omitted from the series). In respect to bronchial and retroperitoneal nodes, fewer cases had to be omitted on the score of unavailable nodes. It may perhaps be surmised, then, that the majority of bronchial and retroperitoneal lymph nodes examined were executing their defensive duties with considerable success and were not letting through great numbers of organisms. The majority of mesenteric nodes in our series were doubtless reactive to unusual conditions and were permitting more organisms to get through the lines.

VIII. The retroperitoneal nodes are on a different footing from the bronchial nodes in that they more frequently contain organisms (84% vs. 64%). The combination of positive retroperitoneal node and positive cerebrospinal fluid is the most frequent two-out-of-three-combination (recalling in this respect the mesenteric series).

IX. Positive growths from all three loci were found in (a) mesenteric node combination, 55%; (b) retroperitoneal node combination, 52%; (c) bronchial node combination, 35%.

X. These combinations of growths are of interest whether one subscribes to the intravital or to the post-mortem invasion theory, since without doubt the tissues and their juices, including blood bacteriolysins, remain active for some time after apparent death.

XI. Our results, as before, incline us to the idea of intravital significance of the organisms found. The statistics show similar frequencies early and late post mortem, and the same high percentages of sterile cultures which the post-mortalist finds it so hard to explain.

XII. Tables are presented showing the main types of organism cultivated. Special remark is made of a protracted period in which an anthrax-like organism kept appearing in certain autopsies. The question of ward and laboratory epidemics or pseudo-epidemics of saprophyte forms is brought up.

XIII. On the basis of this work, important researches into intravital conditions can be imagined, especially in the field of bacteriemia and "low grade sepsis."

IMMIGRATION AND THE MIDWIFE PROBLEM.*

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THE interrelation of immigration and midwifery may not seem patent at first glance. A moment's thought, however, will show that in the problems relating to the restriction of immigration and the restriction of midwifery there are many points in common, not the least of which is the fact that both subjects are constantly suffering from criticism based upon inadequate and unintelligent study. The legal status of the immigrant and the legal status of the midwife also present points of contact.

At the present time the influx of immigrants is greater from the countries in Southern Europe,

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where the midwife exists as an established social institution. In 1910 over 20% of our immigration was from Italy, 25% from Austria Hungary and 18% from Russia. These are suggestive of the nationalities whose women are wont to make use of the midwife. In this country midwives are largely used by the Mexicans, Italians, Swedes, Syrians, Hungarians, Bohemians, Slavs, Poles, Finns, Russians and Austrians. This broad-spread national usage within this country makes apparent the relation between immigration and the midwife problem, and bids us consider for a moment what relation immigration has to the general subject of midwifery.

It is impossible to glean from immigration statistics any knowledge as to the number of midwives who enter this country, nor, indeed, is it possible to get any adequate information upon this point from an examination of the records of the various states of this country. The confusion which exists may be illustrated by the following: 21 cities in the United States report 3,360 midwives; 11 states report 3,708 registered midwives, while 8 states report 4,808 midwives as practicing in the state. Twelve states at least are frank enough to admit that they do not know anything about the midwives that are in their states; how many there are, or even the number of births that are reported by them. A study of the midwives registered in New York City shows that of 1,344 midwives, only 9.1% were born in this country: 26.4% were Italians, 20.6% Austrians, 23.1% Germans and 15.3% Russians. An investigation of 223 midwives in Chicago a few years ago showed of this small number 84 to be Germans, 36 Polish, 31 Bohemians, 13 Swedes and 8 Italians.

This brief reference to the nationality of the midwives gives some index of the relation of immigration to the midwife problem, but the problem has just begun in many ways. It is a striking fact that at the present time our immigration as indicated in 1910 consists largely of males from Italy, Russia, Roumania and Bulgaria, while the older type of immigration, such as the Scotch, Irish, French and German, reveals a more equal proportion of the males and females. This is well illustrated by the fact that for the year ending June 30, 1910, the immigration of Bulgarians, Servians, Montenegrins showed 14,253 males and 877 females.

	Males.	Females.
North Italians,	23,754	7,026
South Italians,	151,249	41,424
Russians,	14,918	2,376
Roumanians,	12,602	1,597
Scandinavians,	35,019	17,018
Scotch,	15,546	9,066
Irish,	21,075	17,307
French,	11,715	9,392
Germans,	42,191	29,189

In the present type of immigrating nationalities this disparity of the immigration of the sexes suggests that with the betterment of the economic conditions of the males in this country, a greater proportion of the females immigrate into this country, or else the prosperous males return to

their own country. The facts in general show that the former hypothesis more nearly approaches the truth. This means that within a few years there will be a large influx of females from Southern Europe, matrimony will be increased, and in consequence there will be a demand for a larger number of midwives. In other words, the present midwife problem in this country will be intensified in the future through immigration unless some check, at present not in use, tends to change the history of immigrants. All plans for the elimination of the midwives are at this time out of the question as illogical and impractical.

In their home countries, the women of various nations make free use of the midwives. The reason for this exists in tradition of many years' standing, and likewise the existence of a legal status of the midwife in the various countries. The midwife of the Heimath is a woman of recognized economic position, with more or less adequate training and under government supervision. For example, the obstetric training which is given to midwives abroad is usually under charge of the same professor of obstetrics who gives the course of instruction to the medical students, and the midwife receives an excellent obstetrical training. When one realizes the sad commentary upon medical education as related to midwifery, as pointed out in the article of J. Whitridge Williams, in which he says, "One half of the answers [from professors of obstetrics throughout the United States] state that ordinary practitioners lose proportionately as many women from puerperal infection as do midwives and over three quarters declare that more deaths occur each year from operations improperly performed by practitioners than from infection in the hands of midwives," it is well to think of the education that is given to our immigrant midwives. Dr. Barton Cooke Hirst practically states that our obstetric training is below the standards of almost all other civilized countries. Only three schools in America, according to this teacher, have facilities to meet the demands of any country. Our immigrant midwives who have received foreign training are certainly more capable and efficient in obstetrical work, at least when they come to this country, than are the graduates of our own medical institutions. The Prussian midwife receives professional training on the average of nine months; in France, at least one year; in Italy, two years; Switzerland, six months; Japan, one year; Netherlands, one to two years; Belgium, two years; Scandinavia, one year; England, six months to nine months. England has an elaborate system of training, supervision and control of the midwives. It is but natural that under such a social system the midwife should have a definite legal, economic and social status and that the people requiring her services should have confidence in her ability to give adequate care.

Such a state of affairs does not exist in this country. There are practically no legal standards; there is no recognized system of supervision

or control and no plan of education has been adopted in any particular state of the Union. Wherefore, the foreign trained midwife must needs come into competition with the graduates of the midwife diploma mills. Her status has altered and naturally or unnaturally, she is relegated into the position of a social outcast, scorned, maltreated, libeled and ignored, depending upon the particular state in which she takes up her work.

That there is a clientele awaiting her, anxious to make use of her services, is manifest by the large proportion of births which are registered by midwives. For example: 47% of the births reported in Chicago were under control of the midwives; 40.7% of the births of Baltimore; 45% in New York; 53% in Jersey City; 53% in Bridgeport; 24% in Philadelphia, and 5% in Omaha. This is merely suggestive of the fact that the total number of births where reports are available shows that the midwives are in attendance in from 5 to 53% of the confinements in various cities of the Union. It seems a blind position to neglect to appreciate the value of a class of the community which is responsible for the care of mother and child in at least 45% of the births of this country.

Another striking thing comes to mind. The immigrant midwife coming into this country enters into competition with physicians whose training frequently is not as good as her own. Under the stress of economic necessity their fees become low and probably average between \$5 and \$8 per case. In addition to their technical care, they give nursing attention and serve in the capacity of housekeeper, so that their services are far more valuable to the household, considered in its general aspects, than are the strictly professional duties performed by the physician competing for the same class of patrons.

The foreign born and trained physician, however, who immigrates to this country on the same boat with the midwife, and who must needs take up obstetric or medical work, is not permitted by the laws of this land to enter into the practice of medicine or surgery in most of the states of the Union until he has passed a state examination. To illustrate: during 1910, 365 physicians immigrated to this country, which number was composed of 7 Mexicans, 6 Russians, 13 Scandinavians, 14 French, 42 Scotch, 42 Italians, 40 Germans and 86 English physicians. These physicians, representing for the most part men trained by the same type of obstetricians as gave the professional training to midwives from their own nationalities, are not permitted to take up the practice of medicine, of which midwifery forms a part, without having their qualifications passed upon by representatives of the state.

The man midwife, as such, does not appear to be a recognized institution, and it is doubtful if the physician unable to pass the state examination as a doctor would desire to take up the work as a midwife, which he might readily do, inasmuch as he has had the adequate training, and there are no laws to prevent him from so doing.

As the result of a questionnaire sent out to the

State Boards of Health, replies were received from the officers of 42 states. Only 14 admitted having any laws or regulations, state, county or city, relating to the practice of midwifery; only 10 could give any information as to the number of midwives registered in their states; while only one could give any report as to the number of births reported by midwives during the year 1910. In two states the presence of midwives is not officially recognized, though in both of these states midwives are signing birth certificates.

At the present time, as far as we know, there are only two states, Ohio and Utah, that concede the existence of schools for midwives, although it is well known that numerous schools giving diplomas in midwifery exist throughout the country. Recently a school for midwives has been established in New York City to give thorough training to midwives. It is absolutely essential to have provision made for education before it is possible to establish standards for the educational and professional qualifications of midwives. Of 1,344 midwives in New York City, 38% hold diplomas from foreign schools. Of 150 Baltimore midwives, 42 had diplomas from foreign schools, and in Chicago, of 223 midwives, 67 had diplomas from foreign schools. Of the 1,344 midwives in New York City, however, 42.6% presented diplomas from schools within the United States. Apparently the question of education is being taken up by the midwives in this country, and also by those men who see in this class of people a chance for exploitation, although it cannot be gainsaid that some obstetrical training is better than none.

Much of the discontent with the service of midwives has arisen from a lack of understanding of their necessity and the traditions for their existence. With a lack of legal status, with real freedom from legislative control, it is not unnatural that a midwife should undergo degeneration in this country. Yet it is a striking fact that in New York City 29 of the midwives arrested had a United States diploma, while only 9 were arrested having a foreign diploma, showing that apparently the standard of morality created by the United States diploma mills is not comparable with that built up by the foreign schools, or else the foreign trained midwife is more shrewd in her illegality and less frequently detected.

These figures are substantiated in Baltimore, where 48 out of 100 midwives were suspected of criminal procedures, but 25 of this number were Americans or negroes out of a total number of 80 belonging to these two groups.

Criminality among midwives is presumably all too frequent, although probably it occurs in no larger percentage of the cases than exists among the types of physicians with whom the midwives are competing. As immigration is designed in part to limit the entrance of criminal classes to this country, it is desirable to know what proportion of the females coming to this country are midwives and how many are convicted for performing illegal operations within the three-year period, so that prompt deportation

might occur whenever such conviction was secured.

Immigration presents a problem as regards infant mortality, and in this phase of the problem the question of immigrant midwives deserves full consideration, inasmuch as she has the multiform position of medical attendant, nurse, housekeeper and general adviser regarding the care of the infant whom she has brought into the world during the period of her attendance upon the mother.

Dr. Newsholme recommends the adequate training of midwives as an essential feature of every program designed for reducing infant mortality.

That midwives are effective in preserving the lives of mothers that they later may take care of their own children may be illustrated by figures gleaned from Italy and England. In Italy the deaths from puerperal fever in 1887 were 8.5 per 100,000. In 1890 a law providing governmental control of midwives was enacted. The death-rate from this single cause dropped to 3.2 per 100,000 in 1902. Deaths from all other diseases of pregnancy, parturition and the puerperium dropped from 15 per 100,000 in 1887 to 5.3 per 100,000 in 1902. In England, the Midwives Act went into effect in 1902. The deaths from puerperal fever for the fifteen years previous to 1903 varied from 10.9 to 20 per 100,000 females living; in 1903, after the act went into force, the rate from this cause dropped to 9.7, and in 1907 it had fallen to 8.1 per 100,000.

In order to appreciate the relation of immigration to midwifery, it is necessary to ascertain how many midwives are admitted to this country. In order to protect the country from the unscrupulous midwife, it is essential that a system of education, supervision and control be established throughout the various states of the Union. Only by education, standardizing, legislating and controlling the immigrant midwife will it be possible to prevent an increase of the dangers now attributed to midwifery as it at present exists among our constantly increasing immigrant population. The increase in midwives depends upon the increase of female immigration. The standards of midwifery in this country should be raised at least to the standards existent in the countries from which the immigrant midwife comes. By the further control of immigration and the securing of information relating to the educational, professional and legal status of midwives, it will be possible to place the midwife problem in an intelligent manner before the American public.

THE EFFICIENCY OF THE OPERATIVE POPULATION OF A TEXTILE CITY AS VIEWED FROM A SURGICAL STANDPOINT.

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FALL RIVER, MASS., is to-day the largest cotton manufacturing city in the United States. The operatives in the mills number approximately