '91.	Private hospital . . .	Died.
Dr. Cort . . . . .	Mrs. M. . . . .	32	Double	Double	101 times	Chronic salpingitis and ovariitis	" 25, '91.	"	Recov'd.
Dr. Clover . . . . .	Miss L. . . . .	33	Double	Double	101 times	Chronic salpingitis and ovariitis; extensive adhesions	"	"	"
Dr. Sutton . . . . .	Mrs. Z. . . . .	28	Double	Double	101 times	Chronic salpingitis and ovariitis	Mar. 4, '91.	"	"
Dr. Bell . . . . .	Mrs. S. . . . .	26	Single	Double	8 lbs.	Pregnant 3½ months; multilocular cyst of left ovary; gestation undisturbed	April 2, '91.	"	"
Dr. Clover . . . . .	Mrs. L. . . . .	24	Double	Double	101 times	Chronic ovariitis and salpingitis; right ovary cystic, left cirrhotic	" 25, '91.	"	"
Dr. Sutton . . . . .	Miss A. . . . .	30	Double	Double	101 times	Dysmenorrhœa; uterus infantile; appendages very small	" 29, '91.	"	"
Dr. Davidson . . . . .	Mrs. H. . . . .	40	Single	Double	9 lbs.	Multilocular cyst of right ovary; adherent to uterus; intraligamentous	"	"	"
Dr. King . . . . .	Miss K. . . . .	42	Double	Double	35 "	Multilocular, intraligamentous cyst; phthisis pulmonalis; died on 9th day of exhaustion	May 16, '91.	"	Died.
Dr. Engle . . . . .	Miss A. . . . .	31	Double	Double	101 times	Recurrent pelvic peritonitis. Got ovaries; failed to get tubes	" 18, '91.	"	Recov'd.
Dr. McComb . . . . .	Miss McM. . . . .	29	Double	Double	101 times	Uterus adherent to rectum; ovaries adherent to tubes and glued en masse to pelvic floor	June 6, '91.	"	"
Dr. Jones . . . . .	Mrs. D. . . . .	35	Double	Double	101 times	Invalidism; chronic ovariitis and salpingitis; cured	Sept. 3, '91.	"	"
Dr. King . . . . .	Mrs. McD. . . . .	56	Single	Double	50 lbs.	Multilocular cyst; slight adhesions at many points	" 5, '91.	"	"
Dr. Henry . . . . .	Mrs. G. . . . .	32	Double	Double	20 "	Multilocular cyst; slight adhesions	" 12, '91.	"	"
Dr. O'Brien . . . . .	Mrs. S. . . . .	35	Double	Double	12 "	Suppurating, intraligamentous, multilocular cyst of left ovary	" 29, '91.	"	"
Dr. Van Dyke . . . . .	Mrs. B. . . . .	44	Double	Double	23 "	Multilocular cyst; adhesions; short, thick pedicle; tied in sections	Oct. 8, '91.	"	"
Dr. J. Frank Ross . . . . .	Miss R. . . . .	35	Double	Double	35 lbs.	Recurrent pelvic peritonitis	Nov. 5, '91.	"	"
Dr. Potts . . . . .	Mrs. J. . . . .	42	Single	Double	35 lbs.	Intraligamentous, multilocular cyst; also, appendicitis and removal of vermiform appendix	Dec. 22, '91.	"	"
Dr. Downer . . . . .	Mrs. S. . . . .	62	Double	Double	50 "	Multilocular cyst; pedicle twisted three and one-half turns; cyst fluid bloody	Jan. 10, '92.	"	"
Dr. Hobbs . . . . .	Mrs. W. . . . .	21	Double	Double	101 times	Cyst; twisted pedicle; violent peritonitis; cavity flushed and drained	" 14, '92.	"	"
Dr. Bell . . . . .	Mrs. K. . . . .	31	Double	Double	101 times	Sterile; chronic ovariitis and salpingitis; adhesions	" 28, '92.	"	"
Dr. Armstrong . . . . .	Mrs. A. . . . .	30	Double	Double	101 times	Left pyosalpinx; right ovariitis and salpingitis	Feb. 1, '92.	"	"
Dr. Mattison . . . . .	Mrs. L. . . . .	30	Single	Double	25 lbs.	Multilocular cyst; pedicle twisted; free fluid in cavity; slight omental adhesion	" 4, '92.	"	"
Dr. McElroy . . . . .	Mrs. McC. . . . .	46	Double	Double	28 "	Multilocular cyst; pedicle twisted; cyst rotten	" 27, '92.	"	"
Dr. Eastman . . . . .	Mrs. M. . . . .	30	Double	Double	5 "	Intraligamentous dermoid; 2nd ovary cystic	Mar. 7, '92.	"	"
Dr. Clagget . . . . .	Mrs. J. . . . .	62	Double	Double	101 times	Cancer of both ovaries; 35 pints acetic fluid. Operated under protest	" 10, '92.	"	Died.
Dr. Ogden . . . . .	Mrs. G. . . . .	65	Double	Double	16 lbs.	Multilocular cyst; died on 14th day of gangrene of lower 3 feet of ilium and entire colon; abdominal wound healed by first intention	" 26, '92.	Allegheny Gen. Hos.	Recov'd.
Dr. —, Allegheny Gen. Hosp. . . . .	Miss O'H. . . . .	19	Double	Double	101 times	Gonorrhœal salpingitis and ovariitis	" 31, '92.	"	"
Dr. —, A. G. H. . . . .	Mrs. D. . . . .	26	Double	Double	101 times	Chronic salpingitis and ovariitis; procidentia uteri; anterior fixation	"	"	"
Dr. —, " . . . . .	Miss B. . . . .	19	Double	Double	101 times	Gonorrhœal pyosalpinx; sharp pelvic peritonitis; suppurating peritonitis later	"	"	Died.
Dr. Taylor . . . . .	Mrs. S. . . . .	32	Double	Double	101 times	Chronic ovariitis and salpingitis; very strong adhesions	April 13, '92.	"	Recov'd.
Dr. Orr . . . . .	Miss M. . . . .	32	Single	Double	1 lb.	Abscess right ovary and mesovarium; pint of pus; discharged frequently per rectum	" 15, '92.	"	"
Dr. Huselton, A. G. H. . . . .	Mrs. P. . . . .	29	Double	Double	101 times	Chronic salpingitis and ovariitis, pelvic peritonitis and cellulitis	" 25, '92.	Allegheny Gen. Hos.	"
Dr. —, A. G. H. . . . .	Miss M. . . . .	32	Double	Double	6 lbs.	Multilocular cyst; no adhesions; second ovary cystic	May 4, '92.	"	"
Dr. Gladden . . . . .	Mrs. P. . . . .	72	Single	Double	40 "	Multilocular cyst of right ovary	" 5, '92.	"	"
Dr. Shenkle . . . . .	Mrs. Y. . . . .	45	Double	Double	16 "	Multilocular cyst of right ovary; pedicle five inches broad; tied in sections	" 7, '92.	Allegheny Gen. Hos.	"
Dr. Smith . . . . .	Mrs. C. . . . .	26	Double	Double	101 times	Sterile; chronic ovariitis and salpingitis	" 9, '92.	"	"

## SYNOPSIS.

In these one hundred cases, which I have the pleasure to report to you, there were:

Fifty-four abdominal sections for removal of diseased appendages with one death, which was caused by suppurating pelvic peritonitis.

Forty-six abdominal sections for removal of ovaries, the seat of tumor, with six deaths, which were cause as follows:

The first, Mrs. M., had been confined a short time previous; was thoroughly septic, having chills, sweats and irregular temperature, pulse ranging from 120 to 130, prior to operation. Died of shock 48 hours after operation.

Second, Mrs. C., the operation was extremely dif-

icult. An intestine was injured, hæmorrhage was profuse, operation was prolonged and vomiting after anæsthesia was uncontrollable. Died from shock 48 hours after operation.

Third, Mrs. K., operated under protest made to her physician and husband together. The operation was completed in a few minutes with moderate loss of blood, and as I predicted, patient died on the table, ten or fifteen minutes after the operation had been completed. There was plenty of time to have her removed from the table, but I refused to have her moved. Her profound neurasthenia was the cause of my protest. Died of shock.

Fourth, Miss K., was operated with phthisis pulmonalis, a sequela of la grippe. Tumor was large.

She should have been tapped and not operated. Died from exhaustion, the result of colliquative sweats and persistent cough.

Fifth, Mrs. J., a woman 62 years old with cancer of both ovaries, enormously distended with fluid and very much exhausted. I protested against operating. The protest was made to her husband and physician a second time before she was anesthetized; my judgment was overruled and my prediction that she would die verified.

Sixth, and last case, Mrs. G., operated without difficulty or unusual incident. On sixth day had stercoraceous vomiting with great tympany. I button-holed the ileum in left inguinal region. Distention was relieved and vomiting ceased. Died on 14th day. Post-mortem showed no cause of death attributable to the ovariectomy. No fluid in abdominal cavity. Lower three feet of ileum and entire colon were gangrenous. Died of thrombosis of nutritive vessels. Thrombi were derived from varix as large as an egg situated in scarpal triangle and connected with femoral vein.

Five of these deaths in the forty-six ovariectomies could have been avoided by refusing the cases, which would have been the proper thing to have done. In the future I shall certainly act upon my own convictions, without reference to what becomes of the case afterwards; a position, however, which perhaps only an experienced operator has the right to assume, for all know how frequently the most unpromising cases will survive operation.

#### PREPARATORY TREATMENT.

The preparatory treatment of these patients, has been about as follows:

The patient is put to bed 48 hours prior to operation, her bowels thoroughly emptied and during the second 24 hours, her diet is limited to nutritious soup, bread and tea. She has had at least two baths at which the cilia about the genitals have been thoroughly cleansed and the vagina washed out with hot water. One hour before operation, a towel wrung out of a hot 1:1,000 sublimate solution is laid over the abdomen and removed on the operating table.

#### TECHNIQUE.

At the operation besides the anesthetizer, one assistant and two nurses are used. One nurse has charge of sponges, the other instruments, needles and ligature.

The first stage of the operation, viz: Opening the cavity of the abdomen, varies from five to fifteen seconds. The incision is made in the median line.

The second stage of the operation, adhesions being present or absent, if the case is one of cystic tumor varies from one minute to ten. The average being four and one half minutes. If the appendages are to be removed adherent or non adherent, the time for both sides varies from four to twelve minutes; the average being probably between eight and nine minutes.

The third stages of the operation, the "Toilette de Pantonine" depends largely on whether there are vessels to take up, fluids to wash out or drainage to be applied. The time varies from seven to twenty-eight minutes. The average being probably very close to thirteen minutes. This includes, of course, suturing the abdominal wound.

After the wound has been sutured it is covered with a layer of aristol; this with eight thicknesses

of aseptic gauze; this with a thin layer of aseptic cotton, and all this secured by a scultetus bandage.

Neither in the sponges nor in the water covering the instruments and suture, is any chemical introduced. If it is necessary to flush the abdomen it is done with simple boiled tap water.

#### AFTER TREATMENT.

The after treatment is of the simplest character. During the first 38 hours the patient gets nothing except sips of hot water, and is encouraged to take as little of this as possible. If she suffers from thirst, occasionally four ounces of warm water are thrown into the rectum. Between the 38th and 48th hour she is allowed to take toast water and tea unless her stomach be irritable, in which event she is given a Seidlitz powder, or 3j Rochelle salts, or a two grain pellet of cloral; the latter if the tongue be furred. At the end of 48 hours, nutritive soups and bread crumbs initiate a more liberal diet a few days later. In very feeble patients, nutritive enemata of peptonized milk are given from the end of the first 24 hours. When it has been necessary to leave the drainage tube in the lower end of the wound, the tube is emptied, and the super dressing changed every two hours until the end of the sixth hour; then every four hours until the end of the first 24 hours and every eight hours from that until the time of its removal, should it be continued beyond 24 hours. If the wound has been aseptic and the vitality of the tissues sufficiently good, no suppuration occurs. If however, this fortunate condition does not exist, about 17 hours after operation the temperature will usually reach a fraction above 100° F., and for the first two or three days will fluctuate between 99½ and 101. Under such circumstances a twenty grain suppository of quinine is given every 24 hours. The wound is examined daily, any offending stitches removed, and usually the result in pus formation is insignificant. It occasionally occurs in a very fat abdomen or in that of a patient extremely debilitated, both conditions predisposing to low vitality, that suppuration will occur to a considerable degree. Early evacuation of the pus, thorough cleansing of the pus cavity or sinus with hydrogen peroxide and subsequent stimulation of its walls with iodized water, with or without the introduction of a small rubber drainage tube, has been followed uniformly by the speedy recovery of the patient.

The average time for laparotomy patients from date of operation is 16 days and the average time in the private hospital is about 23 days.

Increased experience in operating and through this an acquired ability to discriminate justly against hopeless cases as already proven in this table, will, I am confident, enable me to reduce my mortality in the next hundred similar cases to less than seven per cent. Had I maintained my convictions with reference to two of the cases in this table the mortality in the last hundred cases done at this writing would have been but five per cent., and experience has taught me that if a woman who is the subject of phthisis pulmonalis has an ovarian cyst, that it is wise to be contented with tapping. Had this lesson been learned earlier the mortality in this table would have been but 4 per cent. With these considerations I feel confident that the efforts of the future will be better.