V. THE HISTORY AND PROGRESS OF OBSTETRICS

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A THESIS

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Most women are interested in the procedure of birth and certainly all men have had the experience of being born. Therefore, it would seem that the topic of this thesis has universal appeal. In this research I plan the history, development and science of obstetrics and to make in some way intelligible the age old mysteries that surround the many phenomenas which the word "obstetric" connotes. There is a vast gap that lies between the obstetrics of to-day and that of but a few centuries ago. In contrast to the efforts of birth practices in the 16th century which included a fascinating mixture of medieval science and pure, unshamed magic, which to-day seem blundering and ineffecient, we have modern obstetrics with its exact knowledge of functional anatomy, its pain relieving drugs, its death robbing surgical operations. However, we realize that in spite of these explorations which have been made, a huge uncharted territory of obstetrical ignorance remains. It is hardly conceivable that man will ever be the complete master of all the secrets of birth; I am sure that there will always remain a residuum of unknowable. Every person interested in maternal welfare idealizes and dreams of the time of an ideal birth--a birth free from danger, rid of pain, and deprived of inconvenience. This is the goal to which all pioneering efforts have been directed.

In writing the history and progress of obstetrics, an attempt has been made to arrange the person or persons who have contributed to

the science and art of obstetrics as interestingly and in as nearly chronological order as possible.

"Obstetrics is that part of the science and art of medicine relating to the function of reproduction. The word obstetrics probably comes from the Latin ob and stare, "to stand before", "to protect." While, strictly, it should be applied to childbirth or parturition, usage justifies its application to all the phases of reproduction. The function of reproduction is a closed cycle of events, interposed in the life of a woman, and comprises five periods - conception, pregnancy, labor, lactation and involution."[1]

"As early as 3500 B.C., the Egyptians had "maternities", and in 1500 B.C. the Jews taught extreme cleanliness in handling maternity cases. These essential points were lost sight of and in later centuries much of the mortality in childbirth was due to lack of cleanliness and the resulting infection with puerperal sepsis or child-bed fever. This was particularly marked in medieval times and later when labor cases were gathered together in large hospitals and "maternities".[2]

In 460 B. C. "that astonishing old genius, Hippocrates, concluded from his observations that wounds should never be irrigated except with clean water or wine and if water were used it must be very pure or

1. De Lee's - Principles and Practices of Obstetrics, from the introductory page. 1934.
2. Woodward, Henry L., M.D. - Obstetrical Management and Nursing, 1936. p.7. Gardner, Bernice, R.N.

boiled".[3] He began the study of human anatomy. He and his pupils studied the subject of midwifery, but they were rarely called in until the removal of a dead child was required.

The period beginning with Hippocrates (460 B.C.) and continuing to the time of Ambroise Paré (1550 A.D.) was an age of natural or empirical obstetrics. In those days the expectant mother found her encouragement and comfort through the intercessions of priests, the offering of sacrifices, and the wearing of amulets; but she had no anesthetics to allay the pang of labor, no antiseptics to prevent infection, no knowledge of the processes of labor, and no one at hand to lend intelligent assistance where it was sorely needed. She had only the solace of her superstitions and the assistance of the "wise women", the lowest and most ignorant of females.

"In about 1050 A.D. Trotula, an educated woman of Salerno, became noted for her knowledge and writing on maternity and gynecology and for her work on Diseases of Women, Before, During and After Delivery. This book contains the first reference to perineorrhaphy, which she advocated for complete tears."[4]

In 1452, at Regensburg, Germany, an attempt was made to regulate midwivery practice and to establish a Guild for Midwives. The first German school for midwives was established in Munich (1589) and forty years

3. Holmans, John, M.D. - Textbook of Surgery, 1935, p.34.
4. Woodward, Henry L. and Gardner, Bernice, R.N., op. cit., p. 5.

later one in Paris at Hotel Dieu. This famous institution was a building which had been first a candle factory and later a public slaughter house. There was little light and almost no ventilation. The windows were nine feet above the floor and were seldom opened. The beds were made of wood, painted black, and draped with serge curtains and canopies. In the same bed there were seldom less than two patients and often four. When the demand was great, eight patients were assigned to a single bed. They occupied the bed in six-hour shifts and in alternating shifts were laid upon the floor. There was little or no nursing of the sick after ten o'clock in the evening. There was no segregation of the contagious and infectious cases. For twelve hundred years the Augustinian sisters served as nurses. They and the doctors were dominated by the clergy. Matters pertaining to the soul were their first concern, and the physical welfare of the sick was often neglected. The work of these sisters seems to have been made needlessly bare and hard. "Not only was their work cruelly heavy, but they were denied that light of knowledge which brightens the severest toil. . . . For them professional instructions did not exist. Only a routine handed down from one to another approached anything that could be called teaching".[5]

At this time the practice of obstetrics was still in the hands of midwives. Dr. Wertt, of Hamburg, was burned alive in 1522 A.D. because he dressed as a woman and attended a case of labor for purposes of study.

5. Findley, Palmer, M.D. - The Story of Childbirth, 1933, p.204

In 1513 the first German text-book for midwives was written by Eucharius Roesslin, and in 1545 a later one was written by Walter Ruff. In the year 1591 in the city of Edinburgh, a woman named Euphanie Macalyone attempted to defeat the premal curse. She sought to "mislead the devil" by applying to a midwife for a remedy to allay her pains. When James VI learned of her impiety she was right away burned alive as a warning to all women who dared evade the curse of Eve.

"In 1550 A.D. Ambroise Pare', the great French surgeon, boasted that he had attained such perfection in the surgical art that nothing new remained to be discovered."[6] He rediscovered a good deal that the Greeks had known, including the ligature. It is said that if it had not been for his "fat of puppy dogs" which he used as a salve, he would have been a true asepsist. He resurrected podalic version. He started a school of obstetrics in France. And he is credited with the beginning of the scientific era in obstetrics.

"In the 16th century the study of anatomy became more prevalent and in 1595 A.D. Mercurio in Italy studied the pelvis and described the contracted pelvis, advising cesarean section for these patients."[7]

"The removal of the child by the abdominal route was done by the early Egyptians and Jews after the death of the mother in the hope of

6. Findley, Palmer, M.D. Op. Cit., p.213.
7. Woodward, Henry, M.D. and Gardner, Bernice, R.N., Op. Cit., p.7.

saving the child. As far as is known, the first abdominal delivery done on the living mother was done by the Jews (140 B.C.), although it probably was done before that. Bishop Paulus of Meirado, Spain, is supposed to have done one about 1300 A.D. Bien reported one in 1540 and Troutman in 1610. In these early operations the uterus was left without suturing and this caused a high mortality from hemorrhage and infection, as did, also the total absence of any aseptic technic. The uterus was first sutured by Lebos in 1799. He used only three sutures and removed them later. Real suturing of the uterus was introduced by Kehrer and Sanger in 1882 and this was the first operation showing good results. Before the successful suturing of the uterus, Porro (1877) advised amputation of the organ, leaving the stump external, but this was rendered unnecessary, except in infected cases, by the Sanger operation. Osiander (1805) and Joerg (1806 did a low cervical operation instead of cutting through the body of the uterus. This was revived in 1906 by Frank and popularized by DeLee and others."[8]

"Little is known of medieval obstetrics, but in the Rennaissance period we are informed that in normal labor a woman had but an even chance to live - such were the ravages of puerperal fever and eclampsia (convulsions)."[9] In 1660 there was an epidemic of puerperal fever in Paris during which two thirds of the parturient women in the Hotel Dieu died of sepsis. This institution was not the only one of its kind that fostered pestilence. Charles White of Manchester, England, in 1773 recommended

8. Woodward, Henry, M.D. and Gardner, Bernice, R.N., Op. Cit. p.9-10.
9. Findley, Palmer, M.D., Op. Cit., p.104.

the delivery of women in separate apartments, isolating those suffering from fever. White was groping in the dark, since the germ theory of disease was unknown; but with uncanny accuracy he fore-saw the infectious nature of the fever and one means of combatting it.

It is to Gordon of Aberdeen (1795) that credit also should be given for first recognizing the infectious character of the child-bed fever. He wrote: "The disease seized such women only as were visited or delivered by a practitioner, or taken care of by a nurse who had primarily attended patients afflicted with the disease. In short, I had evident proofs of its infective nature, and that the infection was as readily communicable as that of smallpox or measles, and operated more speedily than any other infection with which I am acquainted." This doctor, too, was ignorant of the germ theory. Following these observations marked a signal advance in the management of women suffering from puerperal fever. They were isolated and given fresh air; strict cleanliness was enjoined. The cause of the infection of the contagion was still unknown, but there was no doubt that a contagion of some sort was responsible.

"In the days of Holmes and Semmelweis the mortality from puerperal fever in lying-in wards was rarely under 10%, and at times half and even three-fourths of all women delivered in these institutions succumbed to the disease."[10] In the United States, Holmes (1843), and in Vienna, Semmelweis (1847) attempted to prove that infections were

Findley, Palmer, M.D. Op. Cit. p.205.

carried by students and physicians from the post-mortem room and from other infected cases to the labor cases. Semmelweis proved these facts by a great reduction in mortality from having the hands of all men coming in contact with maternity cases carefully scrubbed and disinfected. But both men were laughed at and persecuted by their fellow doctors. A few years later these facts were placed on a scientific basis by the discovery by Pasteur of the streptococcus as the common germ of puerperal sepsis. Oliver Wendell Holmes said, "The pestilent carrier of the lying-in chamber must look to God for pardon, for man will never forgive him."

"No single man in history has made such priceless contributions to the science of medicine as Pasteur."[11]

But, as Rome was not built in a day, neither was the germ theory of Pasteur readily accepted by his colleagues. Pasteur was not a physician but a chemist, and the medical profession was slow to accept his theory of the living microbe as a source of infection. Sir James Y. Simpson, one of the important doctors of that day, said: "A man laid on the operating table in one of our surgical hospitals is exposed to more chances of death than the English soldier in the fields of Waterloo." So great were the fatalities from infection that it was little exaggeration to say that for every surgical case a coffin was provided. Yet this same doctor was loath to accept Pasteur's theory of germs.

[11] Findley, Palmer, M.D. Op. Cit. p.213.

"Lister gave to the world the principles of antisepsis in 1871. His teachings were first applied in hospitals, and the results were as startling as they were beneficial. . . . . It is largely to his work and to that of Pasteur that we owe the astonishing decrease in modern times in the danger of operations. Before their day the mortality of major operations was fifty to ninety percent; it is now less than two per cent. Cesarean operations carried a mortality of fifty to ninety per cent; in our modern maternities it does not exceed two per cent."[12]

No history of the progress of obstetrics would be complete without a history of the obstetrical forceps. The following is taken from DeLee's Principles and Practice of Obstetrics:

> "Hippocrates advised pulling on the head with the hands, but probably used the manoeuver only for small heads; the Arabians used a three- or four-bladed hooked tractor for dead fetuses; in 1554 Rueff, or Zurich, published a jointed forceps similar to that used in Lithotomy; in 1561 Pierre Franco advised a three-bladed duckbill speculum, obviously impractical; the Japanese for centuries used whalebone loops and silk nets brought over the head by means of strips of whalebone; Smellie tried to draw fillets over the occiput and chin. It is remarkable that the idea of the obstetric forceps was so long in coming. As Schroder says, this was probably because men were

[12] Findley, Palmer, M.D., Op. Cit. p.215.

not allowed at the confinement-bed except in the most difficult cases. And here, for lack of experience in normal cases, they knew little except to mutilate the child and extract it, and often the viscera of the mother, with sharp hooks. Unless the child presented by the breech or shoulder, so that the accoucheur could grasp a leg on which to pull, he was powerless, except as stated. Small wonder the women took alarm when a "man-midwife" had to be called, because they had observed, says Smellie, that "either the mother or the child or both were lost."

"In 1720 Pallfyn, of Courtrai, near Ghent, laid before the Academy of Medicine in Paris his forceps for the extraction of the child without mutilation. This rough, clumsy instrument was modified by others. Dusse crossed the blades and lengthened them, and Levret, 1746, added the pelvic curve, also the French lock, still used, though modified. The forceps depicted on Pallfyn's memorial plaque in the cathedral in Ghent shows a pelvic curve.

"The first forceps were invented probably in 1580 by Peter Chamberlen, the elder, the son of a Huguenot, William Chamberlen, who fled from Paris in 1569 and settled in Southampton. Peter was one of four boys, his brothers being Peter II, Simon and John. These four become the possessors of the secret surrounding the obstetrical forceps. This secret among them led them to

greed and a lust for power and tainted wealth. They were founders of a dynasty unparalleled in remoreseless avarice. The thought predominant in the mind of these ingenious men was not to relieve a woman's pain in labor nor to save their lives, but rather to add to their pocketbooks through the exploitation of women's suffering. Through pain they made money, vast sums of it for husbands or wives paid large sums to be delivered by their forceps. Hard-hearted as they were was evident when they rejected frantic women having difficult labors because they lacked the money they were subjected to pay. The Chamberlens kept the secret of the forceps within their own family. So high was their price that few could afford to pay the price. Their secret was passed on from generation to generation and even in these successive generations was the secret avulged. However toward the close of the 17th century the Chamberlens decided to depart from the family tradition. In 1670 Hugh, one of the large family, went to Paris and tried to sell the instrument for $7500. Mauriceau, to test the value of Chamberlen's pretenses, suggested that the latter attempt the delivery of a woman with extreme contraction of the pelvis, upon whom he had decided to perform cesarean section. Chamberlen declared that nothing could be easier, and at once in a private room, set about the task. After three hours of

vain effort he was obliged to acknowledge his defeat. The woman died from injury to the uterus, the negotiations for the sale were dropped, and Chamberlen returned with his secret unrevealed to England. Later, after wrecking a bank, he fled to Holland, where he sold his secret to a Roonhuysen, in Amsterdam, who sold it in turn to any doctor having the necessary large amount of money, but sold only half the forceps, - the vectis, - adding fraud to infamy.

"In 1753 Vischer and van de Poll purchased the secret and made it public, but by this time, through Palfyn, Drinkwater, and others, the forceps had become common property. John Palfyn, a barber-surgeon in Ghent made midwifery forceps generally applicable in obstetrics. It may have been fate that led Palfyn to recapitulate the Chamberlen's discovery and thus to devise himself an effective pair of midwifery forceps. Palfyn, at the time seventy years of age, had walked to Paris to show his invention. It was not well received and he died poor and neglected, but in 1784 his resting-place in Ghent was marked by a statue of a weeping woman. The original forceps of the Chamberlens were found in 1815 in a hidden attic of a house in Essex, England, occupied by several generations of the family (Ingraham). Numberless alterations and modifications have been made on the forceps."[13]

13. DeLee, Joseph B., A.M., M.D., - The Principles and Practice of Obstetrics, p.1042, 1934.

Obstetrics continued to advance rapidly with doctors interested in the subject. The normal female was studied, text books were written, new discoveries appeared constantly including: study of placenta previa, contracted pelvis, fetal heart, albuminuria in eclampsia, and the use of silver nitrate to prevent gonorrheal ophthalmia in the new born.

But the chapter in obstetrics on the death of pain is probably one of the most important contributions from the expectant mother's viewpoint. For centuries women in childbirth were permitted to suffer pain, with no effort on the part of midwives or physicians to relieve their suffering; it was the "Will of God" and that was all there was to it. Long after anesthesia was applied for relief from the pains of surgical operations there was no attempt made to lessen the pangs of labor. In 1847 Sir James Y. Simpson, after many long weary experiments, was the first to administer chloroform to a woman in labor. He was then professor of obstetrics in the University of Edinburgh. There had been earlier crude forms of relief from torture. The early Egyptians are said to have put the victim of their crude surgery into a state of unconsciousness by knocking him on the head with a wooden mallet, and it was said that it required skill to so graduate the blow as to not fracture the skull. The Greeks administered the wine of mandragora for the relief of pain. The old Javanese devised a crude preparation of cocaine which benumbed pain when applied locally but had no general anesthetic effect.

In the early part of the 19th century Sir James Simpson was born in Scotland. He was destined to fight a Biblical curse of painful childbirth by using chloroform to ease the pangs of labor. Up to the time of his birth the technique of midwifery improved gradually with the advances of scientific medicine. Many new instruments and methods were discovered for mitigating the pain of labor. The final relief of woman, however, was waiting for the 19th century.and for this Scotsman physician, James Simpson. As a boy he was told of his mother's suffering while giving birth to him. This left an everlasting imprint on the boy's mind. Never could he dismiss it and as he grew into manhood the thought conceived as a lad ripened with his age. As a dootor to relieve this seemingly unconquerable pain wat the object of his many experiments. Many disappointments had to be endured; he often became vexed at the inadequacy of scientific knowledge that was retarding his goal in no small measure. Little was known of narcotics in those days. The narcotis known at that date proved unsuitable or dangerous. Simpson, did not ponder long over his discouragements. In December of the year 1846, word reached him from London of a successful painless operation performed by Lishon with the patient under the influence of ether. To Simpson such news was over whelming and extremely joyous. Again he was to be disappointed, for it was found that women were too sensitive at this time to withstand the nauseating effects that ether produced. In 1834 a French chemist,

Dumas, worked out the correct chemical formula for chloroform. Its vapors were used as a remedy for respiratory troubles. Simpson's attention was drawn to this sweet-smelling substance and he determined to make immediate trial of this fluid. He tried it out on guests of his one evening and studied the effect it had on this group. Thus it came to be that just about 100 years ago woman was delivered without pain or knowledge through the use of chloroform administered by Sir J. Simpson. This was the beginning of the annulment of the premal curse "in sorrow thou shalt bring forth children." In spite of this wonderful achievement, a certain religious cult, the Scottish Calvenists, condemned this feat as trying to defeat the work of the Lord. The days to follow were hectic ones for Simpson. Here his struggle to defeat such wrong interpretations of the Bible began. He was shunned by his own people but as Dr. A. R. Simpson, a nephew of Sir James Simpson says: "Fortunate it was for future generations that Simpson was a man of such strong convictions, much iron will, and so skilled in debate as to beat down opposition. For on the man who first dared to apply anesthesia for relief of pain of labor fell the task of enlightening ignorance; of disarming prejudice; of dispelling supersitition; and of vindicating for surgeons and for accoucheurs the right to give and for sufferers to claim, the ease that anesthesia is calculated to afford."[14] In the face of bitter opposition Simpson continued his use of chloroform. For six years to follow, the conflict raged as to whether painless child-bearing could be acceptable to God Almighty,

14. Findley, Palmer, M.D., Op. Cit. p.185.

or was necessarily sinful. At this time loyalty to the throne took stand on the side of chloroform. He was called to Windsor Castle to deliver Queen Victoria under cloroform anesthesia, and for his services was knighted. Following this, chloroform was accepted by all classes without prejudice. His fame not only brought patients to him from all parts of the world, but women traveled far to be treated and delivered by him, and the road was opened for our present day methods of comparative freedom from pain during labor.

The standards of prenatal care were formulated by the White House Conference as follows; Careful history taking is the first step and should precede all other considerations. Inquiry should be made into the history of pre-existing diseases such as tuberculosis, tonsillitis, and diphtheria because of their possible bearing upon the integrity of the heart and kidneys. If there have been any abdominal or pelvic operations, the exact nature of these operations should be elicited because of their possible effects upon the existing pregnancy. An analysis of the character of the menstrual flow, the date of the last menstrual flow in order to estimate the probable date of confinement. This is not wholly dependable but it is probably the most practical means available. Complications arising from previous childbirths, and normal childbirths should be noted and inquiry made into their normality and the question of instrumental interference. All this is important data and may be a means of forewarn to the doctor of possible developments in

future labors. Histories concerning information on previous abortions and miscarriages is also necessary in determining the success of an existing pregnancy. Following this an inquiry should be made into the history of post-partum periods following other deliveries. Was there hemorrhage, infection, or any crippling complication? All these conditions call for serious consideration. Having obtained this information the facts are recorded for permanent record, and the physician should proceed with a thorough physical examination. Doctors do not overlook nor deny the fact that it is incumbent upon them to give mothers instruction in the hygiene of pregnancy.

This research of obstetrics would not be complete without mentioning steps taken in birth control, its ever increasing popularity and the steady advancement of its practice among the people. Never has a subject since the time of Simpson been the target for so much criticism both pro and con. Church dignitaries and medical men and others have voiced their opinion on this subject. Even in our modern day a taste of medieval sentiment might yet reign. Mainly, does birth control prevent the coming of life to one of God's chosen, or does birth control find its home in suppressing the coming of a majority of unwanted and ill-cared for children. Man is the only member of the animal group who upon his own violation limits his offspring. This is not to say that he is making a marked success by this action; according to sociologists and eugenists,

he is not by any means performing a successful activity; it is evident that there is too much indiscriminate breeding among the thoughtless masses of people and too little discriminate breeding among the more favoured classes.

It is a known fact that primitive man was not concerned with sex regulations. Knowing nothing of the cause of pregnancy, but believing only that the baby was placed in the mother's body by devine spirits, he naturally produced his kind in perfect accordance with the natural laws. For one thing he was not concerned with birth control because there was no fear of over-populating the world he lived in; in his blissful ignorance he was content to let nature have its way. Primitive man lived in a time when men fought the beasts of the fields and forests as a means of livelihood, and also waged an exterminating warfare among themselves. Therefore only the fittest held full sway and lived. Although gruesome as it seems, it resulted in the development of a hardy, courageous race. Cowards, weaklings, degenerates or defectives usually did not live long enough to reproduce their kind. If children and grown-ups were defective they were put to death. In this practice among the primitives they were eugenists of a high order. Since contraceptive methods were unknown to them, theyhad their own way of correcting social deficiencies, oftentimes cruel.

In our modern day we too are cruel, only in a different sense. Modern warfare destroys much of our best manpower, and science

devotes its time to the saving of the unfit. The future of our race, therefore, will be anything but promising. In our time criminals, idiots and weaklings are allowed to propagate their kind because of indifference and ignorance, and because we incorrectly conceive of the term "personal liberty." The price paid will inevitably be "race deterioration."

In ancient times birth control was practiced, and it was generally believed that the people who properly regulated reproduction outlived those who did not exercise such control. The ancient people of New Zealand were a sturdy race; for every man was a soldier and war was his chief avocation. To these people the basis of civilization and permanent race existence was through careful cultivation not conquest. Everymans ambition was to grow,strong and healthy; every womans ambition was to grow physically fit in order to bear children to be proud of. To them marriage was designed for the perpetuation and improvement of the race, abortion was regarded sinful. When a New Zealand mother prepared for childbirth it was deemed the duty of both parents to make their bodies as near physically fit as possible. Even the community took a hand in selecting individuals for marriage; only the physically perfect were chosen. No man, crippled or diseased could have children of his own; if he wished to marry he could, but the children of his wife were to come from one physically fit. It was a disgrace to any woman to bear a child under any other conditions, and equally as sinful for her husband to object. As the best seed was chosen in planting their crop,

so was the best sought for a union in bringing forth children.

As Darwin said, "Man might by selection do something not only for the bodily constitution and frame of his offspring, but for their intellectual and moral qualities. Both sexes ought to refrain from marriage in any marked degree inferior in body and mind; but such hopes are Utopian and will never be even partially realized until the laws of inheritance are thoroughly known." It is well known that man scans with scrupulous care the pedigree of his horses, cattle and dogs before he matches them, but when it comes to his own marriage, he rarely takes any such care. The New Zealanders observed these precautions for thousands of years. Their present state of almost complete annihilation is the result of contacts with the white race. Despite their perfect physiques they could not survive the contributions of the white race, namely syphilis and tuberculosis.

In the early years of our nation's life the upper classes maintained as high a birth rate as the lower classes, but the death rate among the lower classes was the larger of the two classes, and so the upper classes gained in number thereby holding a balance favourable to the more desirable group. However, as time advanced unrestricted immigration and preventive medicine brought great changes, all within a time of a few generations. Immigrants have come to this country in great number and reproduced their kind with little or no restraint and no discrimination. While this was going on preventive medicine was advancing

and working wonders in the saving of young lives of the handicapped as well as normal children. The result was inevitable insofar as the death rate among the lower classes decreased until it even became lower than the upper classes. This has brought about a change of social unbalance that will prove ill-gained for our nation's welfare.

Biologically birth control is an interesting subject. Taking for instance the human race we might divide the race into three distinct groups. First we have the lowest type of human being, but nature has hindered them from propagating their kind. They are so degraded mentally and physically that they are rendered incapable of producing children. Even if they do have children they do not survive long. Upon advancing we come upon a large and prolific group which is mentally low grade and are little concerned with the responsibilities of parenthood. Welfare and health agencies devote much of their time to this problem. Although the birth rate has not been appreciably lowered the death rate has decreased more rapidly than that of any other group.

The upper middle group constitutes another large class. Contained here are college graduates, professional groups, skilled mechanicians, successful business men and farmers. This group has become responsible for the progress this county has made and it is with utmost concern that we watch this group and their families diminish. We have seen that it requires four children to perpetuate a family, we have less than an average

of two children in the families of this class. It is predicted that in the future 100 of these people will have 14 descendants, while on the other hand 100 of the poorer class will have 236 descendants. Therefore, it necessarily follows that we must try to curb the production of the unfit and lower classes and stimulate the upper classes to a realization of their marital obligations or needless to say civilization will suffer.

The human race differe from all the animal world, in so much as the most prolific breeders are generally the superior type among the animals. This natural relationship does not exist among the human race under our present social conditions. So the reverse of this situation is the rule.

A theory has recently been advanced that the upper class recruits from the lower classes, and therefore there need be no concern for the future and fate of the nation. There have been countless examples of men who have risen from the lower planes of society to positions of power and influence, thus it is said the race will not deteriorate. Ellsworth Huntington observes that "the data given in Who's Who in America indicates that people who rise from the lower to the upper classes are biologically less vigorous than are those of the same type who were born in the upper classes. It is true that they may be extremely sturdy, but under present social conditions into which they enter they too do not produce children, and even if they do they have small families and uphold

the present social conditions to a greater degree than do the people who were born in the upper classes. Their children are often handicapped as were their fathers, although not so heavily. In our day, more than ever before, the ease with which people can raise from one social level to the other, and the universal freedom in respect to children and marriage mean that that many attain these heights but few maintain them. While there are those in the upper classes who are transfered to the lower classes through influences over which they may or may not have control, nevertheless, the rule applies that the upper classes are largely recruited from themselves.

In 1675 there were a million inhabitants in the United States but half of this number were involuntary immigrants. There, of course, were great numbers who were brought or sent under command; among these people were criminals, castaways, thieves and murderers. It can be justly said that our shores contained the scum of the earth. In spite of all this, it has been seen that these involuntary immigrants, many of them, proved to be good and illustrious citizens. Generally speaking, however, it is fair to conclude that the start of our country was bad and the indiscriminate breeding of the undesirables was only partially remedied by the high infant mortality among the lower and degenerate classes. Criminologists and eugenists tell us that the criminal is born, not made. Hereditary crime is due to defective emotions and low intelligence and these hereditary tendencies which lead to crime can often first be detected by

proper school inspection. Selective breeding would do much to relieve society of this undesirable class.

To understand more fully the results of indiscriminate breeding it is well to turn to reports of the White House Conference on Child Welfare and Protection. We find that there are 45 million children in the United States under 18 years of age and that 10 million of this number are classified as unfit or handicapped. The reasons for handicap are physical disabilities, social restrictions, mental deficiencies, and by poverty.

President Hoover, in commenting upon this large number of handicapped said: "89 per cent of the number are not receiving the needed attention, though our knowledge and experience showthat these deficiencies can be prevented and remedied to a high degree." Although much has been done, and certainly much more will be continued to be done to remedy this deficiency, but it would be more profitable if this loss would be prevented rather than accepted as inevitable. A constructive attitude toward these dependents and an endeavor to convert them from a social liability to a social and economic asset is the programme of the White House Conference. However, it stands to reason that it would be more effective, while endeavouring to alleviate present conditions, to bend every energy toward the prevention of these handicaps. 20% of the blindness out of 14,000 children wholly blind is due to venereal disease in the mother who

is physically unfit for motherhood. The 6 million undernourished children are largely accounted for by the lack of nourishing food in families too poor to assume the financial burdens of a family. The 450,000 children who are mentally retarded and the 675,000 children with behaviour problems largely come from parents morally and intellectually ill adapted for parenthood and the 300,000 crippled children are often the result of poor obstetrical care and neglected correctional measures among the poor. This is convincing proof that there should be support to the contention of selective breeding among the human race, desirable both from a biological and an economic standpoint.

The problem faced to-day is that most married couples voluntarily limit their families to 1 or 2 children because they feel children are expensive to raise, and thus be given every opportunity that life has to offer. Reading back through history we find this is not a modern problem. Polybius, a Greek, wrote, "The most of our citizens consent to just 1 or 2 children whom they leave rich and seated in the lap of luxury." Thus it is that the prudent, far-thinking individuals limit their families, and the unthinking class continue to perpetuate their kind.

A well-known judge, Mr. Justice McCardie, once remarked, "In my view, the knowledge of birth control ought to be more widely extended and particularly among those who live in very poor and unhappy circum-

stances. The law of abortion, as it exists now, ought to be substantially modified. It is out of keeping with the conditions that prevail in the world to-day."

In Poland a draft of new health laws cancels the paragraph relating to punishment for induced abortion. The law now allows gynecologists and also general practitioners in good standing, to perform an abortion at the request of the patient, if health or social conditions render it justifiable. Only midwives and quacks are punished by law for inducing abortion. The Catholic Church opposes this law strongly, and a great campaign has been started to suppress it. To-day educated women have to choose between children or a career. The case is pitiful when the woman out of necessity must bear children and earn their bread. When it comes to a choice, bread most often wins.

In advocating birth control, China and India are cited as good examples encouraging the need of it. They predict the United States will suffer the same experience. The whole world will be so over-populated that all possible places to emigrate will be taken. The remedy, they say, lies in birth control, the alternative of famine, war, and pestilence. The biblical injunction, "Be fruitful and multiply," was doubtless justified when proclaimed, for at that time few people inhabited the earth. To-day, however, this problem is quite in the reverse. To apply this

statement to China and India, when they are already overburdened with their dense populations, would be to go against all economic and biological precepts. Science has made it possible to support more people than formerly in a given area, but as everything else there is a limit to science. Before such bounds are reached, the instinct of self-preservation will assert itself. The fatalist contends that it is the law of nature to fight, to die of epidemics, and to starve, that only in this way can the human race be kept within bounds. The scientists hold that this fate is not necessary and that only the best types should "be fruitful and multiply," and they contend that even their numbers should be limited to the capacity of the world to support adequately. In the Western hemisphere of our country the overcrowding point has not been reached, in spite of this though, too much unemployment exists, with their subsequent evils. We have boasted of our natural material resources, but now we have ever imprinted in our minds our limitations by the squalor and ignorance and poverty in our midst. This confronting us, a remedy is naturally sought -- that being restricting the numbers in families, in building a more enlightened and resourceful race, more capable of meeting changing social and economic conditions.

At the present time it is admitted that birth control is largely unproportioned as it is most widely practiced by the class that needs it least. The advocates of birth control are reluctant to admit

it, but it must be admitted if the world is to retain an intelligent leadership. There is need for more emphasis upon the rearing of larger families among the more desirable classes. To curtail the supply of the socially unfit is not enough; there must be a greater supply of the fit.

Uncontrolled breeding will eventually bring unhappy results, thus it is imperative to have fewer and better babies. Nature has ordained that the weak and the unfil shall give way to the strong. This seemingly ruthless means of checking over-population and of creating a sturdy race is an unpleasant thought, but it is a natural law. Despite everything medical science does much to preserve the unfit who would not have survived in earlier times. The medical science is not alone in this effort. Social works and philanthropic organizations are combining to save all. Therefore, these agencies defeat by their actions the law of the survival of the fittest. They endeavour to preserve for the future childbearing group that well certainly beget its kind, and society will suffer the consequences.

The question arises: would knowledge of birth control encourage sexual immorality? Without a doubt there would be a tendency in this direction, but in spite of this unfortunate by-product of birth control would be offset by making the marriage state happier and thereby contributing to sexual morality. As it is contended that treatment against venereal disease isn't improper because it engenders illicit

intercourse, and by the same reasoning we should not withhold the knowledge of birth control because it might tend to cause sexual immorality. Thus this question of the do's and the don'ts of birth control is argued from every side, but as morality depends more upon character than upon circumstance, it stands to reason that the majority of people are moral in spite of circumstance.

The argument of child-spacing is based upon the assumption that pregnancy should be undertaken voluntarily and intelligently and not be subject to the thoughtlessness of parents; that due regard should be had for the mother's physical welfare and that of the children she already has, and to the economic circumstances of the household. Modern woman is asserting her rights as mistress of her own body and is claiming her right to protect those who are entrusted to her. She is determined that no institution and no group shall dictate her conduct in the rearing of her family. Her duties and her obligations in the home are hers and not the concern of any group of individuals who presume to dictate her conduct with regard to her family relationships.

At this point it is well to discuss the physician's viewpoint on the matter of birth control. The attitude of medical science in matters of birth control is in marked variance with the position of the Catholic Church and of some of the Protestant denominations. The medical profession does not consider religious dogmas, to them the care of the body is the

thing most vital in connection with the physical and social well-being of the child bearing woman.

From the medical point of view therapeutic sterilization is at times justifiable, in the interest of the mother and her dependent children. Some causes for instance might be tuberculosis which seriously aggravates pregnancy. Where contraceptive measures have failed to forestall the bearing of children by tuberculous women, permanent sterilization may be resorted to. The operatiion is usually restricted to those who have already borne two or more children. If, however, a pregnancy exists, it should be allowed to proceed to term, but only under the most favourable hygienic conditions.

Where a child cannot be delivered through the natural passage because of a narrowing of the pelvic outlet, cesarean operations are resorted to. While repeated cesarean operations have been performed with satisfactory results for both mother and child, it is generally conceded that with the third cesarian operation should go the ligation of the tubes to effect permanent sterilization. This is done to obviate the danger of rupture of the uterus in subsequent labors, an event that would probably be disastrous to the mother and child.

Chronic Bright's disease is a serious complication which may shorten the life of the mother. Often death ensues within a year after

compulsory sterilization is imperative. Doctors should give contraceptive advice where it is medically needed. Furthermore, the physician should counsel with his patients on the proper spacing of their children in order that the mother's health may be conserved. It is unfortunate that the laws of our country forbit the giving of contraceptive advice by physicians. Such interference on the part of the state and federal governments cannot fail to react to the detriment of society. While it is most always recognized by the medical profession that birth control is desirable, there has been no device proposed that cannot be depended upon and still not harmful. The intelligent members of the community make no appeal and it is to this class that appeal must be made. The ignorant will not listen.

In concluding the subject of birth control, the ever important question of abortion comes to mind. Often the subjects of birth control and abortion comes linked as meaning the same thing. However, birth control has nothing in common with abortion. Society and the medical profession consider abortion as unethical and dangerous. As a means of seeking relief from an unwanted pregnancy abortion demands a heavy toll of life and suffering among the women of our nation. It is estimated that for every hundred live births there are 25 abortions.

Reasons for wanting abortions are various. One might be, that the more live babies a mother possesses the greater is her desire to

her last delivery, and it seems that such mothers, many of whom have large families, should be saved for the sake of the living children, rather than sacrificed for the unborn.

Serious diseases of the heart are incompatible with pregnancy. Usually the load is too great for an already crippled heart, and so when the heart begins to show signs of failure to carry on, the pregnancy should be terminated. And at the same time, if the condition of the mother will permit the operation, sterilization should be effected.

Mental disorder present perplexing problems when associated with pregnancy. In this category we find epilepsy, feeble-mindedness, insanity, chorea, and other grave psychic disorders. It should not be generalized that all these cases should not bear children, but unquestionably many should be restrained if by no other means than sterilization.

In addition to these conditions for the interruption of pregnancy to safeguard the health and life of the mother, there are indications which the medical profession recognizes as legitimate indications for therapeutic abortions. These conditions include acute hydrammios, uncontrollable vomiting, tumors, etc, that would all give reason for physicians to be compelled to interfere.

Before resorting to permanent sterilization, contraception should be given a trial, save in the totally idiotic class where

interfere in subsequent pregnancies. It is estimated also that after the second or third child is born about one half of all subsequent pregnancies are terminated before the fetus matures.

In cases where the mothers life is in danger if pregnancy is allowed to continue the civil law clearly recognizes the right to interrupt it before the period of viability (end of the seventh month.) Aside from that to interrupt pregnancies prior to this period is considered an immoral, unethical and illegal crime. Yet in spite of all law, the act of abortion has steadily increased from our early times to the present time.

Statistics show that 1 in every 5 or 6 pregnancies ends in abortion, and that half of these are criminal. In New York City alone there are 80,000 criminal abortions annually. This practice exists in all parts of the globe and infests all grades of society. It seems to appear that this social practice is more prevalent in the higher classes of society. Women of keen moral sensibilities, either commit the act themselves or seek aid from others. The worst part of it all is that few women realize the dangers of abortion. This is because of ignorance.

Often women of unquestioned moral standing litterly resent their state of pregnancy and determine to put an end to it, yet when the date of quickening arrives and they are conscious of sheltering a human life, their attitude changes from that of resentment to happy anticipation.

It is a known fact that most abortionists are in that profession for the money they believe to be there. Women, who pretend to be midwives are really abortionists. Many advertise their practices in the daily newspaper; many physicians of both high and low degree practice this type of work unrestrained. Most of them are clever and, therefore, never held accountable in court. It is the belief of many that the medical profession have allowed such practices to go on instead of taking steps to rid their profession of these people. As the result of this attitude families of this modern day use abortion as a means of limiting the size of their families. No longer is it considered a crime, but justifiable.

Abortion is never free of danger even when done by the best doctors and for therapeutic reasons. It is never performed by a doctor of good standing without first consulting his fellow-colleagues. It is fatal in many cases, but how high this fatality rate is, is not known, because death is attributed to many other causes. But it is known that fully half of the maternal deaths due to infection are caused by abortion. Even in the most favorable conditions the death rate of mothers from induced abortion is four times as great as in childbirth. Life alone is not at stake, but invalidism and loss of health result from many abortions.

Newly-married couples often do not wish to have children right away. They, therefore, resort to abortion but too often running the risk

of never being able to bear children again.

In the early days of Imperial Rome abortions were freely performed, and if the pregnancy came to full term and a living child was born, infanticide was resorted to with little thought. The early Christians preached against this early practice, and placed much emphasis upon the value of human life. They preached against abortions, infanticides, and the exposure of unwanted children, practices that were all too common in the Roman empire. Reasons in those days for consenting to abortions and infanticides were varied but typical. Poverty and malformations were the most plausible, but vanity in itself was a definite controlling factor.

In some countries of continental Europe abortions are more frequent than in the United States. In France and Germany for every child born there has been one disposed of. In Russia there is legalized traffic regarding abortion. There it is neither a moral nor a legal crime to destroy the life of the unborn child. However, many eminent obstetricians considered legalized abortion as a "psychic, moral, and social evil." In contrast with the alleged results of abortion undertaking in their government hospitals, there were an equal number of women performing abortion upon themselves or by incompetents with the subsequent loss of 1,000 lives a year. To lessen this loss of life, Russia is giving careful consideration to the problem of birth control

in mothers who are sick and exhausted and cannot in justice and safety continue to bring more and more children into the world.

How to improve the situation present in the U. S. is a perplexing problem. It would be desirable to lessen the number of abortions, but, failing in this, the next most important consideration is to take better care of the cases as they arise. Without a doubt the damage to health and lives could be materially decreased by routine hospitalization of all cases. Under existing conditions only a small proportion of these cases is cared for in the hospitals where every possible safeguard is assured the mother.

The economic situation, as it is to-day in this country and Europe, has undoubtedly increased the number of abortions. In Italy criminal abortions are five times as frequent as before the World War, and there is no doubt that the practice has increased throughout all Europe and America in this period. Abortions have become so prevalent the world over that they may well be called a scourge.

Not all abortions are criminally induced. There is a large number that are unavoidable. Natural causes may be due to such conditions as syphilis, tuberculosis, anemia, infectious disease, extreme youth, old-age, and exhaustion. These help to terminate a pregnancy in its early stages. Women that are too heavy are prone to abort; here glandular disturbances are thought to be the contributing factors.

Also if pregnancies follow in rapid succession, a tendency to abortion is increased. More frequently the causes of spontaneous abortions are found in diseased pelvic organs which, if remedied, may permit future child-bearing. It is here that surgery has made one of its finest triumphs. Lately there has been a theory advanced that the lack of Vitamin E in the diet may prohibit the ovum from fertilization.

The medical profession recognizes the need and the justification for the interruption of pregnancy, whenever, in the judgment of the attending physician, supported by competent medical counsel, the life of the mother is imperilled. Whenever the mother cannot live to give birth to her child; when it is clear that delay can only result in the loss of both mother and child there is but one rational course to pursue; the pregnancy must be sacrificed in the hope that the mother's life can be saved. It is incumbent upon the doctor to save rather than to lose by temporizing. This, to the medical profession, and in the opinion of civil law, is clearly the privilege and the duty of the physician; always of course, if he has the consent of the parents and the consulting physician.

The Catholic Church believes that the mother should give up her life in order to save a new life. There is much discussion centered around this belief--much of which is very commendable; but in the majority of cases if the mother was allowed to give up her life for this cause she would be depriving her other children the care and love that only she can render.

The subject of abortion is an intensive one. It is a subject that will constantly confront our medical profession. Although it has done innumerable harm it has also done good.

Caesarian Section

Most people believe that the caesarian operation derived its name from Julius Caesar, who is reported to have been brought into the world in this manner. There is no evidence to support this story, for it is now known that this operation was in vogue long before he was born. The name is derived from the Latin, "partus caesareus", meaning to cut. In the early Roman days laws decreed that the physician was to remove the baby by way of an abdominal incision following the death of the mother, this was done that mother and child might be buried separately and so consequently this operation was performed for many generations only upon dead mothers. There are also references to caesarean operations in the folklore of early Eruopean races, and the evidence clearly points to the great antiquity of the procedure.

It is not known whether the early races performed caesarean operations. The ancient Jews called such children by name, but thereto it is not known whether the mother lived or died.

In the early seventeenth century this operation gained in popularity as the last resort in cases that could not be delivered by any other means. Naturally the operative mortality was very high; scarcely one woman in ten was delivered safely. Most obstetricians of that day

were very opposed to the operation; nevertheless it gained a secure foothold.

The Catholic Church took a hand in the controversy. The Church being strong in that day gave an impetus to this operation of which it would otherwise not have had. It favoured it when performed late in the course of pregnancy because it provided opportunity to baptize the baby.

In the light of late improvements in the steps of the operation it is a wonder that any woman in the early days lived through the ordeal. There was no antiseptics to safeguard against infection, no sutures to close the wound and control the loss of blood, and no effective anesthetic to deaden pain. If the patient did not die from the loss of blood, it would seem inevitable that spesis would take her life at a later time, but it did not always do so. Because of these facts it is surprising that the operation was not abandoned. As late as the middle of the nineteenth century the death rate of the mothers was 50-85 percent. Unbearable suffering presented itself. Due to the utter futility of any other means of delivery kept the operation alive.

From the early part of the eighteenth century caesarian operations on a living mother were not exceptional. In a medical periodical published in Vienna it told of a Siberian mother, who after days of intense suffering performed on herself in a state of despair,

a caeserian operation by using a razor blade. The most remarkable incident was that both baby and mother survived the ordeal.

A marked advance was made by Pono of Pavia in 1876, who observed that death was caused by loss of blood from the once-opened uterus after having delivered the baby, and that sepsis usually followed if the woman happened to survive the loss of blood. He decided to therefore deliver the pregnant uterus through a long abdominal incision. He then anchored the uterus to the abdominal wall and removed the baby and afterbirth. Bleeding and uterine infection were thus excluded and two great hazards (hemorrhage and infection) were largely eliminated. However Prague gave to us Singer who must receive credit for the perfection of the operation as it is performed to-day. Singer devised a method in 1882 of suturing the incision of the uterus, through antiseptics the uterus could be opened safely, the baby delivered, and the uterene wall wound closed, and most of all the uterus left safely in the abdominal cavity. This technique perfection did away with much of the danger from hemorrhage and sepsis and therefore has made the performance of the operation possible with reasonable safety if and when done by a skillful and experienced obstetrician.

If women would adhere to periodic examination made by a competent obstetrician at frequent intervals throughout the whole of pregnancy, much of the waste of human lives and health could be saved. Under careful supervision the doctor in charge can plan ahead of time

for the future confinement and will thus save any hasty operations. It is needless to say that the woman would be delivered under conditions that would entail less risk to her and to her baby. Always caesarean operations are performed with more or less risk to her and even though they be done by the best of physicians. It is by no means a painless delivery. Upon the completion of the operation there will always remain a uterine scar which will always be a menace to that woman as long as she bears children. It has been said that, "once a caesarean, always a caesarean." This is not always true though, because many women have given birth to children in the natural way. After having had a caesarean the cases require careful supervision for fear of the rupture of the uterus through the scar of the previous operation and so a real risk with every subsequent labor is assumed.

Caesarian operations have often been performed for the sheer excitement that surrounds them. The fearful mortality of caesarean sechion is due to its performance on ill-grounded indications or none at all. Many of our eminent obstetricians believe that better obstetrics results would be achieved if the operation were discarded and let mothers and babies take their chances by natural channels alone. Caesarean sechion should be resorted to only when it promises to be a safe procedure for both mother and child.

Prenatal Care

One phase of abstetrics is probably more neglected than any

other phase and it is certainly one of the most important phases to be considered, namely, pre-natal care. It has always been contended that society neglects and always has neglected the child-bearing woman. It is true that definite progress has been made in regard to the care of the baby, and yet indifference still surrounds the care of the mother in past-partum and pre-natal stages. Women expecting children should never be subject to hard labour and always a rest period of several weeks should be insisted upon for the woman following her childbearing.

It is not enough to provide care and direction for the pre- and the post-confinement periods; society must assume the responsibility of providing service in confinement. The need is for more maternity centers, more efficiently conducted pre-natal clinics. Society is obligated in this in so far as it is for the communities best interest. There is always an increasing demand by the laity for better obstetric care. The sentiment of this can be largely attributed to the profession itself, but the public has not responded in a practical way. The need, first and foremost, is an intelligent understanding of the situation at hand.

It is known that the study of obstetrics is indeed most difficult and arduous of the medical practice, and yet at the same time is really most satisfying. To-day the physician can accomplish much, both in prevention of disease and accidents and in treatment and

operation. The accoucheur often has the positive conviction that without him either mother or child, or both, would have perished. Of course with the erection of model maternity hospitals, the use of anaesthetics, and sufficient assistants employed for the conduct of parturition the practice and advancement of obstetrics is being relieved of most of its objectionable features, and the public more and more have a growing sentiment toward the employment of obstetric specialists. The field of obstetrics therefore is becoming more and more inviting to the young physician providing he is ambitious in the field, and will conduce to more rapid advance in both its science and art. A broad conception of the scope of obstetrics will eventually lead to a satisfying result. Statistics show that there is a vital need for it. It is true that by many obstretrics is still conceded on a low plane. Many different reasons have been advanced to account for it, but probably the main reason is that there is still a prevalence of the notion that childbirth is a normal function. The question remains therefore, "is labor in the woman of to-day a normal function?" It should be, but is not. Annually 25,000 women die in the United States from the direct and indirect effects of pregnancy and labor. It is a known fact that many women die from childbirth, but are buried under another diagnosis. The question of normality heretofore mentioned in pregnancy is considered vital in the medical practice. When we stop to consider that animals such as salmon and insects die soon after reproduction and this act is considered normal, is it natural to expect

a certain amount of mothers to suffer damage to maternal structures during parturition? It can hardly be believed that anyone would take such a stand. All authors hold that the reproductive function should normally have no mortality, and most of all it should not injure the mother nor the child.

Mariceau regarded pregnancy as a disease of nine months duration.[1] Sir James Y. Simpson stated that "parturition is always physiologic in its object, but not in some of the phenomena and peculiarities which attend upon it in civilized life." Engelman after comparing the labors of primitive and civilized peoples, says that a simple, natural labor is no longer possible, and, further, "the parturient suffers under the continuance of the old prejudice that labor is a physiological act." Many of our obstetricians of to-day wish to dismiss from the minds of the laity that labor is a physiological process and rightfully so. To-day 50% of our women present evidences of toxemia in pregnancy, which is classified as pathological. Silkeem, after comparing the primitive woman and the animals, called attention to the incomplete adjustment of the modern, civilized woman in trying to meet the demands of pregnancy, stating that when she is not physically perfect she fails. Eclampsia and other toxemias therefore, can be said to be a failure of metabolism to adapt the organism to the new situation. He concludes that through culture, in so far as it is estranged from nature, pregnancy, labor, lactation, and the whole function of re-

14. De Lee, Op. Cit. P. 15

production, have become a definite load for women of these times. As has been stated previously 25,000 women die annually in the United States during childbirth; of this number 6,000 die from infection, 5,000 from eclampsia, 4,000 from hemorrhage. Of the many number of women wounded there is no estimate. What all this misery, at least a large part of it is preventable is a universal opinion of all those who have studied the situation. Why is it then not prevented? The answer is seen to revolve around the fact that the standards in the principles and practice of obstetrics are too low. Gradually, the schools, hospitals, the profession itself and the public are beginning to realize the value of efficient obstretical art. Before now this phase of medicine was held in low esteem. As the result, the care of the child-bearing woman was left to the inexperienced, incompetent, even a non-medical person, the midwife.

It proves to be evident that if obstetrics can be invested with the dignity it deserves, such regard will inevitably place the practice on an elevated plane and thus more physicians will seek this for their life work; wou law-makers will regard the child-bearing woman with more concern and will protect her with proper legislation, with insistence on sufficient obstetric instruction in the schools; pre-natal care will prosper and with this the midwife will spontaneously disappear. The obstetricians' service will be properly evaluated and his arduous labors will be properly rewarded. All these things will inevitably

reduce the deplorably high mortality and morbidity of childbirth.

Such present disappreciation and disesteem of obstetrics can not be eliminated from the professional mind until certain pathological ideals of the child-bearing function is recongnized. In medicine and surgery true knowledge of the nature of disease has over and over again reduced the number of operations, and always has clarified and indications for interference. Therefore, any unreasonable doubt as to the pathogenicity of parturition as inviting undue interference with the natural powers may be rightfully regarded lightly. It is said that the best surgeons make the best pathologists. So it is in obstetrics, that those men who realize the dangers and possibilities regarding the child-bearing function will make the best accoucheurs, infinitely better than those who are satisfied in blindly calling this function normal, thus leading themselves and their patients into a feeling of fanciful security.

During the past 40 years there has been seen a gradual but steady development of the governmental program in the United States for the protection of health of infants and for better maternal care. The need for more widespread maternal and baby health measures was revealed by the children's bureau studies of social and economic factors in (1) infant mortality, (2) conditions of maternal and infant welfare and health in rural areas, and (3) maternal mortality. Added weight was given by the discovery of such large numbers of physical defects

in men examined during the World War under the draft, many of which defects, it was thought could have been prevented had proper prenatal and infant care been given during their early life.

Educational and service programs have a definitely beneficial effect on maternal health, an effect that justifies fully an expansion of maternal and infant health program in all States, but state funds for such purposes finds many states financially handicapped thus seriously hampering their programs to-day more so than for a number of years past because of reduction in the appropriations to state health departments for maternal and infant health.

The federal government wishes to cooperate with the state and territories in the promotion of the health and welfare of infants and mothers. The general program would be one of consultation, education and demonstration services, with aid to states and territories, and through them to local committees, and would involve state and local administration leadership by public health authorities in close connection with medical groups.

In the furtherance of the general program of maternal and infant health, consideration is given to (1) local services for infants and mothers, services to be administered by local public health units with combined forces of state, local and federal funds, (2) to conditions in rural and other especially needy areas, (3) to the develop-

ment of demonstrations services, (4) to develop adequate divisions of maternal and infant health in state departments of health that can provide the leadership and administration assistance necessary to development of local services and state wide maternal and infant health educational activities.

In conclusion let me quote some alarming figures. "Recent statistics in this country continue to show a high maternal mortality rate, approximately 63 deaths in every 10,000 live births per year, with an infant mortality rate of 58 deaths in every 1,000 live births per year. However, the infant death-rate shows a slight decrease in recent years due to better obstetrical care. These figures, which are extremely high for a civilized country and which have shown comparatively slight changes over a period of years, should impress the public with the fact that "child bearing" is not yet the normal incident they have been led to believe, but a period in life in which the health and welfare of the future race is at stake."[1] In Time Magazine, May 25, 1936, Dr. De Lee says, "The lack of prenatal care is responsible for many deaths, despite some improvement. It is safe to say that not 25% of American women get proper prenatal care."

What are some of the things being done for these alarming figures? Here are a few: a flood of information is being presented to the women of today--not all of it good, but all calculated to impress upon them the necessity for good care during their pregnancy and

15. Woodward, Henry, M. D., Op. Cit., p. 16.

at delivery. Prenatal clinics are open for the public in all the cities. Thousands of dollars are being spent in research for toxemia and for adequate and safe analgesia. The Public Health nurses have launched a campaign on adequate prenatal care for city and county patients alike. And the obstetrician of today is a doctor trained in the science, art, and skill of obstetrics. He is able to reassure the patient mentally, watch for the first sign of impending danger, prepare for the delivery with all the aseptic means known, and able to train the mother in the care of herself and her baby.

Obstetrics has come a long way from the first known crude deliveries of 3000 years B. C., but with the present high mortality of the mother and child it still has a long road to travel until a greater safety is reached.

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