

dorsum of the ilium by hard traction on the leg or on the yarn skeins, or, in older children, a tackle of blocks and rope may be used to overcome the resistance of shortened muscles and fascia.

When the head is over the acetabulum it may, in some instances, be thrust into the socket by firm pressure inward over the trochanter. Sometimes this maneuver has to be combined with abduction of the leg, made while the traction is maintained, the operator pressing the while firmly on the trochanter and supplying a fulcrum so that the head may be made to travel downward and inward and jump over the acetabular rim into the socket. There is one objection to the traction, for it makes a pull on the anterior fibers of the capsule and narrows the opening, and so occasionally one finds that, after reasonable efforts, in which the capsule has probably become somewhat stretched, flexion of the hip and manipulation of the leg—the direction of the movements being guided by the finger in the joint—succeeds in slipping the head into the acetabulum without the use of force at all. In not a few instances, in young children, from two to four years old, this may be done primarily, without the preliminary pull on the leg.

In a fair proportion of these cases there is a twist in the upper part of the femoral shaft so that the neck and head look forward when the toes are pointed in the same direction. Whether this is the case or not can always be determined by radiograms, one taken with the toes pointing forward, and another with the legs rotated out. If there is the twist forward in the bone, it will be necessary to compensate for it by rotating the whole limb inward during the manipulations to direct the head into the acetabulum. Once the head is in the acetabulum the limb is put into a position of abduction of from 50° to 90° and rotated in or not as may be necessary. This position thrusts the head more firmly into the acetabulum and prevents relaxation. The two retracting cat-gut loops are now tied together to close the upper part of the incision in the capsule. The lower part of the capsule incision, by the act of reduction, has been carried so deeply into the limb that it can not be reached to be sutured. Sutures are then put in the fascia, deep and superficial, leaving space for the insertion of a cigarette drain down to the capsule. Finally the skin is sutured and then both limbs and the pelvis are put into a double plaster of paris spica. Even if but one hip is operated on, both limbs must be included in the first retentive plaster dressing.

AFTER-TREATMENT.

After forty-eight hours the drains are taken out, and if there has been no sepsis, the leg is left undisturbed for three months. If sepsis occurs it is right to relaxate to avoid an ankylosed hip.

After three months the spica is taken off, and the limb adducted somewhat and another spica put on, including only the leg of the side of the operation in the one-sided cases, but both legs in the double cases.

After another month or so this may be arranged so as to leave the foot free, and the child may then be made to walk in the plaster. After six months have elapsed the spica may be made only to include the thigh and pelvis, leaving the knee free. After eight or nine months the retentive dressing may be left off entirely.

THE TREND OF MODERN PRESCRIPTION WRITING.*

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The object of this paper is to show the trend of the physician in his prescribing at the present time. Five hundred prescriptions were carefully examined as they were received and filed in each of two of Philadelphia's best prescription stores, both of which are managed by able and energetic pharmacists, who have had collegiate training.

Five hundred prescriptions were examined in each store in order to make proper comparisons, and also to give a more general report of the type of the modern prescription.

These stores were so located that they received prescriptions from all the leading physicians of the city, and a large number of the prescriptions were from the pens of the professors and instructors on our medical school and hospital staffs, as well as a number from physicians in general practice, so that these prescriptions represent the type of prescription as written by our best practitioners in the twentieth century.

The following table gives the results of my investigation, these prescriptions all being written since January 1, 1904:

1,000 Prescriptions.	Store No. 1.	Store No. 2.	Total expressed in percentage.
Number containing chemical incompatibilities.....	8	5	1.3
Number containing pharmaceutical incompatibilities.....	10	3	1.3
Number containing therapeutic incompatibilities.....	1	...	0.1
Number containing 6 or more ingredients.....	34	16	5
Number containing 2 to 5 ingredients.....	347	371	71.8
Number containing one drug or preparation.....	119	113	23.2
Number containing only official preparations.....	244	240	48.4
Number containing proprietary preparations in whole or part.....	195	164	35.9
Number containing patent medicines.....	1	1	0.2
Number in which the metric system was employed.....	3	2	0.5
Number containing non-official preparations in whole or part.....	60	95	15.5
Number written correctly.....	328	293	62.1
Total prescriptions examined.....	500	500	100.0

Now let us consider these prescriptions under the various headings as classified above:

PRESCRIPTIONS CONTAINING CHEMICAL INCOMPATIBILITIES.

Only those were considered where a dangerous or objectionable compound would result from dispensing the prescription as ordered (intentional incompatibilities not being considered), and we find eight in the one series and five in the other. This is a good showing, but it would have been far better if there had been none, as in some instances the prescriber had to be notified and the prescription altered, in others a "shake well" label would suffice to obviate possible danger.

This shows two things: first, the importance of having our prescriptions compounded by competent pharmacists, who have a thorough knowledge of chemistry, and who can act as a "safety valve" when dangerous compounds are ordered, either through oversight or ignorance on the part of the prescriber. Second, the importance of every physician having a general knowledge,

* Read before the Philadelphia County Medical Society, 1904.

at least, of chemical combinations, and how to intelligently combine drugs in order to obtain the best results without forming dangerous compounds.

PRESCRIPTIONS CONTAINING PHARMACEUTIC INCOMPATIBILITIES.

This heading is of particular importance to the pharmacist, as it is his duty to dispense as elegant and palatable preparations as possible.

As in the first group, only those prescriptions were classified which were particularly objectionable or unsightly in appearance, nauseating in taste or difficult to dispense as ordered. We obtained ten from the one store and three from the other. It has been frequently said that if a physician had to take some of the "potions" that he orders, there would be a radical change in modern prescription writing.

Every medical school should give a complete course in prescription dispensing in the pharmaceutical laboratory, as this knowledge would be of inestimable value not only in framing elegant combinations, but would be of especial service to the country practitioner who is compelled to compound his own medicine.

PRESCRIPTIONS CONTAINING THERAPEUTIC INCOMPATIBILITIES.

Only one prescription was found that was particularly antagonistic from a therapeutic standpoint, and this shows that the average medical student is more thoroughly trained in therapeutics than he is in pharmacology.

PRESCRIPTIONS CONTAINING SIX OR MORE INGREDIENTS.

Thirty-four in the one series and sixteen in the other contained six or more ingredients, and it was a noticeable fact that the majority of these prescriptions were written by a certain few physicians who had drifted into polypharmacy. It is pleasing to note that this tendency is gradually dying out, and we hope that the day is not far distant when the old "shotgun" prescriptions, of from twelve to fifty ingredients, will be framed as curiosities of by-gone days.

Another noteworthy fact is that these prescriptions are mostly written by the very old practitioners. If this improvement had only occurred years ago, homeopathy would not have gained its present foothold; then, again, the system of prescribing as used in our best hospitals is so designed as to use only single drugs or preparations, and to make these as elegant and palatable as possible—a good step in the right direction.

PRESCRIPTIONS CONTAINING FROM TWO TO FIVE INGREDIENTS.

This constitutes the great majority, almost three-fourths, of the prescriptions, and shows a great improvement over the prescription of a century ago, when it was the popular belief that the greater the number of ingredients the greater the chance of cure. This rule would apply where ignorance in diagnosis exists, as by this theory the greater the number of ingredients present the more likelihood of administering something that will be of service. A good example of this is the old Warburg's tincture; the original formula as directed by Dr. Warburg contained the old "*confectio democraticis*." This was a complex astringent confection containing opium, and originally had sixty-four ingredients, many of the constituents being unobtainable at the present day.

PRESCRIPTIONS CONTAINING ONE DRUG OR PREPARATION.

It is pleasing to state that the greater number of

these prescriptions were written by our most able practitioners, men who are prominent in medical teaching, and while they do not represent quite one-fourth of the total number, this is not a bad showing.

PRESCRIPTIONS CONTAINING ONLY OFFICIAL PREPARATIONS.

Approximately one-half belonged to this group, and it will be noted the very slight variation in this respect in the two series. This is likewise encouraging, and may the day be not far distant when the number will be increased still more. A point of interest observed here was that the more educated the physician the greater the use of the United States Pharmacopeia.

PRESCRIPTIONS CONTAINING PROPRIETARY PREPARATIONS IN WHOLE OR PART.

One hundred and ninety-five of the one series and 164 of the other, about 36 per cent., contained proprietary preparations, or, in other words, more than one in three prescriptions.

This is a good showing, when we consider that the manufacturing chemists employ persuasive salesmen, who visit every physician's office at stated periods and present him with a liberal supply of their "ideal" preparations, which are always "superior to any other made," and which are usually combined by a "peculiar" chemical process that enhances their therapeutic activity.

PRESCRIPTIONS CONTAINING PATENT MEDICINES.

Only two of the prescriptions were for patent medicines, and one of these was written by an "osteopath," so that we are only responsible for one, and this was one too many. How any regularly qualified practitioner of medicine could so disgrace himself and his profession as to order patent medicines is beyond my comprehension.

PRESCRIPTIONS IN WHICH THE METRIC SYSTEM WAS EMPLOYED.

Only three of the one series and two of the other demonstrate the fact that the metric system is but little employed at the present time, and its use does not materially increase, as my own experience in the retail drug business for a number of years corroborates. One fact is observed, when a practitioner uses the metric system, he uses it exclusively. It is to be regretted that the profession does not adopt this system and use it exclusively, as it is simpler, more scientific and in every way preferable to our present system of weights and measures. The leading medical schools give their students a thorough training in this system, and teach them how to convert the various denominations into the English system, and vice versa, but after leaving the college halls this is all thrown aside.

PRESCRIPTIONS CONTAINING NON-OFFICIAL PREPARATIONS IN WHOLE OR PART.

In this group are classified prescriptions containing commonly used preparations which are not recognized by the United States Pharmacopeia, but which can be prepared by any pharmacist, such as elixir of iron, quinin and strychnin. In this group we have sixty in the one series and ninety-five in the other, showing considerable variation, a noteworthy feature being that the series that yielded a large number, thirty-four, of the polypharmacy type of prescription, yielded the small number, sixty, of this type, while the other series that yielded sixteen of the former yielded ninety-five of the latter. A proportionate comparison.

NUMBER OF PRESCRIPTIONS WRITTEN CORRECTLY.

The criticisms in prescription writing applied to the

endings used in designating the drugs or preparations and the use of the proper official names as embodied in the inscription, and the proper phraseology as applicable to the subscription. As a rule, the prescriptions of the teaching class of practitioners were correctly written to a great extent, while those of some of the regular practitioners were carelessly written, and those of others showed a marked defect in the knowledge of prescription writing. This was especially noticeable among the prescriptions of the more recent graduates. Less than two-thirds were correctly written, and this is largely due to the deficient training in this important subject in the average medical school. Several of the prescriptions were written by a young practitioner who received the highest average among 400 men at a recent examination of the state medical board, yet every one of his prescriptions showed errors in writing and in combining drugs. This merely shows that his training was deficient in this important subject.

IMPORTANCE OF PROPER TRAINING IN THIS BRANCH OF MEDICINE.

Now, who is responsible for this deficiency? Is it the teacher, the means at his command and time allotted for teaching the subject, or the student, that is at fault? The teacher is often a physician, who has never received any practical pharmaceutical training other than the "smattering course" that he received as a medical student, and, as a rule, on account of limited training and lack of interest, he follows the same rut as his predecessor; as a consequence, the pharmaceutical laboratory is deficient in its equipment and very unattractive.

Because of these facts, officers and trustees consider this branch of medicine unimportant, and the student, not realizing the value of a pharmaceutical training, completes the course ignorant of its many valuable points, and usually not until he reaches the senior year and commences to prescribe does he fully realize his deficiency in the knowledge of the mode of preparation, appearance, administration and effects of combining drugs, the very ammunition he is to use in firing his gun of knowledge to combat disease. It is not, however, until as a physician, authorized to use blank and pencil, and brought face to face with the patient, that he most seriously and keenly feels the sting of his pharmaceutical ignorance; tries to formulate a palatable mixture and fails, expects to find a nice clear solution when he calls, only to find one with an unsightly and often dangerous precipitate. It is now after repeated failures that the horizon is filled with attractive-looking proprietary preparations, and these are substituted for the official drugs, because the label states that they are specific for the disease under consideration. As a result, this habit once established is continued through life.

Three of the above prescriptions were written by "osteopaths" and they all showed utter ignorance of the first principles of prescription writing. This should be a warning to us, because, if osteopaths should receive recognition in the various states they will attempt to prescribe medicines and to treat all diseases, not limiting themselves to their own particular methods. The medical profession should be aroused to this matter and take action before it is too late. In the past few months several scathing editorials have appeared in the daily press relative to the large number of incompetent practitioners who are turned out by our medical schools, and the state board suggests an investigation of the present methods of teaching and the adoption of a more

However, in looking over the examination results of the various state boards as compiled in the Aug. 13, 1904, number of THE JOURNAL of the American Medical Association, we find that the percentages of failures from the Philadelphia medical schools vary from none to 8.6 per cent. for the year 1903, and this was the most satisfactory showing of any state in the series, when one considers the number of students examined.

The total number of candidates examined in the thirty-seven states was 5,027: They represented 151 American colleges, 8 Canadian institutions, and there were some representatives of foreign schools. Of the whole number examined, 4,312 passed and 715 failed. The percentage of failure was 14.2, but of the Philadelphia students but 5.48 per cent. were found wanting. This was a lower percentage than was shown by any other state or by the outsiders. The percentage of failures from New York was 7.12; of Boston, 7.28; of Chicago, 8.18; of Washington, 18.84; of Baltimore, 22.70; of Louisville, 27.67; and of St. Louis, 32.67.

Another remarkable showing is, that of the 4,312 successful candidates, 9 per cent. were from the Philadelphia schools, and only 3.2 per cent. of the 715 failures can be charged to this city. These figures demonstrate conclusively that the medical training given by the Philadelphia schools is thorough and comprehensive.

Again, at the recent examination of a state medical board the following are two of the questions asked under *materia medica*:

1. Name the drug of which pilocarpin is the active principle, and give the dose of the tincture that would be equivalent to 1/20 grain of pilocarpin.

In the first place, there is no official tincture of pilocarpus, and hence no recognized tincture of definite strength, and the majority of our standard medical works do not mention any strength for the tincture, and those that do show a variation in strength, so that this question is unanswerable. Books like those of Remington, Caspari, Coblenz and United States Dispensatory on pharmacy, and of Shoemaker and Pötter on *materia medica*, do not mention any strength for the tincture, and, granted that the strength was given, the yield of alkaloid varies from 0.25 to 2 per cent. in different lots of the drug, as all the books state; therefore, how in the world can a student answer such a question?

2. Give the dose of tincture of nux vomica equivalent to 1/30 grain of its principal alkaloid, and name two official preparations into which this active principle enters.

This is a more desirable question, but even here very few students can remember the strength of the tincture as indicated in the United States Pharmacopeia, and for the second portion of the question, a number of the students gave the salts of strychnin instead of the preparations asked for. After conversing with a number of the candidates as they came from the examination room, I found that not one answered these questions correctly.

If the medical boards desire less failures, let them ask: First, questions that can be answered; and, second, questions that when answered are of some practical value, and not unanswerable and unusual questions that no one could answer intelligently, even if they had access to the text-books. The object of state examining boards is to determine the fitness of candidates to practice medicine and surgery, and this can only be done

educated physician should be able to answer intelligently, and not by asking unanswerable or unusual questions, the knowledge of which would be of no practical value, and questions which examiners could not answer themselves without consulting the proper books.

CONCLUSIONS.

The above investigation warrants the following conclusions:

1. That the trend of modern prescription writing is in favor of proprietary preparations.
2. That the use of polypharmaceutic preparations is diminishing to a great extent, and their use is chiefly confined to the older practitioners.
3. That the number of incompatibilities observed is greater than it should be.
4. That the metric system is but little employed at the present time in prescription writing, a condition to be deplored.
5. That over one-third of the prescriptions are incorrectly written, and this is especially noticeable among the younger practitioners.
6. That certain non-official preparations are quite popular, and that some of these deserve admission to the United States Pharmacopeia.
7. That the more educated the physician the greater the use of the pharmacopeial preparations, and the greater the tendency to simple instead of complex, non-scientific, polypharmaceutic and proprietary preparations.

Clinical Reports.

TETANY AND LARYNGISMUS STRIDULUS ACCOMPANYING MALNUTRITION IN AN INFANT.

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Rarity of Cases.—The relative infrequency of tetany in infants has prompted me to report this case. That it is rare in this country is shown by the report of Griffith,¹ who was able in 1895 to collect but 50 cases, 38 of which were in children. Sanger Brown² was able to find but 100 cases in this country up to 1898. He does not state the age at which it was found to occur most frequently.

A careful search of available literature fails to reveal a report of any cases of the disease occurring in infancy, which hardly corresponds with the observation of Holt. It is conceded that the disease is often accompanied by laryngismus stridulus, and usually accompanying rachitis or marasmus. In the following case there was a condition of marked malnutrition of a few weeks' duration only, and only a very few symptoms of rachitis were to be seen before the final termination.

Patient.—J. C. G., male, born May 6, 1904, weight at birth 7½ pounds.

Family History.—Both parents are apparently in good health. The patient was their fourth child. One child died of scarlet fever some few months ago. The other two children, a boy of about 7 and a girl of about 9, are both bright and healthy.

Previous History.—When this child was born it was tongued, which was clipped about six weeks later. Mother states that she has always had plenty of milk in both breasts to nourish the other children well, but at the lactation just previous to this she thought the supply in the left side was not so

good. The milk from left breast at present is poor in quality, showing low percentage of fat, and on standing, separates into opaque and transparent portions. From June 17, when the frenum was clipped, until September 10, the child did not come under my observation.

Clinical Course.—During my absence from home for a few days early in September, a fellow practitioner was called in on account of several superficial ulcerations presenting on the scalp and behind each ear which were slow in healing. There were also several small sores around the edges and end of the tongue, and on the corresponding buccal and labial surfaces. On September 10 I was hurriedly called on account of a spasm the child had just passed through. I found the child lying quietly in the mother's lap, uttering a low feeble whine, mouth wide open, eyes partly closed, skin bluish, features pinched and peaked, lying apparently oblivious to all surroundings and offering no resistance to manipulations. Temperature, 101.4 (axilla); pulse about 125 and weak. The mother, in describing the spasm, said that the child's face became blue, the head was thrown back, the limbs became stiff and rigid. Respiration ceased entirely for a brief time, then began again, and the normal color gradually returned to the skin.

The mother stated that four or five weeks ago the child weighed 12 pounds; present weight 9. He takes the nipple vigorously, but after three or four efforts drops it and begins to fret and cry; on changing to the other breast he nurses all right and seems to be satisfied. Suspecting poor quality and deficient quantity of milk to be largely the cause of the present trouble, an immediate change was made to a 5 per cent. preparation of cow's milk. The sores on the tongue and lips prevented the use of the rubber nipple, so we made use of an ordinary medicine dropper until he could grasp the nipple. The bowels were moving two or three times a day, but contained particles of undigested food. An examination of the lungs was negative.

September 11: Temperature 101.4; pulse fair; slept quite well; takes bottle some; lungs negative; no distension of abdomen.

September 13: Temperature 100.3; pulse strong; gave strychnin in 1/300 gr. every four hours since first visit. Bowels moved three times. Child seems more lively, and takes more notice of things going on about him; cry is stronger, urine scant and of reddish color. Glottic spasms have been occurring each day at intervals of from forty minutes to three hours.

September 15: Temperature 100; some curds passing in stools; some distension of abdomen; lungs negative.

September 19: Temperature 100.2. Until this morning the child was doing nicely, except for some tympanitis, which was relieved by enemata. This morning the mother noticed slight twitching of fingers and forearm on left side. (He had all the time held both thumbs flexed into the palms and fingers clasped over them, so that where the index fingers crossed the thumbs there appeared a small ulceration. We had previously secured the thumbs outside the fingers to allow these to heal.) When I arrived at the house both forearms were involved in the muscular spasm, and the toes of both feet were markedly flexed. The lungs were negative, and the glottic spasms were less frequent and milder. Color of skin was even better than when last seen.

September 20: Temperature 100. Tremor is about the same, but has not had any glottic spasms since night before. Present weight 9½, showing a gain of a half pound. Has had no general convulsion.

September 22: Temperature 101. Tremor was less yesterday, but has increased to-day; some sore throat; a fine, elevated, glistening eruption has appeared over upper part of chest, shoulders and neck. Skin is quite red with a few minute pustules. Small ulceration appeared on umbilicus. Sweats a great deal. Bowels moved three times.

September 24: Temperature 101. Tremor about the same; color of skin better; eruptions disappeared; umbilicus better; profuse sweating, especially of head. Some abdominal disten-

1. Holt's "Infancy and Childhood."

2. Sanger Brown: Med. News, July 5, 1904.