

ing lax domestic and personal hygiene, and especially the questionable character of their food, seemed to have favored in some way the development of pellagra. I am inclined to think that the food used by these people contained elements which acted as a contributing cause of the pellagra among them, and probably also as the exciting cause.

SUMMARY

From the facts in the foregoing article summaries may be made with reference to the following points:

Race.—More cases developed among the whites than among the negroes.

Sex.—More cases occurred among the females of both races than among the males.

Age.—More cases developed at ages between 20 and 40 years than at other ages.

Marital Condition.—Among the married and widowed pellagrins the females predominate; the single pellagrins are equally divided between the sexes.

Dates of Onset.—More cases had their onset during the months of May and June than in other months, and more in 1911 than in any previous year.

Environment.—More cases developed under conditions of poverty than of comfort, and more under conditions of comfort than of affluence.

Relationship of Cases.—More cases developed in the vicinity of other cases than otherwise.

Heredity.—None of the facts seem to indicate that pellagra is hereditary.

Food.—The food used by the people in whom pellagra is prevalent deserves consideration as a possible etiologic factor.

The most promising field for the investigation of the etiology of pellagra is the food being used by the people in whom pellagra is developing.

Marine Hospital.

In other words, the prescription given above amounts to about twelve doses.

It would not seem good judgment to combine the subnitrate of bismuth with the subgallate of bismuth. If one is needed the other is not. The subgallate is a little more astringent than the subnitrate, but a combination of the two is rarely needed. In the next place, the administration of these two insoluble drugs in a liquid is almost inexcusable. Even a mucilage, or glycerin, or other thick suspending medium would hardly cause an equal dosage of the bismuth. The bismuth will stick in the bottom of the bottle, cling to the sides, and even with persistent shaking there will be irregular amounts of bismuth in each dose. Either the bismuth subnitrate or the bismuth subcarbonate or the bismuth subgallate should be selected, and then it should be administered either in powder or in wafer. There is an ounce of the combined bismuth, that is, 32 gm., to be administered in about twelve doses.

Of course it is presumed that the 4 drams of chloroform water means 4 fluidrams. The chloroform water will certainly give a characteristic taste to the mixture. Chloroform water, however, is very uncertain. From the Pharmacopeia it is not clear exactly how much chloroform will be found in the 4 fluidrams of chloroform water. In other words, it is much better to add as much of the official spirits of chloroform as is desired by the physician.

The object of the essence of pepsin is, of course, uncertain. No fluid preparation of pepsin is sufficiently dense to suspend the insoluble bismuth. Also, it is a mistake to think that a dash of pepsin will aid in causing the stomach to care for a multiple mixture or for an irritant drug. There are no irritant drugs in this preparation, and it is not necessary to cause the patient to pay for an expensive preparation of pepsin in order for the above drugs to be administered. As a digestant the pepsin would be useless when combined with the sodium bicarbonate (as an alkali prevents the activity of pepsin), and it could not well act when combined with such sedatives as codein and morphin. Also, it is not certain what the chloroform would do to the pepsin. In a nutshell, the above prescription does not represent good practice from any standpoint.

Therapeutics

PRESCRIPTION NONSENSE

The following is an actual prescription submitted for criticism by THE JOURNAL:

R	Bismuth subnitrate.....	3 iv
	Bismuth subgallate.....	3 iv
	Sodium bicarbonate	3 ii
	Codein sulphate.....	gr. viii
	Morphin sulphate.....	gr. ii
	Chloroform water.....	3 iv
	Essence of pepsin.....	q.s. ad 3 iv

M. Sig.: 3 ii every three hours.

The most self-evident mistake in this prescription is the absurdity of combining the action of codein and morphin. The action is very similar, with a little less liability of the codein causing constipation and drying up the secretions. On the other hand, one should decide whether one wishes the codein action or the morphin action, remembering the above-mentioned slight difference and the fact that codein does not stop pain as does morphin, unless the dose is very large. The dose above advised would give the patient every three hours about 0.04 gm. (2/5 grain) of the codein and 0.01 gm. (1/6 grain) of the morphin. This means, when administered every three hours, a large dose of these narcotics. It should be remembered that although 2 fluidrams are ordered, unless a measuring glass is used, the patient will get 2 teaspoonfuls at a dose, and 2 teaspoonfuls represent 10 c.c. or more than 2 fluidrams.

A LAST PLEA FOR A USEFUL PHARMACOPEIA.

OLIVER T. OSBORNE, M.D.

Professor of Therapeutics at Yale Medical School

NEW HAVEN, CONN.

Shall we have the United States Pharmacopeia up to date and of scientific and therapeutic value, or shall it be a book of ancient drug lore intermixed with drugs of real value?

It is now nearly three years since the Pharmacopeial Convention of 1910, and what has been accomplished? Many of the drugs which have been approved have already been announced, and, as it has wisely been determined that a subject of such wide, almost universal, interest as the United States Pharmacopeia should not be made a secret affair—in other words, that its decisions should be public, what follows is not a breach of confidence. The subject, in every detail, is one of public interest, and, therefore, should be of public knowledge.

In this age of exposure of "patent-medicine" frauds, and the age of education as to the danger of some drugs,

the uselessness of others, and the limitations of all, the people have a right to expect that the next Pharmacopeia will be a book that can be relied on as a standard of purity and of chemical and pharmaceutical perfection in all its drugs and preparations. They have a right to expect that this book will represent the drugs found by medical experts to be of the best therapeutic value at this date, namely, 1913 A. D.

Can there be any other guide for the acceptance of a drug or preparation for officialization in an up-to-date book of this age than that:

1. The drug must have therapeutic value.
2. The drug must be pure.
3. The preparations must be the best.

What, then, determines the best drug? Investigations in the laboratory and clinical experience—and almost every drug that is known to have clinical value shows laboratory activity. If a drug has no activities, or only dangerous activities when used on animals in the laboratory, it is not a drug that should be dignified by recognition in a 1913 book of standard valuable drugs.

SELECTION OF DRUGS FOR THE PHARMACOPEIA

At the convention in 1910 it was stated that the selection of drugs was peculiarly the duty of physicians, while the selection or determination as to which were the best preparations, and how they should be made, was the duty of the pharmacist. How has this been lived up to?

In the first place, fifty members of the Pharmacopeial Convention were elected a Committee on Revision. Of these fifty, only six are practicing physicians; i. e., only six members of this Committee on Revision are qualified to judge at the bedside of the value of the action of a drug, although several members are medical laboratory men and are well qualified to decide on the activities of drugs.

Next, through the stimulation of various agencies, many of the medical societies of the country appointed special committees who prepared lists of drugs they considered valuable, and of drugs they considered should be omitted from the next Pharmacopeia. These lists, in due time, reached the office of the chairman of the Committee on Revision, Professor Remington, and he, at great office trouble and considerable expense, circularized these lists to the Committee of Fifty.

To show how helpful these lists of drugs were, I will quote the opinion of one member of the Revision Committee, not a physician, concerning them, which was circulated to all of the members of the committee. This circularized opinion (*italics mine*) is as follows:

"The Revision Committee may wisely forget about nine-tenths of the well-meant advice which has come to it thankful for the interest shown by an increasing number of physicians."

How many other members of the Committee on Revision agreed with this opinion I am not able to state, but the outcome of the present list of accepted drugs and preparations for the next Pharmacopeia shows that the Executive Committee, the committee of final decision as to what drugs shall appear in the next Pharmacopeia, did not care an iota what drugs these medical societies approved or what they disapproved. In other words, little if any notice was taken of these lists so carefully prepared by some of the medical societies of the country. Those who prepared these lists should know this fact.

The approval by the Executive Committee of drugs of no therapeutic value and their consequent officialization causes them, of necessity, to be described in text-books on materia medica and consequently to be used by physicians. A study of 117,000 prescriptions collected from different parts of the United States showed the number of times therapeutically useless drugs were ordered. The data thus obtained has been used as an excuse for officializing these drugs in the next Pharmacopeia. These will again be copied and described in materia medica books, and the next graduates in medicine will again prescribe these drugs, and the vicious cycle will persist.

A Subcommittee on Scope voted on the drugs of the last Pharmacopeia, as to whether they should be accepted for the next Pharmacopeia or whether they should be omitted. The chairman of this committee dissolved favorably to admission a large number (65) of tied votes. These lists of acceptances and deletions were then sent to the Executive Committee. The Executive Committee is the court of last appeal, and consists of the chairmen of the different subcommittees, fifteen in number. This committee has the power of approving or overruling any decision of the Subcommittee on Scope, and exercised this power liberally. It also did not hesitate to admit some preparations that had never even had the formality of a vote by the Subcommittee on Scope.

PERSONNEL OF COMMITTEES

Now, who are these members, elected from the convention by accredited delegates from the medical societies, medical colleges, pharmaceutical societies, pharmaceutical colleges and from several departments of the Government of the United States? For our purpose it is not now necessary to enumerate all the members of the Committee on Revision, but only those who constitute the Subcommittee on Scope, and those who constitute the Executive Committee, namely, the chairmen of the fifteen subcommittees.

The Subcommittee on Scope consists of:

<i>Name</i>	<i>Position Held</i>
S. Solis-Cohen, M.D., Chairman	Prof. Clin. Med., Medico-Chi. Coll.
Reid Hunt, M.D.	In Hygienic Laboratory, U. S. P. H. S.
Philip Marvel, M.D.	Practicing physician; Trustee A. M. A.
O. T. Osborne, M.D.	Prof. Therapeutics, Yale Univ.
H. H. Rusby, M.D.	Pharmacologist; Prof., N. Y. Coll. Pharm.
Torald Sollmann, M.D.	Prof. Pharmacology, Western Reserve Univ.
H. C. Wood, Jr., M.D.	Pharmacologist; Prof. Pharmacology and Thera., Medico-Chi. Coll.

The Executive Committee consists of:

S. Solis-Cohen, M.D.	Prof. Clin. Med., Medico-Chi. Coll.
Torald Sollmann, M.D.	Prof. Pharmacology Western Reserve Univ.
J. F. Anderson, M. D.	Hygienic Laboratory, U. S. P. H. S., Washington.
Henry Kraemer, Ph.D.	Prof. Botany, Phila. Col. of Pharmacy.
Charles H. LaWall, Ph.D.	Pharmacist and consulting chemist; Prof. Phila. Coll. of Pharmacy.
George D. Rosengarten, Ph.D.	Chemist of Powers-Weightman-Rosengarten Co., mfg. chemists
A. D. Stevens, Ph.D.	Pharmacist; Prof. Sc. Pharm., Univ. of Mich.

- H. W. Wiley, M.D., Ph.D. Chemist; Ex-Chief U. S. Bureau of Chemistry.
 G. M. Beringer, Ph.M. Pharmacist in retail business.
 C. L. Diehl, Ph.M. Pharmacist (retired); Emeritus Prof., Louisville Coll. of Pharmacy.
 W. C. Alpers, Sc.D. Pharmacist in retail business.
 Otto Raubenheimer, Ph.G. . . . Pharmacist in retail business; Editor *Practical Druggist*.
 Wilhelm Bodemann, Ph.G. . . . Pharmacist in retail business.
 A. B. Lyons, A.B., M.D. Pharm. Chem., with Nelson, Baker & Co., Mfg. Chem.
 Chas. Caspari, Jr., Phar. D. . . Pharmacist; Prof., Univ. of Md.; Commissioner, Md. State Bd. Health.

Of this "court of last resort" there is one physician who practices at the bedside (Dr. Solis-Cohen), one who is a medical laboratory expert on the activities of drugs (Dr. Sollmann), one who is a drug laboratory expert at the Hygienic Laboratory (Dr. Anderson), and one who is a food and drug expert (Dr. Wiley); the other eleven are interested in some branch of pharmacy. These facts in conjunction with the way some, at least, of the pharmaco members look on recommendations of the medical men will show how much in evidence was the axiom that "physicians should decide what drugs should enter the Pharmacopeia."

At this date the new Pharmacopeia will contain at least 845 drugs and preparations. About half of these are not needed. One hundred and fifty-eight drugs and preparations were recommended for omission from the last Pharmacopeia by the Subcommittee on Scope. Just half of these, namely, seventy-nine, were voted in by the executive committee over the adverse recommendation of the Subcommittee on Scope, and it should be remembered that only one member of this executive committee is a physician practicing at the bedside, and he, in the Subcommittee on Scope, in sixty-five tie-votes, had decided in favor of admitting the drug under discussion. In other words, sixty-five more drugs and preparations would have been deleted by the Subcommittee on Scope had its chairman not voted in their favor, and he still had one more vote coming to him in the Executive Committee decisions.

USELESS DRUGS ACCEPTED FOR THE NEXT PHARMACOPEIA

It was "love's labor" absolutely "lost" to collect 117,000 prescriptions from all over this country in order to ascertain how many times a given drug or preparation was ordered. How many times a drug or preparation is ordered is no criterion as to its value. Beer is in enormous demand, but it has not yet been shown that it has any medicinal or food value. Is the nutrient value of a food determined by the frequency with which it is used? The turnip is a vegetable that is constantly bought and constantly eaten, but its food value is almost nil. The Pharmacopeia is supposed to be a book of standards for drugs, and each drug should have some valuable activity.

As previously stated, if a physician desires to order a second-rate drug, he can always obtain it by the standard (if there was one) described in the last Pharmacopeia in which it was named. If this were not a fact, and if it were not a recognized fact, deletions of drugs from previous Pharmacopeias would not have taken place. Such deletions (omissions) have occurred, and a large number of drugs which appeared in the last Pharmacopeia will not appear in the next, according to the approved deletion list of the Executive Committee.

If some drugs have been deleted on account of their lack of value, why may not all drugs which are without value be deleted? The argument of those members of the Revision Committee who desire a large Pharmacopeia is that a drug should be accepted and standardized, if some physicians desire that drug. The same argument would hold good for the very drugs that these men have deleted, and therefore this is an argument of no value for officializing drugs that are worthless.

It should constantly be borne in mind that the greater the number of drugs officialized, the greater the number of preparations that must be made, the greater amount of manufacturing that must be done by the pharmaceutical houses, and the greater the amount of buying that must be done by the retail druggist; in other words, the decision as to whether a useless drug shall enter the Pharmacopeia or not, is a commercial one. Will the medical men of the country stand for commercialism as determining whether or not a substance shall be officialized in the next Pharmacopeia, a supposed book of dependable values of useful drugs?

The following useless drugs and their preparations have been accepted at this date, April, 1913, for the Ninth Decennial Revision of the United States Pharmacopeia. It is, of course, supposable that many physicians will disagree with me in considering these drugs as of little value. Will anyone assert that any one of them is needed to cure a patient of an ailment, or to treat a condition, that may not be better treated by more active drugs?

Anthemis (Chamomile)	Guaiacum (Guaiac)
Arnica	Tinctura Guaiaci
Tinctura Arnicae	Tinctura Guaiaci Ammoniata
Berberis (Oregon Grape Root)	Haematoxylon
Fluidextractum Berberis	Extractum Haematoxyli
Calendula (Marigold)	Hydrastis (Goldenseal)
Tinctura Calendulae	Fluidextractum Hydrastis
Calumba (Calumbo)	Glyceritum Hydrastis
Fluidextractum Calumbae	Tinctura Hydrastis
Tinctura Calumbae	Kino
Cannabis Indica (Indian Hemp)	Tinctura Kino
Extractum Cannabis Indicae	Krameria (Rhatany)
Fluidextractum Cannabis Indicae	Fluidextractum Krameriae
Indicae	Tinctura Krameriae
Tinctura Cannabis Indicae	Lactucarium
Chondrus (Irish Moss)	Syrupus Lactucarii
Cimicifuga (Black Snakeroot)	Tinctura Lactucarii
Extractum Cimicifugae	Leptandra (Culver's Root)
Fluidextractum Cimicifugae	Extractum Leptandrae
Tinctura Cimicifugae	Fluidextractum Leptandrae
Condurango	Lupulinum
Convallaria (Lily of the Valley)	Fluidextractum Lupulini
Fluidextractum Convallariae	Oleoresina Lupulini
Crocus (Saffron)	Matricaria (German Chamomile)
Eriodictyon (Yerba Santa)	Mezereum
Fluidextractum Eriodictyi	Fluidextractum Mezerei
Fluidextractum Eriodictyi Aromaticum	Moschus (Musk)
Frangula (Alder Buckthorn)	Tinctura Moschi
Fluidextractum Frangulae	Oleoresina Petroselinii (Parsley) (Apiol)
Gambir (Pale Catechu)	Oleum Hedeomae (Oil of Pennyroyal)
Tinctura Gambir Composita	Pareira
Gossypii Cortex (Cotton Root Bark)	Fluidextractum Pareirae
Fluidextractum Gossypii Corticis	Phytolacca (Poke)
Grindelia	Fluidextractum Phytolaccae
Fluidextractum Grindeliae	Pyrethrum (Pellitory)
	Tinctura Pyrethri
	Quassia (Bitterwood)
	Tinctura Quassiae

Quillaja (Soapbark)	Staphisagria (Stavesacre)
Tinctura Quillajae	Fluidextractum Staphisagriae
Rhus Glabra (Sumach)	Stillingia (Queen's Root)
Fluidextractum Rhois Glabrae	Fluidextractum Stillingiae
Sabal (Saw Palmetto)	Sumbul
Fluidextractum Sabal	Extractum Sumbul
Sanguinaria (Bloodroot)	Fluidextractum Sumbul
Tinctura Sanguinariae	Taraxacum (Dandelion)
Sarsaparilla	Extractum Taraxaci
Fluidextractum Sarsaparillae	Fluidextractum Taraxaci
Fluidextractum Sarsaparillae Compositum	Triticum (Couch Grass)
Senega (Senega Snakeroot)	Fluidextractum Tritici
Fluidextractum Senegae	Uva Ursi (Bearberry)
Syrupus Senegae	Fluidextractum Uvae Ursi
Serpentaria (Virginia Snake-root)	Xanthoxylum (Prickly Ash)
Fluidextractum Serpentariae	Fluidextractum Xanthoxyli
Tinctura Serpentariae	Zea (Corn Silk)
	Fluidextractum Zeae

the individual drugs and preparations, but as a class each reader will certainly decide against these drugs and preparations, if he is familiar with the pharmacology of these and better drugs. While many of these drugs have activities, they are inferior to other drugs and preparations of the same class.

Acetum Scillae (Vinegar of Squill)	Cinchoninae Sulphas
Ammonii Bromidum	Euonymus (Wahoo)
Ammonii Iodidum	Extractum Euonymi
Ammonii Salicylas	Extractum Quassiae
Bismuthi et Ammonii Citras	Fluidextractum Cinchonae
Caleii Bromidum	Fluidextractum Digitalis
Cambogia (Gamboge)	Fluidextractum Gentianae
Camphora Monobromata	Fluidextractum Rosae
Carbo Animalis Purificatus (Purified Animal Charcoal)	Glyceritum Amyli (Glycerite of Starch)
Ceratum Plumbi Subacetatis (Goulard's Cerate)	Glycyrrhizum Ammoniatum (Ammoniated Glycyrrhizin)
Cerii Oxalas (Cerium Oxalate)	Guarana
Infusum Pruni Virginianae	Fluidextractum Guaranae
Liquor Acidi Arsenosi	Oleatum Quininae (Oleate of Quinin)
Liquor Arseni et Hydrargyri Iodidi	Oleum Picis Liquidae (Oil of Tar)
Liquor Hydrargyri Nitratis	Pilocarpinae Nitras
Liquor Ferri Subsulphatis (Monsell's Solution)	Quinina
Liquor Zinci Chloridi (Solution of Zinc Chlorid)	Sodii Acetas
Magnesii Oxidum Ponderosum (Heavy Magnesium Oxid)	Sodii Chloras
	Sodii Phosphas Exsiccatus
	Syrax
	Sulphonmethanum
	Syrupus Rosae
	Zinci Acetas

There is no good proof that hydrastis preparations have any special action on mucous membranes when used externally. There seems to be no good excuse for giving the disagreeable hydrastis preparations internally for action on the stomach.

Cannabis indica is a drug that varies greatly in strength, and its preparations rapidly deteriorate. Its action is therefore very uncertain, and therapeutically it is doubtful if cannabis indica is of any value, unless a too large dose of a strong preparation is given.

DRUGS AND PREPARATIONS THAT ARE DELETERIOUS

The following should not be officialized:

Veratrin and oleate of veratrin are dangerous. Linimentum belladonnae is dangerous. The amount of absorption is uncertain. Troches of potassium chlorate should not be officialized, as saliva mixed with potassium chlorate should not be swallowed. Potassium chlorate should never be given internally, in my opinion. It can cause severe irritation and even ulceration of the stomach, and kidney irritation and inflammation. Dilute hydrocyanic acid should not be officialized, as it has no action whatever unless the dose is large, and then its action is dangerous.

RAPIDLY DETERIORATE

The following are a few of the preparations which rapidly deteriorate, and hence should not be officialized:

Acidum Hydriodicum Dilutum	Aqua Aurantii Florum Fortior
Syrupus Acidi Hydriodici Dilutum	Aqua Rosae
Acidum Hypophosphorosum	Aqua Rosae Fortior
Acidum Nitrohydrochloricum Dilutum	Mucilago Aegiae
Aqua Aurantii Florum	Mucilago Sassafras Medullae
	Syrupus Aurantii
	Syrupus Aurantii Florum

INFERIOR PREPARATIONS

If the selection of a drug or preparation were left to the layman who must take the medicine, it is presumptive that he would select the most active, other things being equal, of the drugs or preparations of the class that he needed. The same must be true of the physician writing the prescription. Hence why should we standardize and officialize preparations of a second-rate drug? The following drugs have been accepted for the new Pharmacopeia, though they are pharmacologically and therapeutically inferior to other drugs which act similarly. I realize, of course, that many physicians will find many points of difference in opinion in regard to

UNNECESSARY OFFICIALIZATION

The following drugs have been accepted for the Pharmacopeia in two forms, or several of the same group have been accepted, though their activities are so similar that reduplication seems unnecessary. Although not listed here, the preparations of many of the drugs are too many. Where several preparations of a drug are offered, one or more of them is superfluous. The careless redundancy of the Executive Committee is shown by the fact that it has officialized in its last approved list, March, 1913, *scopolamin hydrobromid* and *hyoscin hydrobromid*, though they are commercially, pharmacally and therapeutically identical. Following are a few unnecessary redundancies:

Belladonnae Folie (Belladonna Leaves)
Belladonnae Radix (Belladonna Root)
Colchici Cormus (Colchicum Root)
Colchici Semen (Colchicum Seed)
Cinnamomum Saigonicum
Cinnamomum Zeylanicum

Hyoseyamus	} These drugs are so similar to belladonna that there seems to be no reason for officializing them and their preparations.
Fluidextractum Hyoseyami	
Tinctura Hyoseyami	
Stramonium	
Tinctura Stramonii	
Unguentum Stramonii	

Hamamelidis Cortex (Witchhazel Bark)
Hamamelidis Folia (Witchhazel Leaves)
Hyoscinae Hydrobromidum
Scopolaminae Hydrobromidum
Liquor Potassii Arsenitis (Solution of Potassium Arsenite)
Liquor Sodii Arsenitis (Solution of Sodium Arsenite)
Viburnum Opuli (Cramp Bark)
Viburnum Prunifolium (Black Haw Viburnum)