

SUMMARY OF CASES INVESTIGATED IN MASSACHUSETTS UNDER THE MEDICAL EXAMINER LAWS, BY METHODS OF DEATH.—Continued.

Years.	HOMICIDE.		SUICIDE.		ACCIDENT OR NEGLIGENCE.		NATURAL AND UNKNOWN CAUSES INCLUDING ALCOHOLISM.		Totals.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
1889.....	51	3.1	199	12.0	792	47.9	612	37.0	1,654
1890.....	35	2.0	196	11.1	862	48.6	680	38.3	1,773
1891.....	60	3.2	187	10.2	866	47.1	727	39.5	1,840
1892.....	72	3.3	274	12.4	974	44.1	890	40.3	2,210
1893.....	76	3.4	290	13.1	976	43.9	879	39.6	2,221
1894.....	68	3.1	270	12.5	975	45.2	943	40.7	2,159
1895.....	74	3.2	281	12.1	1,019	44.0	943	40.7	2,317
1896.....	74	3.2	318	13.2	1,042	43.1	982	40.6	2,416
1897.....	70	3.1	285	12.5	961	42.2	963	42.2	2,279
1898.....	79	2.9	331	12.5	1,194	45.1	1,044	39.4	2,648
1899.....	57	2.3	319	13.0	1,001	48.7	1,072	36.0	2,449
Total ..	912	3.1	3,651	12.2	13,440	45.1	11,826	39.6	29,829

It is a sufficient comment upon this law that more than 40,000 cases of sudden, suspicious, and violent deaths have been investigated under its authority, and in a far more satisfactory, intelligent, and economical manner than could have been possible under the old régime.

Samuel W. Abbott.

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EXAMINING AND LICENSING BOARDS.—There is no national authority in the United States that can prescribe standards for degrees or for license to practise the professions. Each State makes its own professional laws. As a result there are almost as many standards as there are political divisions. The desirability of uniform standards throughout the country for admission to professional practice is recognized generally, but varying conditions as to density of population, educational advantages, and general development make it impracticable to hope for the attainment of this end for some time to come. Conditions are such that some States cannot maintain the standards demanded elsewhere, others cannot afford to lower theirs, but needless multiplication is unfortunate. Instead of a separate standard for almost each political division, two or at most three should answer for all. In the first group should come the strongest States, and the standards maintained by these States would act as a stimulus to weaker political divisions.

Thirty years ago the public had little protection from incompetency in professional practice. The bar is said to have been at its lowest ebb. Medical laws were crude and largely inoperative. In several States only were there any acts designed to control the practice of pharmacy and dentistry. There was no law whatever restricting the practice of veterinary medicine. There has been extraordinary progress, specially in the last decade, in restrictive professional legislation, and in the admission and graduation requirements of professional schools throughout the United States. In medicine all political divisions except Alaska now have examining and licensing boards. In view of these facts the growth in professional students is remarkable. From 1888 to 1899 the increase was as follows: theology 24 per cent., law 224 per cent., medicine 84 per cent., dentistry 380 per cent., pharmacy 31 per cent., veterinary medicine 17 per cent.

Power to Confer Degrees.—Low standards in many pro-

fessional schools are due to a failure to subject the degree-conferring power to strict state supervision. In New York and Pennsylvania the laws now prevent an abuse of the power to confer degrees. In Massachusetts and Vermont bodies formed under the general corporation acts are prohibited from conferring degrees. In Ohio and Nebraska the statutes require only the nominal endowment of \$5,000 for a degree-conferring institution. In other States and Territories as a rule any body of men may form an educational corporation with power to confer degrees "without any guaranty whatever that the privilege will not be abused."

This matter has been under discussion recently in various educational bodies, and there is a strong sentiment in favor of a strict supervision by the State of the degree-conferring power.

Preliminary General Education for Degrees.—In New York, high standards in preliminary general education are demanded both for degrees and for licenses, and in each case the question of attainments is determined by a central authority, the University of the State of New York. As a rule in other States medical schools conduct their own entrance examinations, and the tests are often mere matters of form, even though the standards may appear satisfactory on paper. In 1898 21 per cent. of the students of medicine in the United States held either B.A. or B.S. degrees as compared with 53 per cent. of those in theology and 29 per cent. of those in law.

Preliminary General Education for Licenses.—In New York State a preliminary general education equivalent to graduation from a four years' high-school course after a completed eight years' elementary course is prescribed by statute as the minimum standard for license to practise medicine. This standard approximates that required in continental Europe. New Hampshire and Ohio have similar requirements, but they are not so rigidly enforced. California makes the requirements "in no particular less than those prescribed by the Association of American Medical Colleges." Wisconsin requires the elementary education necessary for admission to the junior year including one year of Latin. The statutes of Delaware, Maryland, New Jersey, and Pennsylvania prescribe a "common-school education." Louisiana demands a "fair primary education," Maine a standard of preliminary education approved by the medical board. The rules in Vermont prescribe a high-school course; in Maine a good English education; in Illinois and Iowa less than one year of high-school work; in Virginia "evidence of a preliminary education." In remaining political divisions laws and rules are either silent in this respect or so indefinite as to be of little value.

Length of Professional Courses.—The following table shows great progress, specially since 1885, in the adoption of higher standards for graduation.

	Four years.	Three years.	Two years.	One year.	Not stated.
Medical schools, 1875.....	0	3*	72	5	0
" " 1885.....	0	5	103	0	0
" " 1897.....	99	49	0	2	0
" " 1898.....	103	42	0	0	0†
" " 1899.....	141	10	2	2	1

* Distinction between medical schools with two- and three-year courses not certain. † Including three medical preparatory schools.

Influence of Medical Societies.—In 1839 the New York State Medical Society resolved that teaching and licensing ought to be separated as far as possible. In 1837 the same view had been advocated in Philadelphia. Further discussion led to a call for a convention of delegates from all medical schools and societies in the United States. The convention was held in New York in 1846, and from it sprang the American Medical Association.

Results of examinations show the importance of separating teaching and licensing. Under the New York laws, for example, 6,349 physicians have been examined,

of whom 1,379 or 21.7 per cent., were rejected. In these statistics each candidate who fails is counted as often as examined, but nevertheless so large a per cent. of rejections is astonishing in view of the fact that admission to licensing examinations presupposes the preliminary education required by statute and also graduation with a degree from a registered medical school. Including those unable to meet the requirements for admission to licensing examinations, more than 30 per cent. of all applicants have failed to secure licenses.

The following societies have exercised an important influence in promoting higher standards: Association of American Medical Colleges (1890), American Institute of Homœopathy (1844), National Confederation of Eclectic Medical Colleges (1871), Southern Medical College Association (1892). The first and fourth of these societies prescribe for admission to medical schools a preliminary general education equivalent to one year in a high school; the second and third demand work equivalent to about two years in a high school. All prescribe four courses of lectures in different years as a condition for an M.D. degree, though they give an allowance of one year to graduates of reputable literary colleges and of other professional schools. All tend to improve facilities for teaching, dissection, and clinics. These societies registered in 1900 72, 71, 6, and 11 medical schools respectively.

The American Academy of Medicine (1876) and the National Confederation of State Medical Examining and Licensing Boards (1891) should also be mentioned. The former of these societies has emphasized since 1884 the importance of a proper preliminary education, a graded professional course, and a state licensing examination; the latter has recommended a four years' high-school course for admission to medical schools or an alternative examination representing somewhat less than three years of high-school work.

Medical Sects.—As commonly understood, regular physicians have no distinctive theory or practice; homœopaths treat diseases with drugs that excite in healthy persons symptoms similar to the morbid condition treated; eclectics make use of what they regard as specific remedies, chiefly botanical; physiomedicalists use only botanical remedies, discarding those which are poisonous. In practice these distinctions are not always observed.

In addition to the medical sects to which detailed reference is made, a number of *pathies* flourish in many States unmolested under such names as osteopath, vitapath, electropath, hydropath, divine healer, magnetic healer, Christian scientist, faith curist, mind curist, sun curist, etc. Men and women without preliminary or professional training treat diseases under these or similar systems to such an extent that the health of the people is endangered. These so-called systems are followed with impunity in many States in what seems to be open violation of laws restricting the practice of medicine. This is due largely to the fact that so many statutes lack specific definitions as to what constitutes the practice of medicine, and without these definitions the conviction of such practitioners cannot be secured through the courts.

Osteopathy was "discovered" in 1874. It is based on the theory that "a natural flow of blood is health" and that the bones may be "used as levers to relieve pressure on nerves, veins, and arteries." Osteopathy is now recognized by law in California, Connecticut, Indiana, Kansas, Ohio, Iowa, Michigan, Missouri, Montana, Nebraska, North and South Dakota, Tennessee, Vermont, and Wisconsin. Practice of "the system, method, or science of osteopathy" is restricted to licensed physicians and to graduates of "a legally chartered and regularly conducted school of osteopathy." The use of drugs and operations in "major or operative surgery" are not permitted in the practice of osteopathy.

In Georgia, Kentucky, Nebraska, New Jersey, New Mexico, Montana, and West Virginia there are stringent laws against non-medical practitioners. In some other States, like Illinois, they receive such legal protection that any person may treat "the sick or suffering by men-

tal or spiritual means, without the use of any drug or material remedy." Under these conditions any person in Connecticut, Maine, Massachusetts, and New Hampshire is free to practise "the sun cure, mind cure, hypnotism, magnetic healing, Christian science, etc." The greater part of New England seems to be on about the same footing in this respect with the Cherokee nation, Indian Territory, where entire liberty is given to "enchantsments in any form." In striking contrast Hawaii inflicts heavy fines on any person convicted of an attempt to cure "another by practice of sorcery, witchcraft, anaana, hoopio, hoopio, hounauna, hoomanama, etc."

There is much misunderstanding in this country regarding the duty of the state in relation to the health of the people. It does not consist in discriminating between schools or systems of medicine, but in requiring without prejudice or partiality of all who seek a license to practise for gain on the lives of fellow-beings a minimum preliminary and professional training.

Midwifery.—Special tests for certificates of registration as midwives are required in Arizona, Connecticut, District of Columbia, Illinois, Indiana, Iowa, Louisiana, Missouri, New Jersey, Ohio, Texas, Utah, Wyoming.

In the following political divisions the provisions of the medical practice acts do not apply to women engaged in the practice of midwifery: Alabama, Arkansas, Florida, Georgia, Idaho, Kentucky, Maine, Maryland, Mississippi, Montana, New Mexico, North Carolina, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, Washington, West Virginia.

In other political divisions, though there are some special provisions for certain localities, the general acts regulating the practice of medicine make no reference whatever to the practice of midwifery by women.† It would seem, therefore, that these laws restrict the practice of midwifery to licensed physicians. Nevertheless a large proportion of the children in these political divisions are brought into the world by ignorant midwives, and as stated by Dr. M. J. Lewi, of New York, many women are physical wrecks through their incompetence. Practically the conditions in political divisions where the laws seem to restrict the practice of midwifery to licensed physicians are little better than in political divisions where the practice of midwifery by women without a license is authorized by statute. There will probably be little change for the better till the midwife receives legal recognition and the practice of midwifery is regulated by definite statutory provisions.

Early Legislation.—The earliest law relating exclusively to physicians was passed by Virginia in 1639, but like the later act of 1736 it was designed mainly to regulate their fees. The act of 1736 made concessions to physicians who held university degrees. In only two of the thirteen colonies were well-considered laws enacted to define the qualifications of physicians. The General Assembly of New York in 1760 decreed that no person should practise as physician or surgeon in the city of New York till examined in physic and surgery and admitted by one of his majesty's council, the judges of the supreme court, the king's attorney-general and the mayor of the city of New York. Such candidates as were approved received certificates conferring the right to practise throughout the whole province, and a penalty of £5 was prescribed for all violations of this law. A similar act was passed by the General Assembly of New Jersey in 1772.

In 1840 laws had been enacted by the legislatures of nearly all the States to protect citizens from the imposition of quacks. Between 1840 and 1850, however, most of these laws were either repealed or not enforced as a result of the cry that restrictions against unlicensed practitioners were designed only to create a monopoly.

* Either examination or approval of diploma.
† Those practising midwifery without a certificate cannot enforce collection of fee, but this does not apply to the practice of midwifery by women in the town or locality in which they reside.
‡ In Nebraska, North and South Dakota the practice of "medicine, surgery, or obstetrics" without a license is prohibited.

Synopsis of Requirements to 1902.—In the following political divisions medical diplomas do not now confer the right to practise medicine, an examination being required in all cases: Alabama, Arizona, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana (after January 1st, 1905), Indian Territory, Cherokee and Choctaw nations, Iowa, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin.

The following require for admission to the licensing examination:

- Alabama, requirements of State Medical Association.
 - Arizona, diploma from recognized medical school.
 - California, diploma from legally chartered medical school, requiring in no particular less than the Association of American Medical Colleges.
 - Connecticut, diploma from reputable medical school.
 - Delaware, competent common-school education, diploma from legally incorporated medical school.
 - District of Columbia, diploma of school authorized by law to confer M.D. degree.
 - Florida, diploma from recognized medical school.
 - Georgia, diploma from legally organized medical school.
 - Idaho, diploma from legally chartered medical school.
 - Illinois, less than one year of high-school work, diploma from approved medical school.
 - Indiana, diploma from reputable medical school.
 - Indian Territory, Cherokee nation, diploma from reputable medical school; Choctaw, one term's attendance at reputable medical school.
 - Iowa, less than one year of high-school work, diploma from recognized medical school.
 - Louisiana, fair primary education, diploma of recognized medical school.
 - Maine, diploma of reputable medical school maintaining an approved standard of preliminary education and medical instruction.
 - Maryland, common-school education, diploma from legally incorporated medical school.
 - Minnesota, four full courses of lectures at recognized medical school.
 - Montana, diploma from legally chartered medical school.
 - New Hampshire, full high-school course, diploma from regularly organized medical school.
 - New Jersey, common-school education, diploma from legally incorporated medical school.
 - New York, four years' high-school course or its equivalent, diploma from registered medical school.
 - North Carolina, diploma from medical school in good standing.
 - North Dakota, three six months' lecture courses.
 - Ohio, full high-school course or its equivalent, diploma from legally chartered medical institution.
 - Pennsylvania, common-school education, diploma from legally chartered medical school.
 - Utah, diploma from chartered medical school in good standing.
 - Vermont, high-school course or equivalent and diploma from a United States medical school.
 - Virginia, evidence of a preliminary education, diploma from medical school.
 - Washington, diploma from authorized medical school having at least a three years' graded course.
 - Wisconsin, elementary education equivalent to admission to junior year of a credited high-school.
- The following require the licensing examination only: Hawaii, Massachusetts, Mississippi, Oregon, Tennessee, Texas, West Virginia.
- The following require approval of medical diploma by duly qualified boards: Kentucky, Nebraska, South Dakota; diploma must evidence four full courses.
- The following require either approval of medical diplo-

ma or examination by State or other duly qualified boards: Arkansas, Colorado, Indian Territory (Creek nation), Kansas, Michigan, Nevada, New Mexico, Oklahoma, Rhode Island, South Carolina, Wyoming.

The following requiring either approval of medical diploma or examination, admit to examination on: Arkansas, a good literary education; Kansas, four periods of study of six months each; Nevada, five years' practice in the State just prior to act or diploma from a reputable school without the United States; Oklahoma, full course of lectures. Rhode Island approves diplomas of schools that require for matriculation a high-school diploma or its equivalent, and for graduation four regular courses in four different years; Alaska has no law. In Cuba, the Philippines,* and Porto Rico† the requirements are in process of transition.

The following political divisions have mixed examining boards, that is, the boards are composed of representatives of the several schools of medicine: Alabama, Arizona, Arkansas, California, Colorado, Hawaii, Idaho, Illinois, Indian Territory, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, Wyoming.

The following have separate examining boards for each recognized school of medicine: Connecticut, Delaware, District of Columbia, Florida, Georgia, Louisiana, Maryland, New Hampshire, New York, Pennsylvania, Texas, Vermont.

Alaska has no examining board.

James Russell Parsons, jr.

EXCELSIOR SPRING.—Onondaga County, New York. **POST-OFFICE.**—Syracuse. This spring is located in the city of Syracuse. It was analyzed by Charles A. Goessman in 1868, with the following result:

ONE UNITED STATES GALLON CONTAINS:

Solids.	Grains.
Calcium carbonate.....	15.24
Calcium sulphate.....	36.45
Sodium chloride.....	584.53
Alumina.....	1.02
Silica.....	13.16
Sodium sulphate.....	17.69
Magnesium chloride.....	.15
Magnesium bromide.....	
Total.....	668.24
Carbonic acid gas present.	

This analysis indicates a very potent saline water, with diuretic and slightly aperient properties.

James K. Crook.

EXCOCCURIA. See *Euphorbiaceæ*.

EXERCISE, PHYSICAL. See *Training, Physical*.

EXOPHTHALMIC GOITRE. See the **APPENDIX**.

EXPECTORANTS are medicines that are used in catarrhal affections of the larynx, trachea, and bronchi, to modify secretion and facilitate the removal of morbid products.

Until recently our knowledge of their use was founded entirely on careful clinical observations. It had been observed that certain remedies ameliorate cough and increase expectoration in the early stage of acute inflam-

* The assistant secretary to the military governor in the Philippines wrote September 4th, 1899, that "the Spanish law as to admission to practice still governs. In general this requires a diploma from a reputable college, school, or university of such profession or in lieu thereof an examination."

† General Davis established, September 30th, 1899, in Porto Rico an examining committee for licenses to practise medicine, midwifery, and professional nursing. Only those with satisfactory credentials are admitted to the examinations.

mations of the air passages. Most of them, when given in large doses, produce nausea and vomiting, and a notable depression of the general circulation. They were therefore called *depressant, sedative, or nauseant* expectorants. Other remedies had been found to ameliorate cough and diminish expectoration in the latter stage of acute catarrhs, and in chronic catarrhs attended by copious secretion. In large doses many of them cause local irritation, with more or less excitement of the general circulation. Hence they were called *stimulant* expectorants. The recent experiments of Rossbach have confirmed the theory, founded on clinical observation, that some expectorants increase and others diminish secretion. They have rendered our knowledge more precise, and, besides, have established the important fact that some expectorants cause a diminution of the vascularity of the respiratory mucous membrane.

DEPRESSANT OR SEDATIVE EXPECTORANTS.—*Apomorphine Hydrochloras.*—Soon after apomorphine came into vogue, clinicians observed that it exerts a very decided influence in catarrhal inflammations of the air passages. In a short time after its administration is begun expectoration is effected more easily, and the sputa become more copious and less viscid. Usually these effects occur without any noteworthy nausea, or this is observed only after the first dose.

According to the experiments of Rossbach, the expectorant action of apomorphine is due to augmented activity of the mucous follicles; for it caused a very decided increase of the quantity of mucus of the exposed tracheal mucous membrane, when the nerves passing to the trachea had been divided, and all the large blood-vessels supplying this organ had been ligated.

In expectorant doses, apomorphine does not diminish the appetite, nor cause diarrhoea.

Apomorphine is indicated in catarrhal affections of the larynx, trachea, and bronchi, when only small quantities of viscid mucus are secreted; hence, especially in the early stage of bronchitis, when dry, sibilant râles are heard, and when coughing occurs frequently, and is attended by little or no expectoration.

Trustworthy observers state that they have obtained more speedy and more decided success from apomorphine than from all other means in bronchitis, tracheitis, laryngitis, phthisis, and the stage of resolution of pneumonia. Rossbach employed it in pseudo-membranous croup with excellent results, the membranous exudation becoming detached and expelled.

Apomorphine is contraindicated in the above-named affections when moist râles are heard and expectoration is copious. It should never be given when the bronchial tubes are overloaded with secretions which are not expectorated from want of strength.

When a cough is frequent and very severe, and little mucus is secreted, as shown by the scanty, viscid sputum, morphine may be combined with the apomorphine, if the latter do not speedily ameliorate the cough. Morphine does not prevent the action of apomorphine. The combination simultaneously increases secretion and lowers the excitability of the respiratory centre.

No fixed rules can be given as to the dose of apomorphine, on account of the differences in susceptibility to its action, and the great variations in extent and intensity of the catarrhal inflammations of the air passages. For adults, from gr. ss. to gr. i. in twenty-four hours is usually sufficient; but sometimes from gr. iss. to gr. ij. are required. Doses of gr. $\frac{1}{16}$ to gr. $\frac{1}{8}$ may be given every two or three hours. To children apomorphine may be given in doses of gr. $\frac{1}{32}$ to gr. $\frac{1}{16}$, according to their age. At the age of one year the single dose may be gr. $\frac{1}{32}$, and this may be increased by the gr. $\frac{1}{32}$ for each additional year, so that at the age of two years the dose will be gr. $\frac{1}{16}$, at three years gr. $\frac{1}{8}$, and so on. It may be prescribed as follows: R Apomorph. hydrochlor., gr. ss.-i. acid. hydrochlor. dil. gtt. x.; aq. destill., ζ iss. M. Sig.: One teaspoonful every two or three hours. The acid is added to prevent the change of color, which rapidly takes place if no acid is added, and the medicine is

not dispensed in a dark bottle. A syrup may be added, or, if desirable, each dose may be taken in sweetened water. Morphine may be added to the apomorphine, as in the following formula: R Apomorph. hydrochlor., gr. ss.-i.; morph. hydrochlor., gr. ss.; acid. hydrochlor. dil., gtt. x.; aq. destill., ζ iss. M. Sig.: One teaspoonful every two or three hours.

Ipecacuanha.—This medicine is frequently employed in catarrhal affections of the air passages, especially in the early stages, when cough is severe and expectoration scanty. It acts most rapidly when given in such doses as produce nausea. As the activity of the mucous glands becomes increased during nausea, it has generally been held that ipecacuanha acts by increasing secretion, but that this takes place only when nauseating doses are used. But it is frequently observed that the symptoms of broncho-tracheal catarrh become ameliorated by doses which do not produce notable sickness.

The action of ipecacuanha is due to the alkaloid emetine, which it contains in small and variable quantities.

Rossbach found that emetine causes a decided increase of the mucus of the trachea, without augmenting the quantity of blood in the mucous membrane. The increase of secretion also took place when the nerves going to the trachea had been divided, showing that it results from a direct action on the mucous glands or on the secretory nerves.

Ipecacuanha is indicated in acute and chronic catarrhs of the air passages attended with scanty and viscid expectoration. It is the expectorant generally employed in the bronchial inflammations of very young, very old, and feeble patients, and is especially applicable when these affections present more or less fever, a dry skin, soreness of the chest, oppressed breathing, painful cough, viscid sputum, and dry râles.

The dose of ipecacuanha varies from gr. ss. to gr. ij., on account of the variable quantity of emetine that it contains, and the differences in intensity and extent of the catarrhal inflammations. If small doses do not speedily cause a decided change in the expectoration, larger ones should be given, so as to induce slight nausea. The syrup and wine of ipecacuanha are given in doses of \mathfrak{v} x. to \mathfrak{v} xl.

Antimonii et Potassii Tartras.—Tartar emetic is a very depressing expectorant. When administered in small doses, gr. $\frac{1}{15}$ to gr. $\frac{1}{5}$, at intervals of several hours, it usually produces no immediate effects; but after several doses have been taken a decided action on the heart and secretions becomes manifest, the heart's action becoming slower and feebler, and the secretions of the mucous membranes and skin decidedly augmented. After several days, if the medicine is continued, very marked debility ensues.

Tartar emetic is held to be serviceable in severe forms of bronchitis occurring in robust individuals. It is especially indicated when there are present dyspnoea, flushed face, full and strong pulse, soreness of the chest, with little or no secretion, as shown by the dry, sibilant râles heard on auscultation. On account of its depressing action, which is most evident in weakly persons, it is not a suitable remedy for debilitated, very young, or very old patients. It is contraindicated in catarrhs of the air passages complicated with severe disorders of the alimentary canal.

Tartar emetic is usually administered in doses of gr. $\frac{1}{15}$ every two or three hours. R Antim. et potass. tart., gr. i.; syr. althææ, ζ ss.; aq. destill., ζ i. M. Sig.: One teaspoonful every two hours. Sometimes minute doses are given at very short intervals, as by dissolving one grain in five or six ounces of water, and directing a teaspoonful of the solution to be taken every ten minutes until nausea ensues. As soon as this takes place, a marked increase of secretion and expectoration occurs, with decided relief of the soreness of the chest and dyspnoea. The wine of antimony, containing 1 part in 250 parts, is given in doses of \mathfrak{v} x. to \mathfrak{v} xl. It is one of the ingredients of the *compound mixture of glycyrrhiza*, which is given in doses of a tablespoonful.