

JOHN HARVEY KELLOGG (1852-1943)

LECTURES, SPEECHES, NOTES, AND  
ARTICLES, CA. 1890-CA. 1943  
(UNDATED BY TOPIC)

EDUCATION

Mr. Kelly of

Ohio as the rough  
country the student  
follow me the  
wards in the area.

School

D. T. Austin

## CLASS WORK IN HYGIENE.

GRANES

## I. Introduction.

1. Importance of Hygiene.
2. Our bodies, Temples of God.
3. Natural Law.
4. Source of Knowledge.

## II. Soil.

1. Location.
2. Different Kinds.

## III. Climate.

1. Distance from Large Bodies of Water.
2. Elevation.
3. Rainfall.
4. Forests.
5. Prevailing Winds.
6. Temperature.

## IV. Water and Water Supplies.

1. Sources.
2. Sources of Contamination.
  - a. Organic.
  - b. Inorganic.
3. Methods of Purification.
  - a. Sterilization.
  - b. Filtration.
  - c. Distillation.

1899

WIND

## V. Air and Ventilation.

1. Proper Respiration.
2. Normal Composition.
3. Amount of Pure Air required by Each Individual.
4. Sources of Contamination.
5. Methods of Proper Ventilation.
6.
  - a. Private Dwellings.
  - b. Institutions.

## VI. Light.

1. Kinds.
  - a. Natural.
  - b. Artificial.
2. Hygiene of Light.
  - a. Direction.
  - b. Amount.
  - c. Intensity.

## VII. Heat and Heating.

1. Source.
  2.
    - a. Natural.
    3.
      - b. Artificial.
  2. Fuel.

## VIII. Clothing.

1. Material.
2. Characteristics of Proper Clothing.
3. Common Errors.
4. Dress of Different Nationalities.

## IX. Exercise.

1. Necessity of Exercise.
2. Amount necessary.
3. Our Dependence upon it.
4. Modes of Obtaining.
  - a. Occupation.
  - b. Systems of Physical Culture.
  - c. Games.
  - d. Corrective Exercise.
5. Statistics.

## X. Bathing.

1. Physiological Necessity.
2. Methods of Bathing.
3. Benefits Derived.

## XI. Diet.

1. Sources.
  - a. Animal.
  - b. Vegetable.
2. Classes.
  - a. Starch.
  - b. Proteide.
  - c. Fats.
  - d. Sugar.
  - e. Salt.

## CLASS IN SANITARY SCIENCE.

### I Foods.

Sources and Classification.

### II Diet.

a. General principles.

Age, occupation, climate, seasons.

Personal experiences.

b. In Health.

c. In Disease.

d. Food Economics.

### III. Water and Water Supplies.

Sources of Contamination. (Organic, Inorganic.  
(Examination of Filters.  
(Purification of.

Amount required per capita

In cities, in country

Municipal control.

### IV. Sewers and Sewerage.

Importance of.

Methods-

Back yards, surface sewers.

Underground ( Material.  
( Size.  
( Outlet and Disposal.

### V. Plumbing-

General Principles ( Important points.  
( Materials used.  
( Size of pipe etc.

(Vents.  
 (Joints.  
 (Back Ventilation.  
**Common Defects.** (Traps.  
 (Outlets.  
 (Slop sinks etc.

**VI. Garbage.**

Sources ( Temporary.  
 ( Disposal ( Permanent.

Dangers from accumulation.

**VII. Disposal of Dead.**

Animals and human.

Methods and dangers from.

Cremation.

Burial.

**VIII. Infection and Disinfection.**

(Useful. (Diseases  
 Germs. ( Dangerous. (from

(Methods of destroying as by  
 heat, chemical, body resistance etc.

610.72

For many years, a quarter of a century at least, the subject of this sketch has been recognized as one of the leaders in medical thought and activity among the physicians of Chicago. The advantages of a training in the biological sciences under Huxley, Darwin and other eminent London teachers, a privilege enjoyed by few American physicians, gave Dr. Stevenson an enviable preparation for her professional career, and especially qualified her to fill the chair of Physiology in the Woman's Medical College, to which she was called in 1874, later filling the chair of Obstetrics, a position which she has held practically continuously until the present time. Dr. Stevenson's work in connection with the Woman's Medical College has without doubt contributed fully as much as that of any other person, perhaps we may justly say more than any other individual's labors, to the development of progress in medical education, and the Woman's Medical College, to which she has given an enormous amount of time and earnest effort, has kept pace with the recent developments in educational methods and requirements. Dr. Stevenson's recent resignation of the position she has held so long in the Woman's Medical College was prompted by her settled conviction that the time was come when the existence of separate women's medical schools for women is no longer a necessity, a fact which has been amply demonstrated by the experience of a number of first class medical women's colleges both in Chicago and elsewhere.

Dr. Stevenson's most prominent traits of character are perhaps her independence in thought and action and her love of truth and justice. Though keenly sensitive to public opinion, and thoroughly alive to the value of favorable popular sentiment, she has many times been brought into circumstances where she deemed it necessary to take an uncompromising stand against public prejudices and current opinion in defence of what she believed to be the principles of right and justice. Her clear moral vision



and most profound respect and love for truth in all questions relating to human welfare and especially in questions pertaining to the emancipation of woman and the holding up of better ideals of womanhood have often brought her to the front as a fearless and unconquerable champion of a new thought or a noble principle struggling for recognition.

On one such occasion, in which a discussion arose in the Chicago Woman's Club, involving the question of the color line, she made such an eloquent and effective appeal in behalf of the principles of universal brotherhood and sisterhood that the inbred prejudices of the aristocracy of Chicago were broken down, and for the first time a colored woman, educated, cultivated and refined, but truly African in physiognomy and tint of skin, was welcomed as a member into that most select circle of Chicago women. Those who had the good fortune to be present on that occasion declared that the address delivered impromptu by Dr. Stevenson could scarcely be matched for genuine eloquence by any utterance ever made upon the question of civil or social freedom. The apparently invincible opposition which prejudice has raised was utterly swept away by the force of the logic, appealing pathos, and the clear portrayal of the principles of justice and humanity which poured forth spontaneously and with irresistible earnestness from the soul of the speaker, who had made absolutely no preparation for the effort, and to-day cannot recall a word of what she said. But a noble victory was gained in the cause of human progress, and impressions were made which will be as enduring as the everlasting hills. As a public speaker Dr. Stevenson has few superiors, and if she chose to do so, she could gain national reputation as a platform speaker upon any one of a large variety of the burning questions of the day.

Dr. Stevenson, herself broadminded and conscientious to an unusual degree, regards hypocrisy, bigotry and narrowness with unmitigated

abhorrence, having not the slightest patience with cant or political chicanery. She has often made tremendous sacrifices rather than condescend to gain an end or maintain a position by the aid of those political and compromising methods which are commonly termed "tact." The love of truth and the pursuit of truth has lead her outside the limits of the medical profession in many directions. There are probably few women in Chicago who have been connected with so many different lines of philanthropy and humanitarian effort during the last quarter of a century as has Dr. Stevenson.

She has thrown her whole heart and soul into these enterprises, and constantly to the neglect of personal interests and at a great pecuniary sacrifice. This element of her character is well illustrated in the generous personal aid which she has given the American Medical Missionary College and other purely humanitarian institutions and efforts.

Often disappointed, sometimes misunderstood and hence more or less actively opposed, she has nevertheless by straightforward advocacy of right principles and the sterling defence of truth, easily maintained her place at the head of a conspicuous group of broad-minded, public-spirited Chicago women, who, in the midst of a perverse and wrong-headed generation, are setting a strong tide in the direction of betterment and reform, by holding up before their sisters the highest and noblest type of American womanhood.

Said Herbert Spencer. Edu-  
cation is to prepare men for  
life and hence the <sup>school and university</sup> ~~per~~ at  
aim ~~is~~ in training should be  
to make of the boy or girl a  
good animal. - ~~At present~~ most  
the universities ~~should~~ in four the  
four years which the students  
spend in it should make real  
men of the boys weakened  
boys who enter it from the  
high school; and the girls

should be real sturdy women  
with <sup>the</sup> ~~best~~ <sup>most</sup> ~~strong~~ <sup>instructed</sup> of  
strong.

Education - 2 printing  
paragraphs

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Letter from Montague  
Herbert Spencer

Abbeau Thoreau

Jean Paul

Margaret Fuller

Monroe Alcott

---

Wendell Phillips

Letter from him  
Get his life & his share  
"Juvenile Hall speech"

Puny boy - scheduled to die before I was 20. Good prospect.

Lost one lung.

Graham - Cuvier

Froebel - Margaret Fuller.

Brook Farm -

Ripley

Chas. Dana

Hawthorne

Horace Greeley

Thoreau

Bronson Alcott

Wendell Phillips

~~Sarah-Joanna Hale~~

~~Codey's Lady's Book~~

~~Out-door play-grounds~~

~~Physical ed. for women.~~

~~Thanksgiving - Mary's Lamb~~

~~Edison - light bath.~~

How many  
of us together  
here?

Must read Keatts' Evolution  
book.

wonderful things about the  
body

---

achievements.

---

description - Shastles part  
"What a piece of work is man!"  
"The beauty of the world"  
"The paragon of animals."  
p. 38. (Ideas)



# The Future of Medicine

Our ~~go~~ old friend Dr  
long and favorably

Adolphus Kuepf, <sup>internationally</sup>  
known as <sup>a</sup> ~~an~~ able medical

~~writer~~ and a ~~author~~ whose

books have won prizes in  
international contests and  
have been translated into

~~almost every~~ ~~at~~ all the  
principal spoken lan-  
guages. Has written an  
address on the above

in which he forecasts the  
development of the medical  
profession and ~~clearly~~ suggests  
<sup>important</sup> changes likely to be made.  
Dr. Knapp maintains that

(a)

In order that the play-  
sician of the future should  
be prepared for the high  
responsibilities that await  
him, Dr. Knapp would have  
care exercised in the

selection of candidates for  
entrance to the medical  
profession through our  
medical colleges. Hewell  
says: —

(b)  
These words are timely  
and should be heeded by  
the registrars and other  
officials who admit students  
to medical studies.

Correct paper "Habits", etc. by omitting period.

Get out large edition and send with S.L. and circulate large number over U.S. and to all American papers and leading English and French papers, and to all college professors, doctors, and leading business men.

Get out in new and better form.

---

List of occupation diseases.

Facts about.

Bigger headings

Bold type for special passages.

Write or wire Mr. Patterson.

065) 35.840 (552) *Wool*  

$$\begin{array}{r} 35.840 \\ \underline{32.5} \\ 338 \\ \underline{325} \\ 130 \end{array}$$

08) 11.73 (126) *Wool*  

$$\begin{array}{r} 11.73 \\ \underline{8} \\ 37 \\ \underline{32} \\ 53 \end{array}$$

07) 7.14 (1) *Wool*

pressed 65% 1.50  
 Wool 2 150  
 100 staves 12 lbs a day for  
 6.00  
 Wool

48.483.000  
 67.443.000  

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P  

$$\begin{array}{r} 119.422732 \\ \hline 6276.185 \\ \hline 116.52 \end{array}$$

Ex. by Haacker at  $\frac{3640}{453.2}$   

$$\begin{array}{r} 82820 \\ \hline 8282 \end{array}$$

Numm. Ex. Station 15.2  
 Snow camp  $\frac{82.89 \text{ gms}}{276.0 \text{ feet}}$   

$$\begin{array}{r} 359 \\ \hline 2484 \end{array}$$

Less by  $\frac{1574}{70000.0}$  Haacker  

$$\begin{array}{r} 616 \\ \hline 540 \\ \hline 70 \\ \hline 3870.0 \end{array}$$

Mech. problem  $\frac{224000 P}{336000 F}$   

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2) 224.000  $\frac{186486}{3728}$   

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$$\begin{array}{r} 223680 \end{array}$$

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4500,000

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4  
573.90  
353  
926.

1000

180. lbs pro. per acre  
of walnuts

3) 9600

16  
108  
18

365) ~~3200~~ (93)  
3285  
1150  
1095

365) 2880 (8)  
2925  
3250

Fat 1800  
60

Enough protein for ~~8~~<sup>9</sup> persons  
Fat enough for 9 persons.

750  
200  
950  
1500

100  
20  
2000

200  
200  
400000

100,000,000  
625) 25,000,000  
40,000  
of nuts  
400  
100



Price 140,000  
 Walnuts 4500,000

140,000  
 4200,000

(672) 3,000,000 (4000) 6000  
 2688 1400  
3120

230 3,000,000  
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5) 3,000,000  
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26,880  
 228,480

Subscribed  
St. Augustine  
Florida

The Michigan State  
Board of Health  
Abolished

The Michigan State Board  
of Health, one of the pioneer  
boards of this country,  
established chiefly through  
the self-sacrificing efforts  
of Dr. H. B. Baker, and the  
late Dr. R. C. Redgie, is now  
no more. The machinations  
of self-seeking politicians  
has at last accomplished  
its ruin. The first step toward  
the destruction of this most

able instrument of the public  
service was the elimina-  
tion of Dr. H. Baker, who  
for a whole generation had  
devoted his life to most  
valuable and conscientious efforts  
as secretary of the board.

A mediocre politician in  
no way qualified for  
his duties was installed  
in his place, and under  
his inefficient administra-  
tion the usefulness of the  
board steadily declined.  
After some years, a broad-  
minded governor, recognizing

the situation, authorized  
a ~~complete~~ reorganization  
of the board, at least so far  
as the secretary was con-  
cerned and cooperated  
in the effort to bring about  
important changes whereby  
the prestige and efficiency  
of the board as a public  
health agency were res-  
tored. During the preceding  
years great progress  
was made, and Michigan  
bid fair to soon hold a  
premier place in the ranks

of the most  
of progressive states in  
matters of sanitation and  
disease prevention.

A succession of gubernamen-  
tional administrations lacking  
the needed scientific knowledge  
and breadth of view to appre-  
ciate the wisdom of the Board  
and its needs placed obsta-  
cles in the way of the  
work of the Board, one after  
another until its efforts were  
badly crippled. It became  
apparent some time ago  
that conspirators were at

work planning to compare  
the downfall of the board  
and the establishment  
of a Commissioner of Health  
to take its place. This has  
at least been done by a  
bill which <sup>was</sup> recently passed  
the state legislature, and so  
the State Board of Health after  
more than forty years of  
useful service has been  
abolished.

If the work of the board  
were to be carried on by

a commissioner wise and  
experienced and big enough  
to conduct the work effectively,  
in other words to really  
fill the place of the board,  
there might be no serious  
ground for complaint, but  
unfortunately this is not  
the case and there is  
abundant reason to regret  
that the great responsibility  
of ~~the~~ <sup>guarding the</sup> lives of the three  
million citizens of Michigan  
rests in the hands of men  
whose chief qualification

time for the important offices  
which they hold consist  
in the fact that they  
have somehow secured  
the privilege of basing  
in the opinion of paternal  
favor. Sometime we shall  
become sufficiently civilized  
to be unwilling to trust  
our most sacred inter-  
ests in other hands than  
those capable of safeguarding  
them.



## Booklet - new - Hay -

For more than 60 years the B. C. San  
has been pioneering a method of  
promoting health by regimen. At  
first there was much opposition but  
but success in restoring <sup>to health</sup>  
patients who had failed to find health  
by conventional methods demonstrated  
its value. made the institution <sup>respected</sup>  
known throughout the civilized world.

Memo for W.K.K.

The interest of W.K. Kellogg in this Company which he obtains from John H. Kellogg, is accomplished and obtained by W.K. by the issue to him of stock amounting to the share which he is to have. When J.H. returns he will direct the issue of certain amount of stock to W.K. None of the stock to W.K. or J.H. - in the large blocks - to be issued until after July 1st - unless necessary - in order to avoid the revenue duty which goes out on July 1st.

<sup>to</sup>  
~~the~~ Hulbert's note for \$300 is permissible under the law ~~the~~ pay up the three preliminary subscriptions of Hulbert, Onen and Palmer. When these three persons transfer their stock to J.H. - W.K. and W.C., the note of Hulbert is taken up by a note of W.K. for like amount. This note simply lies in the Treasury, subject to collection at any time the collection upon it is ordered. The amount of Second Preferred stock which J.H. receives from the Company is made \$499,700 because \$300 of the stock is covered by the three shares issued on the preliminary organization.

W.K. executes the bill of sale from K. to the Company in order that all the stock may be paid up, which it will be by the transfer of the invention to the Company; thereafter the stock can be issued direct to purchasers instead of first to J.H. and then to the purchasers.

*J.H.K.*

I guarantee the payment of ten per cent per annum hereon

Dated \_\_\_\_\_ 190...

## DESCRIPTION

The cabinet is made preferably of metal, such as stainless steel. On the back side is a tightly fitting door. The top and bottom are tightly closed.

The fan (t) sucks the air from the cabinet through a tube which starts just above the receptacle into which the material discharged from the colon is received. In most cases in which irrigation is needed, the intestinal contents are highly offensive and ~~highly~~ <sup>and sometimes disagreeable</sup> disagreeable to both the patient and the attendant, and not infrequently to other patients.

The window (s) permits inspection of the contents of the receptacle without permitting the foul odors to escape from the cabinet.

The tank (b) shown in dotted lines is made of glass and is only 10 or 12 inches deep. This prevents the very considerable change of pressure which occurs in the use of the long conical vessels in general use, which in some instances permit a fall of pressure of nearly fifty per cent.

The small tank or reservoir (w) is for use in giving medicated liquids, <sup>gory</sup> acidophilus, <sup>milk</sup> and other cultures, and in making alternate hot and cold applications to the rectum, or vagina, or bladder.

The thermometer (c) is placed inside the tank and is <sup>read</sup> through a small window in the wall of the cabinet.

At (d) is shown the dial of a scale upon which rests the tank or reservoir. The figures on the dial to which the hand points show the number of pounds or pints of liquid present in the reservoir at any moment when treatment is being given. By subtracting the

+ page 3

The inspection is facilitated by an  
an. electric light properly  
placed within the cabinet.

amount indicated from the amount shown at the beginning of the *examination* the approximate amount of liquid introduced may be known by subtracting from this the figures shown on the lower dial, the amount of liquid left in the intestine may be ascertained.

The upper dial shows when the tank needs refilling, and the lower dial shows when the waste receptacle needs to be flushed.

The upper dial is connected with scales on which the tank rests. The lower dial carries the weight of the waste receptacle. *(d) is connected with another scale*

The manometer (f) indicates the pressure under which the stream of liquid is entering the bowel through the service tube (p) and also the amount of negative pressure due to the column of water in the discharge tube (9). The ~~is~~ positive pressure is controlled by the valve (i); the negative pressure by valve (7).

The capacity of the waste receptacle (v) is the same as that of the tank (b). *approximately if desired*

The temperature of the water may be regulated by a temperature controller and mixer (y).

The valve (z) permits withdrawal of water for making medicated mixtures or other purposes.

The flexible pipe (m) is provided for the convenient emptying and flushing of the receptacle (v). At (n) is shown an aspirator, which is controlled by the valve (k).

The valves (u), (i), (j), (k) and l give the operator complete control of the apparatus without leaving his seat. He fills the tank by opening valve (j), having previously adjusted the temperature controller so that it will deliver water of the desired temperature.

After the colon or enema tube (r) is introduced, the valve (l) is closed, and the valve (i) is opened fully or partially, according to the amount of pressure desired. When the desired amount of liquid has been introduced, as shown by the upper dial (d), valve (i) is closed and valve (h) opened. The negative pressure is always sufficient, often excessive, so that the mucous membrane is drawn into the openings of the tube, causing stoppage of the outflow.

*The negative pressure is perfectly controlled by valve h.*  
If it is desirable to give a medicated enema, valve (i) is kept closed and valve (h) is opened, the medicated solution having been placed in the small accessory reservoir shown at (w).

When an alternating hot and cold or Scotch irrigation is to be given, the small tank is filled with cold water, the larger one with hot water, and the valves (h) and (i) are opened and closed in alternation. *9/* This powerful revulsive application may render invaluable service in a great variety of therapeutic applications other than the treatment of rectal and colon affections, such as vaginal irrigations, certain eye affections, and for circumscribed superficial exudates and other conditions requiring vigorous stimulation of the local blood circulation.

When the application is finished, or before if necessary, the waste receptacle is quickly emptied by opening valve (k), which sets in operation the aspirator (n), by which the contents of the receptacle are in a few seconds transferred to a nearby water-closet, or passed directly into a soil pipe through a protecting valve, by means of the large flexible tube (m).

Every part of the apparatus may be easily cleansed and disinfected, so that it may be kept in a thoroughly sanitary condition.

## Sir Walter Scott

Scott was a great lover of Nature's life-giving elements, cold water, fresh air and sunshine, in which he bathed at every opportunity. His study at Abbotsford was the sunniest room in the house, and he liked to work at his desk with the sunshine full upon him. "When I was subject to sore throats," he wrote, "I cured myself of that tendency by sponging my throat, breast and shoulders with the coldest water I could get."

--W.

"Say, pop, where is the  
alimentary canal?"

"Why don't you look in your  
geography book?"

--Medical Pickwick



RAY LYMAN WILBUR, M.D., *Chairman*

C.-E. A. WINSLOW, DR. P.H., *Vice-Chairman*

HARRY H. MOORE, PH.D., *Director of Study*

# THE COMMITTEE ON THE COSTS OF MEDICAL CARE

Organized to study the economic aspects of the prevention and care of sickness, including the adequacy, availability, and compensation of the persons and agencies concerned

910 SEVENTEENTH STREET

WASHINGTON, D. C.

TELEPHONE NATIONAL 5358

*Editorial*

Dr. John Harvey Kellogg  
Good Health  
Good Health Publishing Company  
Battle Creek, Michigan

My dear Doctor Kellogg:

We are sending herewith a release on the incomes of physicians of the United States which we think you may wish to review in your journal.

Sincerely

*Everett S. Martley*

Authorized for release by the  
Committee on the Costs of Medical Care  
910 - 17th Street, N. W., Washington, D. C.  
Dr. Ray Lyman Wilbur, chairman  
Dr. Harry H. Moore, director

FOR IMMEDIATE RELEASE

ONE-HALF OF U. S. PHYSICIANS AT PEAK OF PROSPERITY  
HAD INCOMES OF LESS THAN \$3,800, SURVEY REVEALS

- - - - -

Four Per Cent of Doctors Lost Money  
On Practice at Peak of  
National Prosperity

- - - - -

In the boom year, 1929, one-half the physicians of the United States received a net income of only \$3,800 or less, while more than 21,000 practitioners - 15 per cent of all the physicians in the United States - derived less than \$1,500 from their professional activities, and more than 4 per cent lost money as a result of their year's work, according to figures based on an exhaustive study of the incomes of physicians in the United States contained in a report made public today (Thursday, November 24th).

The report states that although a number of physicians have exceptionally large incomes, it was found that a larger proportion of physicians have inadequate incomes than have members of any other professional group.

Physicians' incomes declined 17 per cent in 1930, the first year of the depression, according to the report. Comparative figures for the first three months of 1931 disclosed a still larger drop in income, and the author states it cannot be doubted that as the year progressed physicians' incomes continued to recede.

The report, "The Incomes of Physicians," by Maurice Leven, Ph.D., to be published by the University of Chicago Press, is the 24th study made by the

Committee on the Costs of Medical Care in Washington, a non-governmental organization, which on November 29th at a meeting in New York City will issue its Final Report with recommendations based on its exhaustive five-year investigation of the problem of providing "adequate, scientific medical care to all the people, rich and poor, at a cost which can be reasonably met by them."

The Committee's Final Report, to be made public before the National Conference on the Costs of Medical Care at the New York Academy of Medicine on that day, is being anticipated with the greatest expectancy by both medical practitioners and the general public.

#### Incomes of Physicians in Cotton Belt Dropped 50 Per Cent During First Year of the Depression

General practitioners felt the effects of the first year of the depression more severely than specialists, according to the report, which cited estimates that their net incomes were reduced <sup>by</sup> 20 per cent, while those of specialists dropped only 13 per cent.

Hardest hit by economic conditions were the physicians in the cotton growing areas of Texas, Oklahoma, Arkansas and Louisiana, whose net incomes decreased 50 per cent in 1930. In marked contrast, physicians employed on a salary who held full-time positions (with industrial medical services, public health services, etc.) did not suffer any reduction in income in 1930, according to the report.

#### 44 Per Cent of Physicians in Private Practice Were Specialists in 1931

In a sample group of practicing physicians (excluding full-time salaried physicians), representative of the entire United States, studied by the Committee on the Costs of Medical Care in 1931, the report stated that 23 per cent were complete specialists; 21 per cent, partial specialists; and 56 per cent, general practitioners.

Ways to Increase Returns to Physicians and Reduce Patients' Costs Indicated

The author of the report suggests four ways in which economies may be effected in order to increase the returns to physicians and reduce the costs of physicians' services to patients. He points out that improvements in the methods of medical treatment indicate expansion rather than contraction in the personal service required, but lists the following possibilities for effecting economies:

- (a) "The more efficient use of facilities.
- (b) "Professional services might be coordinated so as to assign the various tasks to those who can do them most effectively and most economically.
- (c) "The professional energy of practitioners might be conserved and more fully utilized, especially in the reduction or entire elimination of idle and non-productive periods such as now are spent in establishing a practice, in waiting for patients, and in long journeys to and from patients.
- (d) "The elimination of unnecessary treatment."

1929 Figures Reveal Interesting Data

Other data, applying to the year 1929, disclosed in the report follow:

1. Approximately 142,000 physicians were actively engaged in furnishing medical care to the people of the United States at the end of 1929.

Of these, about 121,000 were engaged in private practice, and about 21,000 held full-time salaried positions.

2. The average net income of physicians in private practice was \$5,467 -- about 61 per cent of their gross receipts.

While the average net income for all physicians (including those who held salaried positions) exceeded \$5,000 per year, it was pointed out that one-half of them had a net income of only \$3,800. Fifteen per cent (or more than 21,000 practitioners) received net incomes of less than \$1,500 from their professional activities; and more than 4 per cent had deficits.

The report stated that the median net income of physicians, \$3,827, for all practitioners, was slightly higher than that of dentists, \$3,781.

3. Size and location of communities in which physicians practiced affected their incomes.

In general, the more prosperous the area was, the higher the physicians' incomes. Physicians' average gross incomes were highest in the Middle Atlantic States and on the Pacific Coast, and lowest in the South Central States.

The average net income of physicians in communities with less than 5,000 population was \$3,200, as compared with an average of \$6,900 in cities of more than a million inhabitants. The highest average net income, \$7,300, was received by physicians in cities of from 100,000 to 500,000 population.

4. Complete specialists received more than double the average net incomes of general practitioners.

Complete specialists received an average net income of \$10,000; partial specialists, \$6,100; and general practitioners, \$3,900.

5. The American public spends far more for the services of complete and partial specialists than for those of general practitioners.

The people of the United States spent approximately on a per capita basis, \$3.55 for complete specialists; \$1.95 for partial specialists; and \$3.40 for general practitioners.

6. Physicians failed to collect about one-fifth of their charges.

The study revealed that physicians normally collect only 80 per cent of their charges. This fact is of great significance in the economics of medical care, the author points out, because, when a service is so operated that its income is derived from only 80 per cent of its consumers, obviously -- to the consumer who pays -- the cost is 25 per cent more than it need be, unless someone else makes up the deficit.

7. Collection losses were proportionately higher for physicians with the smaller and poorer practices.

Physicians whose total gross income amounted to less than \$1,000 collected only 51 per cent of their charges during the year (1929), while those whose gross incomes were from \$1,000 to \$2,000 collected 63 per cent; and 80 per cent of the total charges were collected by those physicians whose gross incomes were between \$5,000 and \$10,000.

8. Approximately one-third of the physicians in private practice in the United States had incomes under \$2,500.

If \$2,500 may be considered an inadequate income, some 40,000 -- one-third of the physicians in private practice -- had inadequate returns from their professional work. In communities with less than 5,000 population, one-half of the physicians fell into this category.

The Sunday school girls of a certain church put flowers in front of the pulpit each Sunday. One was asked by an elder lady what they did with the flowers after the church service.

"Oh, we take them to the people who are sick after the sermon," was the innocent reply.

--Personality Magazine.

Washington, D.C.

Feb. 12, 1923.

Senator Watson told this story about himself:

At a Chautauqua where he was to be the first speaker on the season's program, the manager made a few preliminary remarks. He told the audience that the year before they had lost money, so that this year, "in order to be on the safe side, we prepared a cheap program, on the first of which will be the speaker of the evening, who will now address us."



## WHAT TO SAY

One morning a Sunday school was about to be dismissed and the youngsters were already in anticipation of relaxing their cramped little bodies after hours of confinement on straight-backed chairs when the superintendent arose, and instead of the usual dismissal announced, "And now, children, let me introduce Mr. Smith, who will give us a short talk."

Mr. Smith smilingly arose, and after gazing impressively around the class room, began with "I hardly know what to say," when a small, thin voice in the back of the room, lisped, "Thay amen, and thit down."

## Disraeli

"Sir Henry Irving had a young relative who took orders and became a clergyman in the Established Church. At the request of Irving, Disraeli appointed this young man one of the curates at Windsor.

"One day the clergyman came to Irving in great distress and said: "The unexpected has happened. Every one has dropped out, and I have been ordered to preach on Sunday."

"Irving took him to see Disraeli for advice. The prime minister said to the young clergyman: 'If you preach 30 minutes, Her Majesty will be bored. If you preach 15 minutes, Her Majesty will be pleased. If you preach 10 minutes, Her Majesty will be delighted.'

"'But,' said the young clergyman, 'my lord, what can a

Breachers possibly say in  
only 10 minutes?

"That," answered the  
statesman, "will be a matter  
of indifference to Her Majes-  
ty".

Chauncey Depew.

"Joseph Chamberlain was the guest of honor at a dinner in an important city. The Mayor presided, and when coffee was being served the Mayor leaned over and touched Mr. Chamberlain, saying, "Shall we let the people enjoy themselves a little longer, or had we better have your speech now?" "

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### **The Old Circuit Rider.**

Robert Frost, the Lincoln authority, has collected many good stories about the old itinerant preachers, or circuit riders, of Lincoln's day.

"These men," he said at a dinner in South Shaftsbury, "made up in good works for what they lacked in book l'arning. One of them once prayed at a Springfield revival:

" 'Roust us up, Lord! We've been settin' so long at ease in Zion that we're stiff-jinted. We want ilin'. Ile us, O Lord! Ile us with the Isle of Patmos!' "

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### **The Post-War World.**

The late Charles W. Eliot took a gloomy view of the post-war world with its profiteers and lying propaganda. He said one day at a luncheon in his Cambridge residence:

"I agree with the school-boy whose teacher asked him:

"'Is the world round, Jimmy?'"

"'Nome.'"

"'Is it flat, then?'"

"'Nome.'"

"'Child, you must be crazy. If the world isn't round and isn't flat, for goodness' sake what is it?'"

"'Pop says it's crooked.'"

## HOW HE CHANGES HIS SERMONS

A little girl of twelve years, the daughter of a clergyman, was asked: "Sadie, does your papa ever preach the same sermon twice?"

After thinking a moment, Sadie replied:

"Yes, I think he does; but I think he hollers in different places."

## Introduction

Hardly happy in her introduction of a speaker was the chairman of the Women's Business and Professional Club of Kansas when she said:

"We have with us this evening one who is not so popular here at home as she is where she is not so well known."



## Going Some!

**S**AID the negro preacher, regarding the white preacher who had consented to occupy the black brother's pulpit on the following Sunday:

"Gemmen an' ladies of de congregation, dis noted divine am one of de greatest men of de age. He knows de unknowable, he kin do de undoable, an' he kin on-screw de onscrutable!"

*THE ARKANSIAN.*

Authorized for release by  
The Committee on the Costs of Medical Care  
910 - 17th Street, N. W., Washington, D. C.  
Dr. Ray Lyman Wilbur, Chairman  
Dr. H. H. Moore, Director

File  
For Release Wednesday Morning  
November 30, 1932 and  
Thereafter.

**THE COMMITTEE ON THE COSTS OF MEDICAL CARE IN FINAL  
REPORT RECOMMENDS BASIC CHANGES IN MEDICAL CARE**

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**URGES ATTACK ON PROBLEM OF PROVIDING  
MEDICAL SERVICE FOR ALL PERSONS**

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Changes Proposed Are Adaptable to All Communities.

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Medical Centers Urged.

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Report Provides Scientific Basis for Handling Problem.

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Group Payment Recommended.

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Recommendations Based Largely on Existing Organizations.

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Personal Relation Between Physician and Patient and Higher Compensation  
to Physicians Stressed.

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New York, - Basic change in the system of providing medical care for the people of the United States is recommended in the report of the Committee on the Costs of Medical Care made public yesterday, (Tuesday, November 29th) at the National Conference on the Costs of Medical Care held at the Academy of Medicine, New York City. Asserting that our physical and mental health is the nation's greatest asset, the report, which has been adopted by a substantial majority of the Committee, urges immediate steps to provide better medical care for the people of the United States, and to bring this about, outlines five recommendations. Prominently featured among

the recommendations are group organization of medical service and group payment of the costs.

The five basic recommendations of the Committee are:

(A fuller statement of the Committee's recommendations is attached at the end of this statement).

1. That medical care be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel, centered around a hospital, and rendering home, office, and hospital care.
2. That all basic public health services be extended until they are available to the entire population, according to its needs.
3. That the costs of medical care be placed on a group payment basis through the use of insurance, taxation, or both methods, without precluding the continuation of the individual fee basis for those who prefer it.
4. That a specific organization be formed in every community or state for the "study, evaluation, and coordination of medical service."
5. That the professional education of physicians, dentists, pharmacists, and nurses be reoriented to accord more closely with present needs, and that educational facilities be provided to train three new types of workers in the field of health; namely, nursing attendants, nurse-midwives, and trained hospital and clinical administrators.

The development in each city of one or more hospitals into a "Community Medical Center" is called the "keystone" of the Committee's recommendations. These centers would provide complete medical services in return for weekly or monthly fees, with, when necessary, some supplementary support from tax funds. Professional procedures, according to the report, would be under the control of the physicians, dentists and other practitioners, and financial responsibility would rest with a board representing the public.

The personal relation between patient and practitioner would be carefully maintained in such centers, the Committee states. Such organization, it asserts, would be fairer to practitioners than the present system, because it would provide them with higher average incomes and would give the largest rewards to those with the greatest experience and ability.

The recommendations in general, the Committee stresses, provide for the development of existing machinery rather than the construction of entirely new organizations.

Based on an exhaustive five-year study of all major aspects of medical service in the United States and a careful consideration of European experience with health insurance, the report provides for the first time a scientific basis for communities throughout the country to attack the perplexing problem of providing adequate medical care for all persons at costs within their means. A document of 236 pages, it is to be published this week by the University of Chicago Press.

The Conference at which the report was released was held at the New York Academy of Medicine, 2 East 103rd Street, in an all-day session attended by leaders in all fields of medicine and public health, by industrialists, representatives of labor, heads of women's organizations, educators, economists and other representatives of the general public.

On behalf of Governor Roosevelt, the address of welcome at the opening session was made by Dr. Thomas Parran, Jr., New York State Commissioner of Health.

The high lights of the 26 fact-finding studies of the Committee on the Costs of Medical Care were presented to the Conference during the morning session by members of the Committee and the research staff.

The recommendations of the Committee were presented at the opening of the afternoon session by Dr. C.-E.A. Winslow, Vice-Chairman of the Committee and Professor of Public Health, Yale University. The minority viewpoints were

presented by Dr. Nathan B. Van Etten of New York City. Among the speakers at the afternoon session who discussed present and future significance of the Committee's findings and recommendations were Dr. Lewellys F. Barker of Baltimore, a member of the Committee, who spoke from the physician's point of view, and President Livingston Farrand of Cornell University, who spoke from the public health point of view.

The speakers at the concluding session of the Conference last night were Dr. Ray Lyman Wilbur, Chairman of the Committee, and former president of the American Medical Association, who spoke on "The High Points in the Committee's Recommendations"; Dr. John A. Hartwell, professor of surgery at Cornell University Medical College, and past-president of the New York Academy of Medicine, who discussed "The New Outlook for Medicine"; and President James R. Angell of Yale University whose subject was "The Future and the People's Health".

Among other conference members were: Dr. R. H. Bishop, Jr., Cleveland, Ohio; Dr. Philip King Brown, Chief Physician, Southern Pacific Railroad, San Francisco, California; Dr. W. C. Davison, Dean and Professor, Pediatrics, Duke University School of Medicine, Durham, North Carolina; Paul Fesler, Past President of the American Hospital Association, Chicago, Illinois; Paul U. Kellogg, Editor, The Survey, New York City; Dr. Frederick P. Keppel, President, Carnegie Corporation, New York City; John A. Kingsbury, Secretary, Milbank Memorial Fund, New York City.

Dr. Dean Lewis, Surgeon-in-Chief, Johns Hopkins Hospital, and President-elect of the American Medical Association, Baltimore, Maryland; Dr. Adolf Meyer, Professor of Psychiatry and Director of the Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore, Maryland; Dr. A. L. Midgley, Secretary, American College of Dentists, Providence, Rhode Island; Albert C. Milbank, President Milbank Memorial Fund, New York City; Anne Morgan, President, American Woman's

Association, New York City; W. J. Norton, Secretary, Detroit Community Fund, Detroit, Michigan; Fred C. W. Parker, Secretary, Kiwanis International, Chicago, Illinois; Mrs. John F. Sippel, Ex-president, General Federation of Women's Clubs, Baltimore, Maryland.

Dr. W. H. Welch, President, Board of Directors, Rockefeller Institute for Medical Research, Baltimore, Maryland; Dr. Horace J. Whitacre, President, Washington State Medical Society, Tacoma, Washington; Dr. Linsly R. Williams, Managing Director of New York Academy of Medicine, New York City; Dr. M. C. Winternitz, Dean, School of Medicine, Yale University, New Haven, Connecticut; and Leo Wolman, Professor of Economics, Columbia University, New York City.

The report represents the result of five years' study by the Committee on the Costs of Medical Care--an unofficial organization composed of 48 physicians, public health officers, economists, and representatives of various institutions and of the general public--under the chairmanship of Dr. Wilbur.

Sixteen of the 24 doctors of medicine on the Committee, seven of the 11 members engaged in other forms of medical and public health work, and twelve of the 13 economists and representatives of the public, support the Committee's five recommendations.

In the introduction to the report, Dr. Wilbur states:

"When the Committee was organized, an effort was deliberately made to secure as members persons representing all points of view on the problems under consideration. There are two important results of this policy. First, all interests and points of view, it is believed, have been adequately considered in the formulation of the Committee's recommendations. Second, there have been two small minority groups which, not able conscientiously to subscribe to the views of the majority, have submitted minority reports; and two other members have prepared personal dissenting statements."

The principal minority report, signed by nine members, has seven recommendations as follows:

(1). That government competition in the practice of medicine be discontinued and that its activities be restricted entirely to certain types of service; (2) that government care of the indigent be expanded with the ultimate object of relieving the medical profession of this burden; (3) that coordination of medical service be considered an important function for local communities; (4) that united attempts be made to restore the general practitioner to the central place in medical practice; (5) that the corporate (i.e. organized) practice of medicine be vigorously and persistently opposed as wasteful, inimical to high quality, or productive of unfair exploitation of the medical profession; (6) that careful trial be given methods which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice; and (7) that state or county medical societies develop plans for medical care.

In a separate personal statement, Professor Walton H. Hamilton of Yale University presents a scholarly outline of the evolutionary background of the problem of medical care and suggests that it be solved by a scheme of medical organization paralleling the type of organization now in vogue in universities. Two dentists on the Committee present a second joint minority report supporting in general the recommendations of the majority but criticizing certain aspects of them.

In presenting this final report, which represents five years of intensive work by the Committee composed of forty-eight members, and its large research staff, Secretary Wilbur said:

"The problem of delivering adequate, scientific medical care to all the people, rich and poor, at costs which can be reasonably met by them

in their respective stations in life, is vital to the American people. The Committee on the Costs of Medical Care, formed in 1927, an unofficial organization composed of physicians, public health officers, economists, and representatives of various institutions and of the general public, has presented ways of meeting this problem. It has completed twenty-six studies. The Committee has been supported by eight foundations and two other organizations--the Carnegie Corporation, the Josiah Macy, Jr. Foundation, the Milbank Memorial Fund, the New York Foundation, the Rockefeller Foundation, the Julius Rosenwald Fund, the Russell Sage Foundation, the Twentieth Century Fund, the Social Science Research Council, and the Vermont Commission on Country Life.

"The American Medical Association, the American Dental Association, the Metropolitan Life Insurance Company, the National Bureau of Economic Research, and the National Tuberculosis Association have conducted supplementary studies which have been of great value to the Committee's program of study. The United States Public Health Service gave valuable assistance in the tabulation of an immense amount of statistical data gathered in connection with the Committee's study of the incidence and costs of sickness among families. Finally, state and local departments of health, visiting nurse associations, and other organizations and individuals have cooperated most generously in the field work of the Committee's various studies. The work performed without cost to the Committee by collaborating agencies and the various organizations and individuals who have assisted in the field work would otherwise have required the expenditure of a great many thousands of dollars."



Dr. Wilbur expressed the hope that when the present Committee goes out of existence January 1, 1933, some other organization may be formed for the purpose of promoting further research in the field of medical economics. It is also hoped, he stated, that a continuing organization may immediately be formed to promote experimentation and demonstrations in local communities along lines proposed in the Committee's recommendations.

The Committee is as follows:

#### OFFICERS

Ray Lyman Wilbur, M.D., Chairman, Department of the Interior, Washington, D.C.

C.-E. A. Winslow, Dr. P.H., Vice Chairman, Yale University School of Medicine,  
New Haven, Connecticut

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Harry H. Moore, Ph.D., Director of Study, 910 Seventeenth Street,  
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Michael M. Davis, Ph.D.  
Mrs. Wm. Kinnicutt Draper

Haven Emerson, M.D.  
George E. Follansbee, M.D.  
Walton H. Hamilton, Ph.D.  
Walter R. Steiner, M.D.

#### MEMBERS WITH INTERESTS REPRESENTED

##### Private Practice

Lewellys F. Barker, M.D., Baltimore, Maryland  
Walter P. Bowers, M.D., Clinton, Massachusetts  
A. C. Christie, M.D., Washington, D.C.  
William Darrach, M.D., New York City  
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C. E. Rudolph, D.D.S., Minneapolis, Minnesota  
Richard M. Smith, M.D., Boston, Massachusetts  
Walter R. Steiner, M.D., Hartford, Connecticut  
N. B. Van Etten, M.D., New York City  
Robert Wilson, M.D., Charleston, South Carolina  
Rollin T. Woodyatt, M.D., Chicago, Ill.

### Public Health

- George H. Bigelow, M.D., Commissioner of Public Health, State Department of Health, Boston, Massachusetts
- Herman N. Bundesen, M.D., Coroner of Cook County, Chicago, Illinois
- Haven Emerson, M.D., Professor of Public Health Administration, College of Physicians and Surgeons, New York City
- John Sundwall, M.D., Professor of Public Health, University of Michigan, Ann Arbor, Michigan
- Edgar Sydenstricker, Director of Research, Milbank Memorial Fund, New York City, and Statistician, U. S. Public Health Service, Washington, D.C.
- C.-E. A. Winslow, Dr. P.H., Professor of Public Health, Yale University, New Haven, Connecticut

### Institutions and Special Interests

- W. Irving Clark, M.D., Service Director, The Norton Company, Worcester, Massachusetts
- Louis I. Dublin, Ph.D., Third Vice-President and Statistician, Metropolitan Life Insurance Company, New York City
- Elizabeth Fox, R.N., Executive Director, Visiting Nurse Association, New Haven, Connecticut
- Ambrose Hunsberger, Phar.M., Member of Governing Bodies of National Association of Retail Druggists, American Pharmaceutical Association, and National Conference on Pharmaceutical Research, Philadelphia, Pennsylvania
- Alfred Owre, D.M.D., M.D., C.M., Sc.D., Dean, School of Dentistry, Columbia University, New York City
- W. S. Rankin, M.D., Director, Hospital and Orphan Sections, Duke Endowment, Charlotte, North Carolina
- Mary M. Roberts, R.N., Editor, American Journal of Nursing, New York City
- Alphonse M. Schwitalla, S.J., Ph.D., President, Catholic Hospital Association, and Dean, School of Medicine of St. Louis University, St. Louis, Missouri
- Winford H. Smith, M.D., Director, Johns Hopkins Hospital, Baltimore, Maryland
- Olin West, M.D., Secretary, American Medical Association, Chicago, Illinois

### Economics and Sociology

- Michael M. Davis, Ph.D., Director for Medical Services, Julius Rosenwald Fund, Chicago, Illinois
- William T. Foster, Ph.D., Director, Pollak Foundation for Economic Research, Newton, Massachusetts
- Walton H. Hamilton, Ph.D., Professor of Law, Yale University Law School, New Haven, Connecticut
- Wesley C. Mitchell, Ph.D., Director, National Bureau of Economic Research, New York City
- William F. Ogburn, Ph.D., Professor of Sociology, University of Chicago, Chicago, Illinois
- Henry C. Taylor, Ph.D., Agricultural Economist, Burlington, Vermont

### The Public

- Winthrop W. Aldrich, President, Chase National Bank of the City of New York
- Morris L. Cooke, D.Sc., Management Engineer, Philadelphia, Pennsylvania
- Mrs. William Kinnicutt Draper, New York City

John P. Frey, Secretary-Treasurer, Metal Trades Department, American Federation of Labor, Washington, D.C.  
 Homer Folks, LL.D., Secretary, State Charities Aid Association, New York City  
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Significant Facts Revealed

Among the significant facts and figures revealed in the report are the following:

1. The nation's "medical dollar" (based on data for total medical bill of \$3,656,000,000 for 1929) is distributed as follows:

Physicians in private practice.....	29.8¢
Hospitals.....	23.4
Dentists.....	12.2
Medicines.....	18.2
Public health.....	3.3
Nurses.....	5.5
Cultists.....	3.4
All others.....	4.2
	<hr/>
	100.0¢

2. A total of 1,084,500 persons in the United States are engaged in the provision of medical care and in the sale of medical commodities, as follows:

<u>Personnel</u>	<u>Private Practice</u>	<u>Medical Institutions or Sale of Commodities</u>
Physicians.....	121,000.....	21,000
Dentists.....	56,800.....	5,600
Graduate Nurses.....	118,000.....	77,000
Student Nurses.....		80,000
Public Health and Industrial Nurses.....		18,800
Practical Nurses.....	150,000	
Midwives.....	47,000	
Chiropodists.....	4,900	
Optometrists.....	20,200	
Osteopaths.....	7,700	
Chiropractors.....	16,000	
Naturopaths.....	2,500	
Religious Healers.....	10,000	
Pharmacists.....		132,000
Lay Personnel in Hospitals, Clinics and Public Health Agencies.....		196,000
	Total 554,100	Total 530,400
Grand Total.....		1,084,500

3. The place that medical care occupies in the nation's expenditures is shown by the following table:

Fuel, gas, ice, and electricity.....	2,573 millions
Personal adornment.....	2,698
Tobacco, candy, ice creams, soft drinks.....	3,074
Education.....	3,388
Recreation.....	3,420
Medical Care.....	3,577
Household furnishings and supplies.....	4,594
Automobiles.....	7,882
Clothing.....	9,315
Rent.....	13,060
Food.....	16,137

Most of the money spent directly by the people for medical care goes for the treatment of illness and a very small proportion for prevention, as follows:

- 78.5% for care of illness
- 17.4% for dental care
- 2.7% for eye care
- 1.4% on prevention

5. The following comparison is given between the number of deaths due to largely preventable causes, and the number of United States soldiers killed in battle or by wounds in the World War:

Killed by the World War.....	50,285
Killed by tuberculosis (1930).....	88,088
Killed by cancer (1930).....	119,818
Infant deaths (1930).....	135,845

6. The per capita expenditure in the United States for medicines is \$5.49. For public health work - local, state, and federal - it is only \$1.00.

7. Practitioners' incomes are distributed very unevenly, and actual incomes are inadequate for a large number of practitioners, while they are more than adequate for some others. The extent of this maldistribution is suggested by the wide interval between the middle or median net income of \$3,800 and the average of \$5,300. In 1929, one-third of all private practitioners had net incomes of less than \$2,500. For every physician with a professional net income of more than \$10,000, there were two who received less than \$2,500. The contrast is especially great between general practitioners and specialists. In 1929, the 70,000 general practitioners, as a group, received less income than the 30,000 complete specialists. The average net income of the former group was under \$4,000, while that of the latter was over \$10,000.

8. Costs to the individual receiving medical care were likewise found to be extremely uneven. A study of 9,000 families showed that average costs of medical care varied with the incomes of these families, but that within each income group there were wide variations in the actual cost per family.

Of families with total annual incomes under \$1,200, 80 per cent paid less than \$60 during a year and one per cent paid over \$500.

Of families with total annual incomes over \$10,000, 0.7 per cent paid under \$60 during a year and 74 per cent paid over \$500.

"Deficiencies" in Present System Pointed Out.

The report outlines the present situation in the provision of medical care, basing this summation on the findings in its twenty-six extensive studies into all aspects of the problem.

As a result of this survey into existing conditions, the report then lists the following "deficiencies in the provision of medical service which seem to be within the power of the American people -- professional and lay, separately or together -- to overcome at the present state of medical knowledge":

1. The people need a substantially larger volume of scientific medical service than they now utilize. This is particularly true of persons with small incomes. In spite of the large volume of free work done by hospitals, health departments, and individual practitioners, and in spite of the sliding scale of charges, it appears that each year nearly one-half of the individuals in the lowest income group receive no professional medical or dental attention of any kind, curative or preventive.

2. Modern public health services need to be extended to a far greater percentage of the people, particularly in rural areas, towns, and small cities.

3. There is need for a geographical distribution of practitioners and agencies which more closely approximates the medical requirements of the people.

4. Current expenditures for medical care, in rural and semi-rural areas, are insufficient to insure even approximately adequate service, to support necessary facilities, or to provide satisfactory remuneration to the practitioners.

5. Many practitioners, particularly well-trained recent graduates, should have opportunities to earn larger net incomes than they now receive. Incomes of general practitioners and of specialists should be more nearly equal than at present. The opportunity and incentive for "fee-splitting" should be removed.

6. Better control over the quality of medical service is needed, and opportunities should be provided for improving quality as rapidly in the future

as it has been improved in the past. Improvement of the quality of service would include: elimination of practice by unqualified "cult" practitioners; control over practice of secondary practitioners (like midwives, chiroprodists, and optometrists); restriction of practice of specialties to those with special training and ability; more opportunity for post-graduate study for physicians, particularly rural practitioners; more opportunity for physicians to exchange experiences and to assist each other; better control, through supervision and further education, over the work of certain physicians and dentists who even though regularly licensed are not competent for many functions.

7. There should be more effective control over the number and type of practitioners trained, and their training should be adjusted to prepare them to serve the "true" needs of the people.

8. There is a need for reduction of waste in many directions, such as the money spent on unnecessary medication, on services of poorly qualified or utterly unqualified "cultists," and wastes due to idle time of practitioners, high "overhead" of private medical and dental practice, unused hospital accommodations, and the sending of patients from place to place for medical service.

9. There is need for some plan whereby the unequal and sometimes crushing burden of medical expenses can be distributed. The prevailing methods of purchasing medical care lead to unwise and undirected expenditures, to unequal and unpredictable financial burdens for the individual and the family, to neglect of health and of illness, to inadequate expenditures for medical care, and often to inequable remuneration of practitioners.

Essentials of a Satisfactory Medical Program Enunciated in the Report.

The following basic essentials are laid down in the report for consideration in the formulation of a plan for the provision of medical service:

1. The plan must safeguard the quality of medical service and preserve the essential personal relation between patient and physician.
2. It must provide for the future development of preventive and curative services in such kinds and amounts as will meet the needs of substantially all the people and not merely their present effective demands.
3. It must provide services on financial terms which the people can and will meet, without undue hardship, either through individual or collective resources.
4. The program must include, not only medical care of the individual and the family, but also a well-organized and adequately-supported public health program that will apply all existing knowledge to the prevention of disease and permeate all medical practice with the concept of prevention.
5. It should include provisions for assisting and guiding patients in the selection of competent practitioners and suitable facilities for medical care.
6. It must provide adequate and assured payment to the individuals and agencies furnishing the care. That this could be provided by comparatively small individual payments from those receiving such care is indicated in another part of the report, in which it is estimated that all needed medical care of the kind customarily purchased individually could be provided, excluding capital charges, for from \$20 to \$40 per capita per annum, which equals 40 to 80 cents per week. This estimate is based upon the actual experience of various organizations that are now providing complete or nearly complete service for weekly or monthly fees or without direct charge to the beneficiary.

Lines of Approach Indicated.

After a discussion of each of the six foregoing "essentials" the report specifies the following three "major lines of approach" in obtaining a satisfactory medical service which will meet these essentials:

1. The development of types of organized or group practice that will more effectively and economically meet the community's medical needs.



2. The distribution, over a period of time and over a group of families or individuals, of the costs of service.

3. Provision for the planning and coordination, on a local and regional basis, of all health and medical services.

Among other data included in the report is a discussion of the kinds of organization and administration that are deemed most likely to translate its objectives into action. This is followed by a resume of the most significant plans and experiments now under way in which the advantages and disadvantages of each are briefly summarized.

The report then considers the five recommendations outlined above in detail, and this is followed by a chapter pointing out the need for action and suggesting some practical immediate steps.

## RECOMMENDATIONS OF THE COMMITTEE

### I

The Committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office, and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician.

### II

The Committee recommends the extension of all basic public health services - whether provided by governmental or non-governmental agencies - so that they will be available to the entire population according to its needs. Primarily this extension requires increased financial support for official health departments and full-time trained health officers and members of their staffs whose tenure is dependent only upon professional and administrative competence.

### III

The Committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, i.e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services.

### IV

The Committee recommends that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

### V

The Committee makes the following recommendations in the field of professional education: (A) That the training of physicians give increasing emphasis to the teaching of health and the prevention of disease; that more effective efforts be made to provide trained health officers; that the social aspects of medical practice be given greater attention; that specialties be restricted to those specially qualified; and that postgraduate educational opportunities be increased; (B) that dental students be given a broader educational background; (C) that pharmaceutical education place more stress on the pharmacist's responsibilities and opportunities for public service; (D) that nursing education be thoroughly remolded to provide well-educated and well-qualified registered nurses; (E) that less thoroughly trained but competent nursing aides and attendants be provided; (F) that adequate training for nurse-midwives be provided; and (G) that opportunities be offered for the systematic training of hospital and clinic administrators.

## WHAT'S THE MATTER WITH OUR SCHOOLS?

Fifty years ago, when I was a senior student at the old Bellevue Hospital College, New York, I was sent by my preceptor, the late Dr. Daniel Lewis, to visit a reported case of smallpox. I found a little boy in a one-roomed tenement, well broken out with smallpox and with a very high temperature and unconscious. When I suggested a bath, the mother protested and called my attention to the fact that she had sewed him up and didn't expect to change his clothes until the attack was over, because the health officer would burn them up and everything infected. In spite of my appeals, the mother carried out her program and saved the clothes, though she lost the boy. That was quite a long time ago; but rather recently a Chicago teacher had a similar experience when she ordered a bath for a small boy whose aroma was not agreeable to his seatmates. It was soon discovered that his clothes were sewed on, so that it was necessary to take his garments apart to remove them. The next morning a very angry mother appeared with the boy and berated the teacher well for having ripped off the boy's clothes, when she had "just got him sewed up for winter." "Of course, Johnnie is no rose," she shouted, "don't smell him, learn him!" There is a good deal of discussion nowadays about what is the matter with our colleges and with our educational system in general. To my mind, we are giving too much attention to the clothes, and not enough to the boy. That is, we are giving too exclusive attention to superficial training and culture, and not enough to fundamentals.

The latest definition I find for education is by the Outlook which, the other day, declared the purpose of education to be to make the man intelligent, useful and agreeable to his fellowmen. Mr. Lawrence F. Abbott would thus have

education concern itself chiefly with mind, manners and business. He quite forgets the boy himself. This I conceive to be a general fault in our educational system.

Said Montaigne, "I would like to have the pupil's outward fashion and mien and the disposition of his limbs formed at the same time with his mind." Montaigne recognized the importance of bodily development, physical bearing and posture,--matters which probably receive as little attention from teachers at the present time, if not less, than at any previous time in human history.

Dr. May, of the University of Michigan, reports that of the many hundreds of freshmen who entered the university this year, only fifteen per cent had correct posture. A bad posture means hampered lungs, a crippled heart, congested viscera, lessened endurance, lack of efficiency, a depreciated body and a shortened life.

Stated Herbert Spencer nearly fifty years ago, "People are beginning to see that the first requisite to success in life is to be a good animal," and we are only beginning to appreciate this basal biologic fact which the old Greeks recognized when they wrote over their temples, "mens sans in corpore sano."

Spencer maintained that the essential question in education should be "how to live," "to learn the laws of health." Said he, "the vital knowledge--that by which we have grown as a nation to what we are, and which underlies our whole existence--is a knowledge that has got itself taught in nooks and corners, while the ordained agencies for teaching have been mumbling little else than dead formulas."....."The vice of our educational system is that it neglects the plant for the sake of the flower."

The alpha and omega of education should be health inspection and health training. It is far more important for a teacher to know what a boy or girl has to eat than to know that he has mastered his lessons in mathematics, history or language. We are made of what we eat. What a boy eats to-day is walking around and talking to-morrow. I would like to see a weekly health survey made obligatory for every school--a survey which would include not simply the school building but a careful inquiry into the physical status and the health conduct of every student and every teacher.

We are making great progress mentally and morally, at least our ideals are improving, but we are going down so fast physically that many scientific men have lost all hope for the future of the human race. At the late Eugenics Congress, Professor Davenport remarked, in an address, "Of course, we all know that the human race will ultimately perish;" and Major Darwin, son of Charles Darwin, said, "If our present civilization survives, and I fear it will not, it will have to be the United States that saves it."

We have developed within the last fifty years such a fine educational system for horses, dogs, cows, poultry and other domestic animals, that we now have horses that run faster, cows that give more milk, and hens that lay more eggs, than creatures of their kind ever did before. Under the guiding hand of man, these domestic species of animals are all making a thorough-going application of biology and physiology to human life. As Mr. Stefannson has demonstrated, it is safer for a civilized man to adopt the habits of uncivilized people, even those living under ~~the~~ most unfavorable ~~climatic~~ conditions, than it is for a savage to adopt the habits of civilized man. When a business man finds himself worn-out and breaking down in health,

he takes to the woods and temporarily becomes a near savage. In six months he comes back rejuvenated. A teacher who finds herself the victim of consumption, as the result of her caged life in the school-room, goes out of doors, lives the simple life, and gets well. When the savage becomes civilized, he pines away and dies.

What a marvelous nation we would be if all the people lived the simple life all the time, or at least lived biologically enough to keep themselves fit and efficient and disease-resistant. If we ever cease to be the disease-ridden people we now are and begin to stem the tide of degeneracy that is sweeping us down to race extinction, it will have to be through the training of school children in biologic habits of living.

Euthenics and eugenics, individual hygiene and race hygiene, ought to be the chief concern of education and educators. Schools and school teachers offer the only hope for saving the human race from ultimate extinction. To make our schools effective, they must cease to be one-sided. We must, as Herbert Spenser suggests, give attention to the plant as well as the flower, and, as Montaigne insists, seek to develop not simply the mind or the body alone, but the man.

What's the matter with civilization? is the greatest problem before the world. What's the matter with the colleges and the schools? is only a part of the problem and a very important part, for the school is the most important of all the factors making and molding modern civilized life. We are all born wild and savage. Education is part of the taming process by which we are made <sup>to</sup> fit the mores of our time and place. Undoubtedly, the taming is over-done, so that before we are grown up we have lost a large part of the vitality

and verve and initiative and stamina with which we were endowed at birth. That something is the matter is evident from the fact that the draft examinations of the late war showed that we have lost  $2\frac{1}{2}$  inches in stature since the Civil War and that more than half the young men of the country are milksops and mollycoddles, and verified the prediction of Galton that the intelligence of the average man would be found only a shade above imbecility. If the average American at the present time is not a moron, he is only a little above that degree of mental deficiency.

Taken as a whole, civilization promotes disease rather than health. We have fallen into a terrible slough of degeneracy, physical, mental and moral. The school is only in part responsible for the situation, though it can probably do more than any other factor in helping us out.

The American school teacher has a tremendous responsibility on her hands and the greatest opportunity of all time. She can save civilization and the human race if she will, but the body must be saved as well as the soul.

MEDICAL PROGRESS WITHIN THE LAST TWENTY-FIVE YEARS.

Twenty-five years ago it was customary to speak of the art of medicine; to-day medicine is called a science. The ~~xxxx~~ science of medicine is almost wholly the product of the researches and investigations of the last twenty-five years. The discoveries which have been made through the means of the chemical, bacteriological, and physiological laboratories, in which hundreds of devoted men have patiently labored during the last twenty-five years, have accomplished more for human welfare in matters connected with the medical profession, than all the labors and all the discoveries of five hundred years previous.

In this brief article it is impossible to even enumerate all the various important discoveries which have been made within the last quarter of a century, neither would such a technical enumeration be of special profit. We shall merely take a hasty glance at some of the most important features of the marvelous development along the line of human progress within recent years.

Perhaps we should mention, as most important of all, the recent discoveries in medical science, those which relate to the causation of disease. Twenty-five years ago an epidemic of typhoid fever, of cholera, of yellow fever, of the plague, was looked upon by the majority at least, as a sort of visitation of providence. It is nearly a score of years since Dr. Parkes, the eminent English sanitarian, made the startling assertion, "When a man dies of typhoid fever, somebody ought to be hanged." Modern science has clearly pointed out the fact that catching diseases and infectious maladies, epidemic disorders, are all, without exception, due to the invasion of the body by germs, organisms so minute as to be invisible to the naked eye, but capable of the direst mischief when brought into contact with the body under favorable circumstances for the development of the disorders which accompany their growth. The number of these germs which has been discovered is already legion, and bacteriologists



tell us that we are only just upon the border land of this great new branch of botany. Multitudes of new microbes are discovered yearly, and there is plenty of new territory to explore and new worlds to discover in this branch of investigation. ~~XXXXXXXXXX~~

Incomplete as the research has been, however, we already find ourselves with facts of the most startling character respecting the relation of these minute organisms to all the conditions of our daily life. For example, we have found that the ~~XXXXXXXXXX~~ motes which dance in the sunbeams, as the poets tell us, are in large part living germs which, when received into the body, are capable of almost endless mischief. A German bacteriologist found more than a dozen different kinds of germs present in the examination of the contents of a basket of fruit left by his grocer upon his door step: The dust of the street is no longer to be regarded as an inconvenience, but as a great reservoir of malignant microbes ready to lay us low when a favorable opportunity offers. Pulmonary consumption, one of the most deadly, and in civilized countries one of the most common, of all human maladies, is propagated almost wholly through the inhalation of the dried sputum of persons suffering from the disease which contains the living organisms characteristic of this malady. Fully one fourth to one seventh of all the people that die in this country fall victims to this one disease, which twenty five years ago was supposed to be hereditary and unavoidable, but is now known to be a catching malady, like measles, whooping cough, and similar disorders.

Why all persons do not suffer from tuberculosis, typhoid fever, or other germ diseases, is a mystery hard to explain. Recent science, however, has come forward with a demonstration that germs are not the direct cause of disease, after all, but that the real cause is a weakened body, deteriorated tissues, which furnish favorable soil for the planting and growth of these malignant vegetable organisms. This discovery has brought forward in bold relief the fact that germs are, after all, not

the cause of disease, but rather characteristic factors in it. The real causes of disease are to be found in those habits of life which lessen the vital resistance and deteriorate the bodily functions. For example, the stomach is capable of destroying any germ which may find its way into it. It destroys cholera germs very quickly, also the germs of typhoid fever. Hence, man cannot contract either cholera or typhoid fever so long as he has a perfectly sound stomach. If he happens to swallow the germs of these diseases, he simply digests them as he digests potatoes, cereals, and other vegetables which he may swallow. But the man whose digestive vigor is impaired is constantly exposed to infection, not only by typhoid, yellow fever, or cholera germs, if he happens to come into contact with them, but the blood and tissues being impaired, the defences of the body are all weakened, and germ diseases as well as other disorders of every sort, are <sup>W</sup> imminent.

In order that the body should be maintained in the highest health, it is necessary that every habit of life must conform to the normal standard of conduct. A thoroughly healthy body is capable of resisting the attacks of germs of all sorts. It is only when the bodily health is impaired that germs of any kind are capable of obtaining a foothold. It is thus apparent that the discoveries which have been made in relation to the nature of germs, their method of development, etc., have naturally led to an exhaustive study of the habits of life and their bearing upon human health and longevity.

In this line of research careful study has been made of foods and of their relation to stomach health and general vigor. A vast array of most useful facts in relation to foods, their nature, nutritive values, digestibility, etc., have been brought forward, and ~~xxx~~ <sup>are</sup> gradually finding their way from the medical text books to the public prints, from the laboratory to the kitchen. Twenty five years ago a man who ate graham bread was looked upon as a crank or a fanatic. Cracked wheat, oatmeal, and similar whole grain products, were just beginning to receive attention

Now graham bread, oatmeal, cracked wheat, and other whole grain preparations appear regularly upon the bills of fare of every well ordered hotel in the country. Graham bread is supplied by bakers everywhere, even in the smaller towns. Other equally important dietetic reforms have been made. Mustard, pepper, peppersauce, vinegar, have been critically examined by the physiologist and found to be not only detrimental to the digestive processes, but directly injurious to the stomach, and productive of gastric catarrh and other grave and obstinate maladies. The relation of fats to the digestion of starch and other food elements has likewise been studied so that we are able to comprehend the reason why boiled rice digests in an hour while the digestion of Saratoga chips compares favorably only with that of pebbles or sole leather.

Sir William Roberts and other English physiologists have extended their researches to inquiries respecting the nature of tea, coffee, alcohol, and other beverages, and their effects upon human digestion, with the result that facts have been elicited which condemn these articles as utterly unwholesome, pernicious, and of no possible service to the human body. Within the last few years the study of dietetics ~~has~~ has led to an investigation of the question of the wholesomeness or unwholesomeness of a flesh dietary. The results have been the declaration by Dr. Haig, one of the most eminent physicians and physiologists of Great Britain, that flesh eating is without doubt the cause of rheumatism and gout, as well as neurasthenia and various other maladies, and that there is a veritable and clearly defined disease which may properly be termed meat eaters' disorder, which, in a great number of instances, is only the forerunner of Bright's disease, paralysis, neurasthenia, epilepsy, sick headache, and a great variety of other chronic and all but incurable maladies.

Another result of the scientific study of diet within the last twenty five years is the development of a class of special food preparations known as health foods, particularly designed for crippled stomachs

whose energies have been largely exhausted in wrestling with the dietetic abominations which appear upon the average table. The fundamental principle in these preparations ~~are~~ (at least those which are meritorious for their numerous worthless imitations) is the preparation of cereal and other foods in such a manner as to lighten the burden of the digestive organs, a large part of the work of digestion being performed by the preliminary processes to which these foods are subjected in the course of manufacture. Twenty five years ago health foods were just coming into existence, but they have gradually won their way into the public confidence, or rather the public have gradually come to appreciate their value and importance, so that at the present time these foods are manufactured not only at the original headquarters, but in Australia, Switzerland, Denmark, and Canada, as well as at several points in the United States. Steps are being taken to install factories for these foods in Mexico, South Africa, and several other foreign countries. The demand for these foods has gradually increased from a few tons annually to many hundreds of tons, more of these foods being at the present time manufactured in a single day than were made in a whole year less than a score of years ago. The public has become so well aware of the evil effects of the ordinary dietary of tea and coffee that the manufacture ~~of~~ of cereal substitutes for coffee has come to be so great in magnitude that numerous immense establishments are devoted exclusively to this line of business. It is safe to say that at the present time several hundred thousand people in the United States habitually use cereal coffee instead of Mocha, Java, and the various other brands of coffee and of tea which they formerly used. The principal headquarters for the manufacture of these foods in the United States are found at St. Helena, Cal., Boulder, Colo., College View, Neb., and Battle Creek, Mich.

One of the most characteristic features of the new medical science to which the present century, and particularly the last half of it, has

given birth, is the idea that health getting is not a matter of magic or of pill swallowing, but instead, in the majority of cases, at least, a matter of education and training. The chronic invalid is ill because he or she has ~~unkindly~~ violated the laws of health. Rational medicine regards disease as the result of the operation of nature's laws, and not a consequence of chance or of supernatural agencies. It would seem self-evident that the tissue changes, the functional disturbances, the pathological processes, which result from the long-continued violation of nature's laws, are not to be remedied by the most ingeniously managed medicinal antidoting any more than by the blind hopefulness of the faith healer or the mummeries of the mind curist. Nevertheless, it is a sad fact that a large proportion of the public have failed to recognize that in its onward march of progress, true medical science has left behind the specifics and panaceas of the old regime, along with the astrology and alchemy of an earlier age, and are still engaged in combating disease on the basis of an effete and false philosophy, or else blindly following an unphilosophical and ever changing empiricism.

Rational medicine, as expounded first by Jacob Bigelow, then by Holmes, and later by a whole generation of laboratory-trained physicians, recognizes as necessary, in chronic cases, the control of the entire life of the invalid. Grave chronic disease involves not a single organ, but many, usually, in fact, the entire body; and its cure necessitates, first of all, that the habits of the patient shall be strictly conformed to such principles and rules as will efficiently and curatively modify his disordered vital processes. Health is as much a matter of growth and development as is the sprouting of an acorn, the growing of an oak, or the raising of a crop of wheat. The rational physician keeps ever in mind the fact that the real curative force resides not in his medicine case, but in the constitution of the patient. Nature is the real curative agent. The physician really assists his patient toward recovery only when he studies the purpose of nature in her efforts, and supplies condi-

tions which will aid nature in her work.

A little more than a quarter of a century ago the principles of rational medicine were so little recognized in the world that the physician who undertook to practice medicine in harmony with these principles was looked upon as a fanatic and was compelled to depend for a ~~xxxxxxxxxx~~ living upon some other resource than the practice of medicine.

The sanitarium, a place where all physiological and rational measures of treatment are gathered together ready for application to any given case, was unknown. To-day the mother institution, the beginning of which was made in 1866, numbers daughters by the score, not only in the United States, but in all parts of the world. These institutions are frequented chiefly by patients whose cases have been pronounced incurable, and which are incurable by any less thorough going measures than are employed in a well equipped sanitarium. Thousands of persons are annually resorted to health by focusing, as it were, upon each case at one time and in one place, all the resources afforded by rational scientific medicine. Cases which have been for long years abandoned as hopelessly ill often yield readily to the judicious combination of remedial measures, each of which has perhaps been applied in succession, but which have never been employed coincidentally. As the result of the scientific study of disease which is made possible by the intimate relations of the physician in a properly conducted sanitarium, many most valuable advancements have been made in the use of water, electricity, exercise, and other physiological agents.

The exact study of disease and sick people has made necessary the development of laboratories, in which skilled chemists, bacteriologists, and other experts are employed to aid the physician in getting at the exact morbid conditions which are present in every individual case. This precise study of conditions has led to a revision of remedial agencies, and to a more accurate adaptation of the measures approved to conditions of disease, temperament, etc. Thus a new medical science has

been born, and at the present time a great number of maladies once regarded as absolutely hopeless are found to be actually curable, and scores of so-called incurables are constantly being restored to health.

Another feature in progress which ought, perhaps, to be mentioned, is the change of attitude on the part of the medical profession toward important questions bearing upon the public welfare. One of the most important of these is the question of the education of the laity in medical principles. The time existed when the doctor thought it necessary, in order to maintain his influence with his patients, to keep them in absolute ignorance of what he was doing or aiming to do in the administration of remedies. The adaptation of rational measure has changed the attitude of the physician. Being engaged in the practice of rational medicine, he is able to give a reason for his diagnosis of the patient's condition, and for the various directions which he may give respecting the patient's care, and thus there is a greater readiness on the part of the physician to communicate medical facts to his patrons. The public are to-day vastly more intelligent respecting matters of this sort than twenty five years ago. The necessity for the medical education of the people has come to be recognized, and eminent physicians are taking their stand in behalf of the enlightenment of the public upon all medical questions which can be popularized and brought within the comprehension of the ordinary intelligent layman. The results of the educational work of this sort which has already been done is being shown in the decline of the patent medicine industry, which depends entirely for its success upon the ignorance and superstition of the people. A very successful patent medicine manufacturer said to the writer not many months ago, "I am going to sell out my business as soon as I can: the patent medicine business is doomed." The public are without question imposed upon to a more monstrous degree in matters pertaining to the treatment of disease than in any other way. The quack, the nostrum vender, find in the chronic

invalid a ready dupe, but modern medical science stands ready to educate the ignorant respecting the great principles of rational living, and the rational treatment of the sick, and emphasizes a principle which sounds the death knell of quackery and medical humbuggery of all sorts, viz., that in dealing with the sick it is not the malady, but the sick man, that is to be treated and cured.

A scientific sanitarium represents rational medicine in its most advanced state, and is at least one of the greatest and most beneficent of all the gifts of modern medical science to humanity. It is not only an institution for the healing of ~~the~~ diseased and crippled human bodies, but the center of an educational work the purpose of which is to teach the principles of wholesome living, of physical righteousness, to inculcate the moral obligation of obedience to physical law, to point the way to a higher, a better and more complete life, a life in harmony with heaven born principles, to raise a note of warning to a world which is rapidly going down through race deterioration and decay to race extinction.

In conclusion, a word may be said respecting the marvelous achievements of surgery within the last quarter of a century, through the discovery of germs and the relation of suppuration and aseptic properties which were formerly known as blood poisoning, gangrene, etc. A quarter of a century ago amputation of the leg at or near the hip joint was one of the gravest and most deadly operations in surgery. Amputations of all sorts were most serious. The surgeon expected suppuration to occur in the great majority of cases, and talked about laudable pus, healthy pus, etc. The abdominal cavity was invaded only by a few bold operators who expected to lose 25% of their cases. The brain, the lungs, the heart, and the abdominal viscera were considered practically beyond the region of human surgery. Yet to-day, thanks to asepsis and thorough cleanliness, amputations of all sorts are regarded as scarcely more than minor surgery. The abdominal cavity is opened with comparatively little



danger under favorable conditions, and enormous tumors and other diseased structures are removed. The spleen, one kidney, a portion of the liver, and in some instances several feet of intestine, are removed with comparative safety when occasion requires. Even the entire stomach has been removed, and the stomach is frequently opened for the removal of foreign bodies which have been swallowed. In a recent case more than a pound of hardware was taken out of the stomach of a man who had for several years been exhibiting in a dime museum as the human ostrich. The list of things removed from his stomach included more than a hundred staples, cartridges, nails, etc. Portions of lung have sometimes been removed, and slight surgical operations have been performed upon the heart. The brain cavity is frequently opened for the removal of tumors and other diseased structures. The surgeon no longer talks about healthy pus, but undertakes to maintain such cleanliness and asepsis as will secure immediate union of the wounds which he makes, without suppuration. By a combination of the most skillful surgical measures with a pure dietary, it has been found possible to save alive a much larger number of desperate surgical cases than is possible under less favorable conditions.

Certainly in medical matters the world moves, and at the present moment, progress is so rapid that it is next to impossible for a busy practitioner to keep pace with the progress which is made in various lines of research which are being carried forward in various parts of the world, and to be thoroughly successful in his work the busy practitioner must call to his aid the chemist and the bacteriologist to assist in his research into the exact condition of each organ and each function of the human body. Medicine is no longer an empirical art: it has become a grand and noble science, and each day adds something to the luster of its glory and to the efficiency of its service to the human race.

## SHOULD GENERAL HOSPITALS ESTABLISH

### DEPARTMENTS FOR PHYSIOTHERAPY?

A department devoted to physiotherapy may not be needed by every hospital, but every hospital needs physiotherapy. Every hospital does not need a dining-room, but every hospital needs foods for its patients and a dietitian or nurses and physicians trained in the principles of nutrition and scientific feeding.

Within the last half century a most remarkable evolution, one may even say revolution, has occurred in methods of dealing with the sick. The marvellous light thrown upon life processes, normal and pathological, by the revelations of physiology, bacteriology and physiologic chemistry and the exposures of the fallacies of old therapeutic notions, the inertness or inadequacy of the great majority of drugs made by experimental pharmacology and clinical observation checked up by modern instruments of precision, have so completely transformed the practice of medicine that the war of the pathies ceased years ago for lack of anything of interest to war about. Everybody knows, nowadays, that sick people are not cured by either big pills or little pills, but by the vis medicatrix Naturae. As a disciple of the great Rokitauski declared, "Nature creates and maintains, therefore she must be able to heal." And, as the late Dr. Winternitz, the father of scientific hydrotherapy insisted, "It is the blood that heals." The ancients knew this, and recognized that "The blood is the life;" but the great cloud of ignorance and superstition which submerged the world during the "Dark Ages" obscured this vitally important truth which modern physiology has brought out again and made to shine with greater luster than ever. We have a very few specific drugs which cure by destroying parasites of some sort; but with very few exceptions, the agents which are really

but they don't tell us what to do." The doctors were not to be blamed, for does not the learned Osler say many times over in his great work on practice, "If the measures indicated fail, try hydrotherapy." Water, as a means of producing thermic impressions and thereby influencing the vasomotor nerves and centers, is the most potent as well as the most versatile of all curative agents. By its proper use, even with such simple means as a wet rag, it is possible to control almost at will the blood circulation of any vital organ, and thereby to produce therapeutic effects quite surprising to those who are not familiar with the results obtainable with this wonderful agent when skilfully applied even with the simplest means.

A room or series of rooms fitted up with expensive appliances makes a fine show in a hospital, and makes a great impression upon visitors; but the thing really needed in the general hospital is such an intimate acquaintance with the resources of physiotherapy as will in large measure eliminate the use of hypnotic drugs to produce sleep, of laxative drugs and mineral waters, and even of drugs for relief of pain. In discussing a paper which I read some years ago before a very active medical society, the superintendent of a large state hospital for the insane, the late Dr. Edwards stated that in recently comparing their present use of chloral and other hypnotic drugs with their practice twenty years before, they had found that with 2000 patients they were now using less of such drugs in a year than they formerly used with 600 patients every week. He added, "If a patient has insomnia, we just put a wet rag on somewhere and he goes right off to sleep." The effective use of water to produce sleep is not quite so easy as that, but the neutral bath and allied measures are so remarkably efficient in producing sleep that they

patent in combating disease are those which modify the blood or the blood supply, and these agents are almost wholly those which belong to the domain of physiotherapy, which includes all therapeutic measures other than drugs and psychic influences.

The modern general hospital is supposed to be a place where the sick may receive the benefit of every curative method and resource recognized by scientific medicine, and there seems to be no good reason why the modern general hospital should not realize this ideal in its equipment and the personnel of its staff of physicians and nurses.

If the question of expense is raised, the objection is easily answered by the fact that for a very efficient use of physiotherapy very little expensive, special equipment is actually required. The great essentials of physiotherapy, in addition to diet, are air and water, -hot and cold, -light and exercise, -active and passive. These most potent of all means of modifying metabolism and nutrition may be applied in a thoroughly efficient manner and with most satisfactory results without the use of apparatus of any sort other than every hospital possesses. The most important part of a physiotherapeutic equipment is a thorough, theoretical and practical knowledge of physiotherapy. With this, great results may be attained with little or no special equipment; without it, the most elaborate equipment is useless. Not so very long ago, I happened to visit a large hospital which was supposed to possess a most elaborate and up-to-date physiotherapeutic outfit. The hydrotherapeutic equipment was particularly elaborate and expensive. On being introduced to the head nurse, I was at once beset with questions about hydrotherapy. Said the nurse, "Do tell us how to use hydrotherapy." The doctor send us down patients every day with a prescription for hydrotherapy

have almost wholly suspended the use of sleep-producing drugs in the leading hospitals for the insane in this country as well as in France and in other European countries where they have been long employed. When I was a student at old Bellevue 50 years ago, I one day heard two of the internes discussing the treatment of delirium tremens, cases of which were very numerous at Bellevue in these days of cheap whisky. The regulation treatment was confinement in a cell and opium and chloral in massive doses. Said one of the internes, "I often find 'em dead in the morning." "Yes," said the other, "I slip one every now and then, but that's the only way to keep them quiet." A year or two later, when I encountered my first case of acute alcoholic mania, I wrapped him up in a wet sheet to keep him in bed and discovered that it not only kept him still but sent him off to sleep.

The analgesic effects of heat are among the most remarkable of all therapeutic effects. Heat kills pain. Just how, nobody knows, as no one has yet explained the action of opium or of other pain-relieving drugs. Of course, heat is not a complete substitute for opiates, but it will relieve at least nine-tenths of all the pains for relief of which opiates are given, and has the great advantage of being wholly free from the numerous dangers and disadvantages of opiates. For the proper use of heat every hospital should be supplied with conveniences for quickly preparing fomentations, with thermophores and electric photophores, as well as hot water-bags and other convenient means of applying heat. These simple and inexpensive appliances are far more important than an elaborately appointed department filled with expensive apparatus.

Nevertheless, the physiotherapy department with specially trained persons in charge is just as essential; for the complete equipment of a modern hospital as is an operating room, an examining room or a laboratory. In such a department should be found appliances for the efficient use of hydrotherapy, thermotherapy, phototherapy, mechano-therapy, electricity, corrective gymnastics, and in-door and out-door gymnasiums. For many years I have made a close study of appliances adapted to physiotherapy and have tested every new apparatus that has become known to me and have selected out of a great number of more or less useful appliances those which have proven to be of real service and worthy of a place. Chief among these I may mention the following nearly all of which have been in use for many years at the Battle Creek Sanitarium:-

(For the INTER-OCEAN.)

### A New Departure in Medical Education.

Monday evening, Sept. 30, there was held in the great Tabernacle at Battle Creek the inaugural exercises of the American Medical Missionary College incorporated July 3, 1895, under the laws of the State of Illinois. The American Medical Missionary College is a Chicago institution having its office and headquarters at 23, College Place, having two large dispensaries in the city, one at 40, Custom House Place, where the society by which the college is supported has been carrying on a medical mission for more than two years. Another and more recently established dispensary is located in the Stockyard District near the corner of 47th St. and Union Avenue, in connection with the recently established medical missionary college settlement. A large hospital and laboratories for chemical and microscopical study and research are located at Battle Creek, Mich., so that the course of instruction will be carried on in both places, the principal part of the instruction during the first years of the course being given at Battle Creek.

The financial foundation of the school is a gift of \$40,000 made by Francis and Henry Wessels, of Cape Town, South Africa. These gentlemen, with other members of their family, a few years ago made the fortunate discovery that their large farm covered a diamond mine. The mine was sold a short time ago for several million dollars, but since its development, could not be bought for

twenty times that sum, and has proved to be the richest diamond mine in the world. The family thus suddenly made wealthy have generously devoted a liberal share of their money to the establishment of worthy philanthropic enterprises in various parts of the world, including a Sanitarium in South Africa upon the same philanthropic basis, and conducted in the same manner as the Battle Creek Sanitarium, ~~and also~~ <sup>has also been established</sup> An Orphan Asylum on the same plan and under the same general management as the Haskell Orphans Home at Battle Creek founded by Mrs. Caroline E. Haskell, who recently contributed \$100,000 for a University and other similar enterprises.

The Battle Creek Sanitarium has also contributed liberally to the equipment and support of the College and other contributions have added to its resources until it now has at its command property, including the fine Hospital at Battle Creek, Mich., amounting to more than \$100,000. Its Laboratories for histological, bacteriological, microscopical and chemical study and research are among the finest in the United States. For several months the promoters of the enterprise have had in their employ well known experts in the various lines of scientific work preparing the laboratory equipment and organizing courses of study in readiness for the opening, October 1st.

At the opening exercises, Sept. 30th., addresses were made by and O. A. Olson, L. McCoy, members of the Board of Trustees presenting the needs of medical missionary work and of a college especially devoted to the education of medical missionaries, and the President



of the Faculty, Dr. J. H. Kellogg also made an address in which he presented the reasons for the establishment of a medical missionary college and the special advantages offered advantages offered by this school for the training of medical missionaries. In the course of his remarks Dr. Kellogg said:--

"The ordinary medical school is not favorable for growth in grace. The modern medical college affords splendid opportunities for the study of the sciences, but, unfortunately, the students of medical schools are often subjected to active irreligious influences which sometimes prove disastrous to the faith even of those who have entered upon a course of medical study with the expectation of devoting their lives to medical missionary work. Missionaries in India and other foreign fields have often sent their sons home to be educated for medical missionaries, and after giving them a medical training at the expense of many a self denial have been disappointed to find their sons settling down to private practice at home or accepting a professorship in some medical school instead of returning to the field equipped for the grandest of all Christian or philanthropic work, that of a medical missionary.

A medical missionary college is a new idea. The enterprise which has just been launched is the first attempt of the sort ever made. In 1851 a society in Edinburgh organized what was known as a medical missionary institute for the purpose of encouraging young men and women to obtain a medical education for the purpose

of enabling them to engage in missionary work. The institute, however, did not undertake to give its students a medical education; medical subjects were studied in ordinary medical schools. A similar institute was organized in New York by Dr. Dowkantt formerly connected with the Edinburgh institute. Several years ago a society was organized in Chicago for the purpose of encouraging young men and women to pursue a medical education as a preparation for foreign missionary work, but through the death of all the leading officers this society long ago ceased to be active and no longer exists. The American Medical Missionary College is unique in the fact that it offers an opportunity to young men and women who desire to devote their lives to medical missionary work to obtain a thorough medical education under religious and Christian influences while at the same time receiving instruction in missionary matters and principles.

(Here add further quotations)

J. H. Wallis J. H. Hints

Lecture Sept. 23, 1892