

## Section on Commercial Interests

Papers Presented at the Sixty-Second Annual Convention

### THE SALE OF BIOLOGICALS.

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"The present is the perpetually moving spot where history ends and prophecy begins. It is our only possession; the past we reach through lapsing memory, halting recollection, hearsay and belief; we pierce the future by wistful faith or anxious hope, but the present is based on fact."

So says a modern writer and we do not gainsay him truth, yet we build to-day with hope for to-morrow. The past is past—What of the future?—What of to-day?

It was 118 years ago that the practice of vaccination against Small-pox was introduced and some twenty years ago that Anti-Diphtheritic Serum was first marketed, but it is during the last decade that the greatest advances in Serum Therapy have been made, and our Biological Materia Medica has been so greatly enlarged by the various Serums, Bacterial Vaccines, Phylacogens and Sensitized Vaccines that are coming to play such an important part in the practice of medicines that when the physician of to-day is called upon to prescribe for his patient his mind turns in many instances to Biological Materia Medica for the remedy.

This being so, it behooves the pharmacist to be thoroughly informed, not only as to the different biological products, their distinguishing points, methods of production, usage in the treatment and prophylaxis of disease, but the methods of best preserving them in active condition and commercially of the most effective ways of bringing them to the attention of the physicians and the public.

That comparatively few pharmacists are keeping up to date on this rapidly changing line is an admitted fact, and failing to be posted they are naturally unable to take care of the demand that may be made on them for biological materials. The elaborate and expensive plants and complex methods necessary to the production of Serums and the modern Bacterial Vaccines makes it obligatory for the manufacturer to depend for distribution, and the physician and public for supplies on the dispensing pharmacist or other local source of supply, we should therefore be prepared to meet the demand for this class of material which affords a good margin of profit and for which the user naturally looks to the pharmacist.

Let us briefly mention the various Biologicals with their distinguishing points. Diphtheria Antitoxin is the only one at present official in the Pharmacopœia. Its method of production is fairly well understood. In the twenty years that it has been in use, the mortality from Diphtheria has been greatly reduced, danger of epidemic lessened and to-day its use is the first thought in this disease, and Diphtheria has ceased to be the universally dreaded scourge it was. Tetanus

Antitoxin and the Anti-Bacterial Serums, Anti-Streptococcic, Anti-Pneumococcic, Anti Meningitis, Anti-Dysenteric, Anti-Anthrax are all produced in a manner similar to Diphtheria Antitoxin by developing in horses by repeated injection of either a toxin or bacterial culture a high degree of immunity, the blood serum from these animals after purification representing the marketed product. Normal Serum, the purified serum from the blood of healthy horses is used in the treatment of Hemophilla and has quite an extensive sale.

Small-pox Vaccine marketed in capillary tubes and glass or ivory points is the original Biological; its method of production is doubtless familiar to all of us, and commercially this product is of considerable interest.

Bacterial Vaccines are the product of Bacterial cultures on a suitable media, they representing commercially either the solution of the product of a specific organism, or of several combined varieties, their medicinal value lying in their property of raising the resistance power in the body to infection; that is to stimulate the Phagocytes that nature provides for fighting infection. The principal commercial varieties are Acne, Coli, Diphtheria (for immunity), Neisser (Gonococcic) Pneumo, Staphylococcic, Streptococcic, Typho and various combinations of these forms.

Phylacogens are "Sterile aqueous solutions of substances generated by bacteria grown in artificial media," they are, substantially, mixed bacterial vaccines, those bearing a specific name showing a preponderance of the named organism, the principal varieties are Mixed Infection, Gonorrhoea, Rheumatism, Pneumonia. Their use medicinally is similar to that of Bacterial Vaccines, they following Shaeffer's theory that in all infection, the growth of all forms of pathogenic organism is stimulated and to successfully combat disease all forms of infection must be combated.

Sensitized Bacterins, marketed as Serobacterins, are prepared after the method of Besredka, by bringing live bacterial cultures on artificial media, into contact with the blood serum of an animal which has been previously rendered immune to the specific infection; that is, one whose blood has been heavily charged with antibodies, a precipitate is formed which is freed from adhering serum, purified and killed mechanically, an aqueous mixture with suitable preservative representing the commercial product. They are used medicinally in the same way as Bacterial Vaccines and Phylacogens; the claim being made that they produce quicker and more lasting immunity with less reaction, the marketed forms are practically same as the Bacterial Vaccines. Tuberculins, for diagnostic and therapeutic use, are produced from cultures of the Tubercular Bacillus. They are marketed in various forms both concentrated and dilute and are largely used by a limited number of physicians.

Various cultures of the Bacillus Bulgaricus both in liquid and dry form are becoming important commercial products; following the theory of Metchinkoff of Paris they are used in the treatment of various conditions due to intestinal infection, cultures are also marketed for the production of buttermilk, the use of which is along the same lines.

That it is manifestly impossible for the pharmacist to carry in stock all of these items is evident, but the well-regulated stock should include in addition to Diphtheria Antitoxin and Small-pox Vaccine, Normal Serum, Anti-Streptococcic

Serum, Tetanus Antitoxin, Anti-Meningitis and Anti-Pneumococcic Serums and an assortment of Phylacogens or Bacterial Vaccines, including Acne, Gonococcic, Streptococcic, Staphylococcic Typhoid, both treatment and immunizing, and Mixed Staphylo Bacterin, the quantity to be carried must necessarily vary in different localities and should be regulated by the volume of business (that is, the number of people you might normally be called on to serve), and the distance from a dependable source of supply. It should be sufficient to care for a reasonable demand and where the source of supply is so situated that fresh stock can be obtained within twenty-four hours a representative stock might include in Diphtheria Antitoxin six packages of One Thousand Units, and two each of 3000, 5000 and 10,000. Twenty vaccinations against Small-pox and double this amount of all except the 1000 Unit Diphtheria Antitoxin should the source of supply be more distant.

Of Anti-Streptococcic Serum and Tetanus Antitoxin, six curative packages each should be carried. For in treating severe cases one package is used every six hours; two immunizing packages of these should be carried as well. A smaller amount of other Serums will suffice as will of the Bacterial Vaccines in which it is advisable to carry in stock the larger packages. After you learn your trade and have established a demand for these preparations, a little care and observance will enable you to keep the stock in good condition, but do not overstock vaccines, as in many instances the sale of a single package is all you may expect for a case under treatment. The manufacturers, in most instances, provide for exchange of unsalable stock, but with this material it is very easy to tie up an unnecessary amount of capital.

As to the best methods of preserving, the manufacturers of the various Serums and Vaccines have given a great deal of time to experiments along this line, the results of which show in what manner they may be best preserved,—that is, their activity retained for the longest period.—They should be kept in the dark, this is easily done as they are marketed in light-proof packages. These packages, also, in most cases, bear a date after which time they should be no longer sold. They should be kept at an even temperature preferably at 40° F. or thereabout, it having been shown conclusively that the rate of deterioration of Serums stored at this temperature for a considerable time is 16% as compared with from 30 to 40% at the ordinary room temperature, while the deterioration of Small-pox Vaccine is much more rapid, in warm weather, it often losing its efficiency in a few days, while if kept at a low temperature its activity is retained and at 10° F. it may be kept for a long period.

The rate of deterioration of Bacterial Vaccines and Phylacogens is still somewhat questionable and there is no doubt but that they retain their activity longer if kept cold. Temperature being such an important factor, it is advisable that all biologicals be stored in a refrigerator so constructed that the packages may be kept cold, dry and slightly and at the same time be readily accessible. One constructed entirely of metal or porcelain, is preferable and if properly arranged will keep your stock in good condition and may be made a valuable advertising asset; and also of use in storing other preparations liable to rapid deterioration such as Ergot and Digitalis preparations, Culture Media, etc. Personally, I have found a refrigerator of this kind a most valuable addition to store equipment.

Now, having a stock of Biologicals and providing for their being well stored, the question of sale is of paramount importance; during the first few years that Diphtheria Antitoxin was on the market, the use of it was confined principally to the specialists in diseases of the throat. Among the medical profession to-day its use is well nigh universal; all schools and classes of physicians resorting to its use when the opportunity presents itself. The newer Biologicals have been used until lately by comparatively few physicians, but the opportunity for business to-day, and in the future, lies through those physicians in general practice whose investigation along Biological lines is comparatively limited. These men are possible good friends of your pharmacy, their patients are your good customers and will turn to you for supplies. Be prepared when the opportunity comes to talk Biologicals to these men, study the literature on the subject that may be easily obtained from the manufacturers; read carefully the various articles that appear in the trade journals from time to time along this line and if the opportunity presents itself visit one of the larger Biological Laboratories where you can get the information at first hand, *get this information* so that when the opportunity comes to make use of it, you will not have to say "Well, I don't know much about that, but maybe I can find out," but will be able to identify the particular Biological that is needed for the case in question. Remember that the psychological factor in making a sale is an important one and that you must know the value of your merchandise before you can impress its value on another. I hear someone say, "We are not practicing medicine for the physicians, let them do that for themselves; we're in business to supply what is called for, not to tell what is wanted." Quite true, but neither are you practicing pharmacy for yourself unless you are thoroughly familiar with the composition and therapeutic value of the medicines and agents that are used to-day, and if your interests are Pharmaceutical rather than purely commercial, you will be up to the times. If not, you will be distanced by some more energetic fellow who has kept up-to-date and is willing to impart his knowledge when the opportunity is at hand.

Advertise Biologicals to the Medical Profession, informing them that you are carrying a complete assortment, stored under proper conditions, and that you know their therapeutic use. Advertise them too, to the public, for with the very considerable amount of publicity that has been given to Bacterial and Serum treatment of various kinds for the last two years in magazines and the daily press, the better read people have a more or less defined knowledge of Biologicals in the treatment of disease and will be attracted by your advertising a line of medicines that they know are coming into more extensive use continually.

Personally, I have used street car advertising with marked success, running for some time a card calling attention to my installation of a special refrigerator where biological products were stored under ideal conditions; asking inspection of it, and saying that these products were supplied only on physician's orders. Also a card on Anti-Typhoid inoculation for the production of immunity against Typhoid Fever at a time when this disease was prevalent. Use methods of this kind or well-worded newspaper advertising, coupled with window displays of dummy packages and display of attractive placards. Your good friend the "general public" is very amenable to suggestion, if it be timely and about something that is of interest; so advertise Vaccine when Small-pox is an epidemic. Typhoid

Vaccine when this disease is prevalent, Diphtheria Antitoxin at appropriate seasons and Tetanus Antitoxin before the Fourth of July.

The margin of profit is good and people will respond, your physician will benefit as much as you and if your advertising is dignified you can not be accused of overstepping the bounds of proper publicity.

When the demand comes to your establishment, see that you are there to take care of it or have some one who is equally well informed, don't let the junior do it all; but be awake when opportunity comes your way, for we are told that "she knocks but once at every door."

As to Autogenous Vaccines, that is, Bacterial Vaccines prepared from cultures of individual cases for the treatment of such cases, on account of the apparatus and time necessary for their production, these cannot be undertaken by the pharmacist with any degree of success, except in rare instances, but an arrangement with the larger manufacturers is available which will enable you to take care of any demand that you may have. Rabies treatments may also be taken care of in this way, and while these items do not afford a large percentage of profit, they are handled on a cash basis and you have no investment to make.

So far, we have considered only the Biologicals used in human practice. In the veterinary line there is a fertile field for those stores which are so situated that they are able to get in touch with the veterinary and farmer trade and to obtain business along veterinary lines, for a profitable trade can be readily established. They use Biologicals largely and the present indication seems to be that the horse is far from being displaced by the motor, while the demand for dairy biologicals continues to increase.

Tetanus Antitoxin in veterinary practice is highly successful and the use of immunizing doses of Tetanus Antitoxin is a routine procedure with the better veterinarians in all surgical cases. Anti-Streptococcic Serum has a very considerable demand, as has Veterinary Diphtheria Antitoxin. Among the Bacterial Vaccines, Mixed Bacterins of Polyvalent type, Pneumococcic, Streptococcic Bacterins and Anthrax and Abortive Vaccines and the various Veterinary Phylacogens are considerably used, while the demand for Tuberculin and Mallein is steady.

In point of quantity, Hog Cholera Serum is the largest item among Biological preparations, the amount used in some sections being enormous.

These items can be advertised to farmers and veterinarians and a very profitable business be secured with little effort where proper conditions exist.

Summing up the whole matter—If you are not developing the business in your territory along Biological lines you are neglecting a great opportunity for profitable trade.

Their use has shortened the duration of many diseases and practically eliminated others. It has decreased the need for ordinary medication to a marked degree and so curtailed your profits to some extent. What the development along these lines will be in the next decade we hesitate to predict, certainly there will be great advances and great developments. Be well informed and get the business in your field while it is developing, and keep in mind that saying "He who knows and knows that he knows is a wise man."

## DISCUSSION.

Chairman Mason said that it had been his contention for a number of years that the future of the druggist was right along this line of biological products; that the materia medica is going to diminish in importance, and the future is in the direction of biological products. Chairman Mason said further that he was afraid that the American druggists have not appreciated this fact, and for that reason he had solicited these two papers on the subject, hoping that the authors would act somewhat as missionaries. The Chairman said if there were any others present who could give their experience in the sale of biological products, he would be delighted to have them do so.

Mr. Cornelius Osseward, of Seattle, said it had been his experience that biologics were getting less attention from the druggists than any other line that has recently been put in the drug-stores. He spoke of that because of the number of clerks he had recently employed, it had been his experience that everyone of them came to his store knowing nothing whatsoever about biological products, and the result was that he himself had to be "on the job" all the time, unless he got a man who would take enough interest in the subject to take it up and study it. It did not take much time for a man to become posted on the subject. It was a good line, and there was a good profit in it, and the druggist could get as much as forty per cent. plus his cash discount on the goods, and he did not see why the druggists do not take up that line more than they do. In his case he was somewhat at a disadvantage in that he was so far away from the eastern markets that he had to carry an immense stock, which made it necessary for him to have between twenty-five hundred and three thousand dollars invested in biologics. The reason for this was because the physicians insisted on goods made by different manufacturers, and this required carrying, sometimes as many as five different makes. This is a hardship, and it meant the investment of a lot of money that really was not necessary, with druggists who were close to the market. Where there was but one man in the city who handled biologics, he did not need to have more than one line because he was independent. In his case, there were five or six other druggists who handled biologics to some extent, which made it necessary for him to carry most of the makes which were on the market, which was the only disadvantage he claimed for carrying biologics in his vicinity.

Mr. Selzer said he used to handle serums, but, because the city now distributed it free, to rich or poor alike, as well as vaccine virus, he had discontinued doing so.

Mr. Holzhauser said, the Board of Health in his city, supplies biological products to rich and poor alike, and the Board has stations for their distribution in various drug-stores throughout the city. This was true of all the biological products with the exception of a few which are not in common use. The Board of Health had charge of the whole thing and the druggists simply acted as distributing agents.

Chairman Mason asked Mr. Holzhauser what the druggist got out of it, to which question Mr. Holzhauser replied that they got nothing, except glory. (Laughter.)

Chairman Mason then asked Dr. Charles T. P. Fennel, of Cincinnati, to explain why it is that any city Board of Health distributes free antitoxin to any one except the indigent.

Dr. Fennel replied that he was just going to say that the same conditions existed in Cincinnati with their Board of Health, and they had the additional misfortune of having a surgical instrument house in their city which catered to the medical profession, and offered them a twenty per cent. discount on their goods, with the result that the druggists who carried a line of surgical instruments, were placed at a disadvantage, and only had calls for these articles in the night time when the Board of Health and the surgical instrument house were closed, and consequently there was no profit in these lines in Cincinnati.

Mr. Holzhauser said, originally, in his city, the Board of Health provided antitoxin only for the poor, and the way the change was brought about to provide it to the people who were not poor, was by a gentleman coming into his store one night who had a child sick with diphtheria. In this case the culture had been sent to the Board of Health Station, and the report made that it was a case of true diphtheria. The gentleman on getting this report, wanted a bottle of antitoxin, but was told he could not have it as he was not poor. Mr. Holzhauser said he saw the ridiculousness of the position and he went to the Board of Health about it. As a result of this incident the Board of Health started their own department and developed along the line he had indicated.

Mr. E. H. Thiesing, of Cincinnati, said he would like to call attention to a few interesting situations which had existed in Cincinnati some years ago in regard to this very product; that the druggists woke up to the fact that they were selling no antitoxin at all; that the local association then took the matter up and after some investigation it was discovered that two firms in the city were delivering antitoxin to the physicians at the same prices that the druggists were paying for it, with a two per cent. discount; that the druggists finally decided to make an effort to have antitoxin of their own brand, and they got in touch with the Board of Health, and with their cooperation, the local association has made an arrangement with the Memorial Institute of Chicago, he believed, by which the druggists are now selling antitoxin in quantities of five thousand units for \$2.25 to the public, against the former retail price of \$7.50; that the association had in this way brought back to the druggists about eighty-five per cent. of the trade in antitoxin, whereas previous to the druggists making this arrangement, the sale was in the hands of two firms in the city.

Mr. Thiesing said he mentioned this because it might be advantageous to do this in other places. The antitoxin is now handled in his city through the local association, and is also being supplied to some small towns outside of the city, and they can sell it at this same price. He thought 3,000 units were sold at \$1.50, and 1,000 at eighty cents. The arrangement had been quite an advantage to the public, and had brought back to the druggists the sale of the antitoxin, which they had not had for a little while. The arrangement had been brought about only through cooperation with the Board of Health, and each package of the goods was marked with the approval and consent of the Cincinnati Board of Health.

Mr. Holzhauer said they had at his store arrangements to receive diphtheria slides which went to the Board of Health, and in twenty-four hours the physician knew whether he had a case of diphtheria or not. Otherwise, the physician went on treating his case two or three or four days before he absolutely made up his mind whether he had a case of diphtheria. This was true with other diseases all the way down to tuberculosis. In a suspected case of tuberculosis, the sputum cup is used, and the sputum is examined, and in twenty-four hours the physician knew whether he had a case of tuberculosis.

He never liked to turn his back on anything that provided profit for the druggist, but it did seem to him that it was a case of doing the greatest good to the greatest number, and with the Board of Health managing this thing he thought it was a great deal better for the patients who were suffering from these diseases to have it under such control, rather than to have a physician "fool" along for a week before he made up his mind whether he had a case of typhoid fever, for example. As it was now, the physician knew inside of twenty-four hours, and it seemed to him, while he received less profit, still it was a great benefit to the community at large.

Mr. Selzer said in his city all the police stations furnished antitoxin, and the physician did not have to go down street to get it; that the police stations supplied it, and the physician did not have to tell what it was for.

Chairman Mason called on Mr. Leonard Seltzer, of Detroit, for some comments on this subject. Mr. Seltzer said he had not been able to determine how far the sale of biological products had been interfered with by the distribution of such products by the Boards of Health. The sale of such products has been somewhat interfered with, but he had not seen much interference, so far as antitoxin was concerned. He did not know, of course, how much he did not sell, but simply how much he sold. So far as the sale of biological products was concerned, it seemed to be only a good means of pulling other business. It was a good plan, in order to keep in touch with the physicians, to have a full line of biological products, and keep them in good condition.

Mr. Holzhauer asked Mr. Selzer how much he lost by deterioration? Mr. Selzer replied, he had never figured it out, but he did not remember of having lost a single package of antitoxin, although once in a while he had lost some of the others.

Mr. Bowman thought they were losing sight of one very important thing in this discussion; that the thing to do was to make the public believe that your own store keeps biological products in better shape than any one else in town. A certain number of people in every community knew who had the best goods, and they will come to you because they know your goods are all right, and you know what you are doing, and they do not know what kind of goods this Board of Health "stuff" is, particularly with the newer biologics. The druggist should put himself in such shape before the public that when they need any of these things, he will be the first man to come into their mind, and they will go to his store and buy them. It was good advertising to the public and that was the one great point in the sale of biological products.

Mr. Osseward agreed heartily with the last speaker, and said that the pharmacist should so conduct his store that the public would come to him. He further said that he had an incubator in his store, which the physicians use. They put their cultures in this incubator when they want to find out the nature of an infection, and, in the case of diphtheria, after the physician has left his culture, he comes back to the store and gets his culture before he goes to the patient. The physician makes his test, and the culture incubates in the store, and the next morning the authorities come around to the store and inspect the culture, and the physician gets the report and comes to his store, because there is where the culture was incubated. The incubator was one of the best investments he had ever made, it had cost him a hundred dollars, although you can get a small one for fifty dollars. It was because he had this incubator, that when the physician got his antitoxin, or his biologics, he came to him, as their store had the reputation of having everything that is on the market in the way of biological products.

Chairman Mason said he thought they had perhaps given sufficient time to this subject, and he simply wanted to say in concluding the discussion that both Mr. Bowman and Mr. Osseward of Seattle have made a brilliant success in the sale of biologic products, and that they have shown what can be done by giving some study and attention to the subject.