GAINS AND SETBACKS

Community experiences on efforts for acceptance of water fluoridation

Committee to Protect Our Children's Teeth, Inc.
105 East 22nd Street, New York 10, New York
COMMITTEE TO PROTECT OUR CHILDREN'S TEETH, INC.
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NEW YORK 10, N. Y.

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(2nd edition, November, 1958)

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Duncan W. Clark, M.D., President
Committee to Protect Our Children's Teeth, Inc.

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INTRODUCTION

This guide is released at a time when the issue of fluoridation of community water supplies has become a matter of national concern. The wisdom of proceeding with a health measure which has been proved beyond reasonable doubt to be safe and effective is contested in many communities throughout the nation. Many failures of public understanding and action have been experienced. From failure and from success, lessons are available for the learning and for this reason representative community experiences are presented.

Through this opportunity for knowing something of the actions and methods of the opponents of fluoridation, the behavior of some persons and groups in your community may be anticipated. More important, through examination of localities where favorable action has been taken, the key to public and official education and understanding may be recognized and used.

Fluoridation is of national concern, on the basis of more than simply widespread geographic distribution of the debate. Medicine, dentistry, public health and engineering have overwhelmingly supported the practice of fluoridation on evidence within their competence to judge. But there is by virtue of the attack upon the integrity and authority of these professions the quite serious fact of a faith at risk which has long known public trust. When to this is added an identical attack upon officially constituted health bodies the situation borders on the absurd.

The health of children is not the least reason why this is a matter of national as well as local concern. Three out of four American children fail to receive this valuable trace element in amounts sufficient for the normal development of healthy teeth resistant to decay. This failure can be ascribed to public and official apathy, inadequate community planning, and an opposition answered in the record but unanswered as far as the public understands. To the correction of such failure, this guide has been organized for the use of community lay and professional leaders in this effort toward the public health.

DUNCAN W. CLARK, M.D.
President
Committee to Protect Our
Children's Teeth, Inc.
Status of Controlled Fluoridation in the United States, 1945–56

During 1956 fluoride was added for the first time to the drinking water of more than 8,500,000 people (table 1). This is nearly twice the number of people who started drinking fluoridated water in 1955. The 1956 increase was exceeded only in 1952 when 8,600,000 people started drinking fluoridated water.

In 1956, 213 communities started fluoridating their drinking water, a larger number than in each of the preceding 2 years. The number of water supply systems which these communities represent was slightly fewer than the number starting fluoridation in 1955 (92 compared with 96).

During the year, 12 water supply systems, representing 16 communities and serving a population of 185,000, discontinued fluoridation. Four water supply systems, representing an equal number of communities and serving 38,000 people, reinstituted the practice after discontinuance.

Although the annual rate of increase in the number of water supplies instituting fluoridation remained about the same during the last 3 years, there was a decline in the rate at which water supplies discontinued fluoridation. In 1954, 20 systems discontinued this public health measure. In 1956, 12 water systems stopped fluoridating. Two systems reinstituted fluoridation in 1954, four in 1956.

By the end of 1956 nearly 1,500 communities with 31,500,000 people fluoridated their water. It has been estimated that about 110,000,000 people in the United States are served by community water supply systems. At the present time about 1 in every 4 of these people are drinking water with adjusted fluoride content. It seems apparent that the number of people using water with a controlled fluoride content will continue to increase at a substantial rate.

The year 1956 was the 12th year in which the practice of adding fluoride to the drinking water in optimal amounts has been practiced as a caries control measure. The procedure was started in a few study communities in 1945. More study communities were added in 1946.
and 1947. By 1949 and 1950 a small number of places, convinced of the benefits to be derived from fluoridation, instituted the measure as a regular practice. Late in 1950 published reports confirmed the anticipated reduced incidence of dental decay resulting from the addition of fluoride to drinking water, and national professional organizations endorsed the procedure. As a result, 109 communities in 1951 and 182 in 1952 decided to bring this health measure to their people, and the trend in reduction of tooth decay by an observed two-thirds was well under way.

As adoption of the procedure gathered momentum, the number of people drinking fluoridated water increased from about 1.6 million in 1950 to 5 million in 1951, 13.6 million in 1952, 17 million in 1953, 21 million in 1954, 24.8 million in 1955, and finally reached 31.4 million last year (fig. 1).

During the entire 12-year period, 80 communities, which at one time served fluoridated water to 1,900,000 people, discontinued the procedure. Of these, 10 communities, serving 223,000 people, reinstated the practice (table 2).

According to the 1950 Census of Population,

<table>
<thead>
<tr>
<th>Table 1. Annual cumulative findings on the institution, discontinuance, and reinstitution of controlled fluoridation showing number of communities, water supply systems, and population served,¹ 1945–56</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
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<tr>
<td></td>
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<tr>
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<table>
<thead>
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<th>Year</th>
<th>Fluoridation discontinued whether or not reinstated</th>
<th>Fluoridation reinstated after discontinuance</th>
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<tr>
<td></td>
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<td><strong>Number of water supply systems</strong></td>
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<td>1951</td>
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¹ Most recently available population figures were used regardless of the year that fluoridation was instituted.
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<th>Population</th>
<th>Number of communities</th>
<th>Number of water supply systems</th>
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<th>Population</th>
<th>Number of communities</th>
<th>Number of water supply systems</th>
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<tr>
<td>Total</td>
<td></td>
<td>80</td>
<td>64</td>
<td>1,902,199</td>
<td>10</td>
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there were 18,548 communities in urban and rural territory in the United States. Table 3 presents a comparison of these communities, by size group, with the numbers of places using controlled fluoridation. Two of the five communities of over 1,000,000 population are now fluoridating their drinking water as are 8 of the 13 communities of 500,000 to 1,000,000 population. Thus, 55 percent of the largest cities in the country have adopted the measure. From 25 to 30 percent of places ranging in size from 10,000 to 500,000, and 15 percent of the places from 2,500 to 10,000 population are now fluoridating. Of the 14,000 places of less than 2,500 population, only 5 percent are adding fluoride. Figure 2 shows the number of communities, by size, that have adopted the fluoridation procedure.

During 1956 the proportion of cities of 500,000 population and more that were fluoridating increased from 45 to 55 percent. Those with a population of from 10,000 to 500,000 people increased from 24 to 28 percent. The number of places from 2,500 to 10,000 in population
using fluoridation increased from 12 to 15 percent, and the percentage of those under 2,500 increased from 4 to 5.

Water supplies in 85 percent of all communities fluoridating are operated under public ownership. The proportion is similar among large and small cities.

How the institution of fluoridation was authorized is a subject of considerable interest. In nearly 85 percent of the communities the governing body alone constituted the authority for the action. In 5 percent, the authority was referendum; and in 4 percent of communities fluoridating, the utilities commission made the decision. It is interesting to note that in 91

Table 3. Total communities in the United States, by size group, compared with the proportion of each using controlled fluoridation, December 31, 1956

<table>
<thead>
<tr>
<th>Population of community</th>
<th>Number of communities in urban and rural territory</th>
<th>Number</th>
<th>Percent of all communities of same size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>18,548</td>
<td>1,487</td>
<td>8.0</td>
</tr>
<tr>
<td>1,000,000 and over</td>
<td>5</td>
<td>2</td>
<td>40.0</td>
</tr>
<tr>
<td>500,000-999,999</td>
<td>13</td>
<td>8</td>
<td>61.5</td>
</tr>
<tr>
<td>250,000-499,999</td>
<td>23</td>
<td>7</td>
<td>30.4</td>
</tr>
<tr>
<td>100,000-249,999</td>
<td>65</td>
<td>19</td>
<td>29.2</td>
</tr>
<tr>
<td>50,000-99,999</td>
<td>126</td>
<td>42</td>
<td>33.3</td>
</tr>
<tr>
<td>25,000-49,999</td>
<td>252</td>
<td>78</td>
<td>31.0</td>
</tr>
<tr>
<td>10,000-24,999</td>
<td>778</td>
<td>201</td>
<td>25.8</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>1,176</td>
<td>209</td>
<td>17.8</td>
</tr>
<tr>
<td>2,500-4,999</td>
<td>1,846</td>
<td>251</td>
<td>13.6</td>
</tr>
<tr>
<td>1,000-2,499</td>
<td>4,296</td>
<td>277</td>
<td>6.4</td>
</tr>
<tr>
<td>Under 1,000 and not specified</td>
<td>9,968</td>
<td>393</td>
<td>3.9</td>
</tr>
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</table>


Table 4. Ownership and authorization for fluoridation in places fluoridating, December 31, 1956, by size of community

<table>
<thead>
<tr>
<th>Population size of community</th>
<th>Number of communities</th>
<th>Ownership</th>
<th>Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,487</td>
<td>1,272</td>
<td>190</td>
</tr>
<tr>
<td>1,000,000 and over</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>500,000-999,999</td>
<td>8</td>
<td>8</td>
<td>0</td>
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<tr>
<td>250,000-499,999</td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>100,000-249,999</td>
<td>19</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>50,000-99,999</td>
<td>42</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>25,000-49,999</td>
<td>78</td>
<td>70</td>
<td>7</td>
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<tr>
<td>10,000-24,999</td>
<td>201</td>
<td>180</td>
<td>15</td>
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<tr>
<td>5,000-9,999</td>
<td>209</td>
<td>177</td>
<td>30</td>
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<tr>
<td>2,500-4,999</td>
<td>251</td>
<td>214</td>
<td>28</td>
</tr>
<tr>
<td>1,000-2,499</td>
<td>277</td>
<td>235</td>
<td>35</td>
</tr>
<tr>
<td>Under 1,000</td>
<td>190</td>
<td>148</td>
<td>42</td>
</tr>
<tr>
<td>Not specified</td>
<td>203</td>
<td>170</td>
<td>24</td>
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</table>
percent of places of 25,000 and over in population, the procedure was authorized by the governing body. The smaller places resorted to referendum or utilities commission action with a little greater frequency—the largest percentage (6 percent) being observed in communities ranging from 10,000 to 25,000 in size. Table 4 shows findings on ownership and authorization.

Today, only 8 of the 18 cities in the country with over 500,000 population are not fluoridating. It is anticipated that most of these eight cities will institute fluoridation within the next several years. After that occurs the rate of increase in the number of people drinking fluoridated water will depend largely upon the rate of adoption in cities of between 10,000 and 500,000. The lag in the smaller centers may also be overcome during the next several years because of the greatly reduced costs that are now possible, the present availability of simplified and accurate techniques for determining the fluoride content of water supplies, and the growing public acceptance of the measure throughout the country.
We hope that the following resume of the events prior to and following the November 6, 1951 election in San Francisco on which date the residents of San Francisco voted in favor of fluoridation will be helpful to you:

1. Early in 1951 the San Francisco Dental Society presented the fluoridation measure before the Board of Supervisors. Full scientific discussion of the measure was held, and in April, 1951, the Board of Supervisors voted in favor of fluoridation by a count of 9 to 2. Plans were to fluoridate 40% of the city's water supply as a pilot-plan project. To my knowledge there was no opposition expressed to fluoridation at this time.

2. Shortly thereafter, the Board of Supervisors was presented with material and information against the fluoridation program. This was expressed by two people who, insofar as I know, were not working together in an opposition program. The first of these was Mr. James Vincent, Western Publications Editor for the Christian Science Church, and whom I imagine could be contacted through the Christian Science Committee on Publications, 210 Post Street, San Francisco, California.

The second opponent was Mrs. Hugo Franzen, 767 San Bruno Avenue, San Francisco, California who has appeared widely throughout the State to oppose fluoridation efforts. It is also our understanding that Mayor Elmer E. Robinson received a considerable number of letters protesting fluoridation.

3. As a result, the Board of Supervisors moved that fluoridation be placed on the ballot in order to test public acceptance of this type of program. This call for a "Declaration of Policy" necessarily postponed the plan to fluoridate 40% of the city's water.

4. As fluoridation had now moved from a scientific plane into the political arena, it was felt that a Citizens' Committee should be formed, constituted of civic leaders from all walks of life and of all interests and beliefs.

Accordingly, therefore, a Citizens' Committee For Fluoridation was formed, composed of outstanding people from civic and business organizations, labor groups, various racial groups, educators, health officers, and members of the dental and medical societies. Mr. Dan Del Carlo, local labor and civic leader, was chairman of this committee.

5. At this point, the dental profession restricted its activities to assisting the Citizens' Committee in various ways. This included meeting with various persons being asked to serve on the Committee so as to furnish them with the facts about fluoridation; in serving on a Speakers Bureau which was scheduled by the Committee for engagements before labor, veteran, social, civic, religious, educational and business groups, etc.; and in furnishing the committee and its members with factual information needed in informing the public of fluoridation benefits.

6. To indicate the calibre of people serving on the Citizens' Committee, the following partial list may be of interest:
Honorable Don Fazackerly - Member of the San Francisco Board of Supervisors who had initially introduced and supported fluoridation. Dr. Herbert C. Clish - Superintendent of Schools, San Francisco. Mr. Adrian Falk - Former Chairman, San Francisco Community Chest; noted civic leader; member Board of Education. Dr. Don Galagan - Senior Dental Surgeon, U.S. Public Health Service. Dr. Henry Leicester - a world noted biochemist and professor of biochemistry of the College of Physicians and Surgeons, San Francisco. Dr. William P. Shepard - Vice President, Metropolitan Life Insurance Company, San Francisco.

In addition, the following dentists and physicians served on the committee, and filled countless requests for speaking engagements:

Dentists: Dr. Sidney Epstein, Dr. Harry B. Hambly, Dr. Myron E. Horan (then president of the San Francisco Dental Society); and Dr. Thomas Wu, a Chinese civic leader.

Physicians: Dr. Erwin Sage, Dr. William Thomas, and Dr. Garnet Cheney (then president of the San Francisco Medical Society).

Other members of the Committee were prominent in Catholic and Protestant P.T.A.'s, in the League of Women Voters, and such organizations as Junior League, etc.

7. The Citizens' Committee for Fluoridation hired its own Public Relations personnel to raise funds for the campaign and to handle publicity. Our own services were offered to the Citizens' Committee as representatives of the dental profession, within the limitations of activity already described as adopted by the State Association. This was done to avoid any implication that the Dental Association was trying to "put something over on the public", and with the feeling the Citizens' Committee should take the lead in formulating and leading widescale public approval of fluoridation.

8. Much difficulty was encountered in the fund-raising efforts, as no "selfish" interest could be appealed to for support, the campaign having instead to depend on the purely humanitarian appeal. However, a speaker's bureau was organized on which the members of the San Francisco Dental Society served. Talks were scheduled well in advance for civic clubs, neighborhood groups, business organizations, etc.

9. As it became increasingly apparent that little money could be had for staging a "wide-open publicity campaign", the methods resorted to for gaining support for fluoridation resolved themselves to these three principal steps:

a. Through Speaking Engagements, securing the endorsement of civic groups, business organizations, etc. These in turn sent to papers as publicity releases.

b. As newspapers were cool to general publicity releases, much use was made of the "Letters to the Editor" approach, signed by top people in San Francisco. We received excellent coverage on fluoridation through this medium.

c. The distribution of fluoridation pamphlets "Why We Back Fluoridation". Some 30,000 pamphlets were distributed through 600 dental offices, with an insert asking each patient to "telephone
five of his friends," and ask them to vote for fluoridation. A local milk company assisted in the distribution, as did the Senior and Junior Chamber of Commerces, hospital clinics, etc.

10. Newspaper ads, stating "Vote Yes For Proposition M" (fluoridation) were run in all four San Francisco dailies and last few days of the campaign. The list of societies endorsing fluoridation was printed in the ad.

11. Personal calls on all four newspapers were made early in the campaign. Two newspapers openly supported us - two, because of much pressure from the opposition, gave out a "No Recommendation" on their sample ballots.

12. The opposition, chiefly represented by the Christian Scientists, opposed fluoridation on the grounds it represented "compulsory medication". A few citizens, operating on the belief, that fluoridation was merely a disguise for some type of "poison", campaigned heavily against the measure. Mimeographed sheets were distributed about the city, along with cards imprinted with a "skull and crossbones". Various scientific "authorities" were quoted, claiming fluoridation would harm the kidneys, that it would harden the arteries, etc.

13. As the election drew nearer, opposing groups seemed fairly clearly defined. The San Francisco CHRONICLE in its October 28 Sunday magazine supplement, "This World", outlined these groups as follows. After telling about the groups (both national and local) which had investigated and endorsed fluoridation, the CHRONICLE continued:

"Some San Franciscans are not happy about the prospect of fluoridated water. Organized opposition to the measure comes from three separate sources, the Churches of Christ Scientist, the Citizens' Committee for the Protection of San Francisco's Good Water, and the Citizens' Committee Against Fluoridation."

According to our information, the Citizens' Committee for the Protection of San Francisco's Good Water was led by a realtor.

We frankly do not know if there was any relationship or working connection between any of the four opposition groups mentioned.

14. A few days prior to the election, we were told by various members of the Citizens' Committee that summons were being served by either Mr. Martynow and/or Mrs. Franzen. Summons were also served on three of the Supervisors who "ordered the following argument submitted to the voters in favor of Proposition M". I regret that an extra copy of this summons is not now available.

It did, however, accuse the committee of misrepresentation in the pro-fluoridation statement placed in the voters pamphlet which we have previously mentioned. For one thing, the American Medical Association (which did not officially endorse fluoridation until after the election) was listed as one of the endorsing organizations. A second criticism was levelled at the phrase: "Introducing this safe chemical into drinking water results in no ill effects." In line with the campaign premise of Mrs. Franzen and Mr. Martynow that fluoride is a poison (which of course it is in excessive amounts) and despite the findings of all major scientific and professional groups that the recommended ratio of fluorine (1 part fluoride to every million parts of water) is completely safe, the complaint said the statement is false. The complaint also contended that the ballot argument: "Extensive research since 1916 has conclusively proved that scientifically controlled fluoridation
prevents up to 60 per cent of the decay in the children's teeth" was similarly "false in that such has not yet been conclusively proven; that such statement is misleading in that it leads voters of the city and county of San Francisco who study the aforesaid ballot argument for guidance to believe that the introduction of fluorine into drinking water supplies will be 'scientifically controlled fluoridation'; such statement is fraudulent in that it seeks to persuade the aforesaid voters of the city and county of San Francisco who study this ballot argument for guidance to approve the aforesaid Declaration of Policy on a statement that is untrue."

Lastly, the ballot statement: "Your physician and dentist endorse this proposition" was claimed to be "false in that not every physician and dentist have endorsed this proposition; it is misleading in the same respects that it is false; it is fraudulent in the same respects that it is false."

Article XV of the Complaint reads as follows: "That the plaintiffs have been damaged by said false, misleading and fraudulent statements made by defendants in the sum of FIVE HUNDRED THOUSAND DOLLARS ($500,000.00) WHEREFORE, plaintiffs pays judgment against defendants for the sum of FIVE HUNDRED THOUSAND DOLLARS ($500,000.00) and for such other and further relief as to the court seems meet and just."

15. Our own counter-opposition took at all times the positive approach to this type of misrepresentation. No attempt was made to go on the defensive, thus repeating the arguments of our opponents. Rather, it was stated and re-stated that fluoridation is an entirely safe, beneficial public health measure, endorsed by the nation's leading scientific organizations. These statements appeared over the signature of such men as the Presidents of the Medical and Dental Societies, the Director of the Department of Public Health, the President of the Catholic P.T.A., the Public Health Chairman of the Chamber of Commerce, the Superintendent of Schools, etc.

16. At the election, held on November 6th, Fluoridation passed by a majority of 114,125 to 88,377. While this was a substantial majority, it was clear that many people had been successfully confused, and that what, in the professional and scientific view should be a relatively simple health measure had been cast into considerable doubt.

17. During the period between the election and the actual inauguration of fluoridation, efforts to impede initiation were still made. For instance an article by James B. Thompson, Associated editor of the Hastings Law Journal was given wide circulation.

Thompson, according to the San Francisco CALL BULLETIN, stated that fluoridation is "in violation of state laws and federal constitution." It should be pointed out John B. Thompson at the time was a second year law student and could not speak for the law college. The only body that can speak officially for the Hastings Law College is the Board of Regents of the University of California.

Nevertheless, the $500,000 damage suit was dismissed on December 11, 1951, by Superior Judge William T. Sweigert, who declared that "no legally recognized cause of action is stated or can be stated". As for the question regarding legality of fluoridation, on July 9, 1952, City Attorney Dion Holm ruled there was no legal prohibition against the addition to drinking water.

In reference to Mr. Holm's decision, the San Francisco RECORDER, a legal publication, stated:
"Citing a recent San Diego county Superior Court case in which a non-suit motion was granted, thus upholding legality of a similar fluoridation program, City Attorney Holm, referring to a claim that the right of religious freedom is violated in the proposed program, quoted from a State Supreme Court opinion which said:

"There can be no question that a person is free to hold whatever belief his conscience dictates, but when he translates his belief into action he may be required to conform to reasonable regulations which are applicable to all persons and are designed to accomplish a permissible objective."

18. Subsequently, the actual fluoridation of San Francisco's water began on August 25, 1952.
How Fluoridation Facts Were Presented to the Citizens of Baltimore, Md.

H. BERTON McCauley, D.D.S.

Though it is the prerogative of leaders to lead intrepidly, they are wise to set a cautious pace that allows the rank and file to keep up with them; otherwise there may be no parade. This hackneyed observation is given new meaning by the success story that follows.

On November 26, 1952, the people of Baltimore, Md., inaugurated a program of water fluoridation which they believe will eliminate from the next generation of Baltimorans a substantial portion of the tooth decay which is their current misfortune. On this occasion, Mayor Thomas D'Alesandro summarized the public interest in the program as follows:

What we do here today may well be termed by future generations one of the most important events in the history of our city.

By adding fluorine to our water, an advance strongly recommended both by the dental and medical professions, we begin today to benefit thousands of young children, and in the future hundreds of thousands of boys and girls will be benefited.

Exhaustive tests by the United States Public Health Service have demonstrated conclusively that fluoridation of the drinking water supply will reduce dental decay up to 60 per cent.

Thinking in terms of toothaches alone the benefits to children will be enormous. And fluoridation will have a very beneficial effect on the financial headaches of parents.

Our medical and dental authorities tell us that the addition of fluorine to the drinking water has the direct result of strengthening the enamel which coats our teeth. It is as simple as that.

Yet this greatly desired result is attained without any harmful effect on the body.

Proof of this has been demonstrated again and again in communities which have fluorine in their water naturally and in quantities much larger than we shall add. As a matter of fact, there are several such communities right here in Maryland.

There was a little opposition—misplaced opposition—to fluorine. But the overwhelming majority of our people, the parents of Baltimorans, who think of the well-being of their children, is solidly behind fluorine.

The support of the people and the powerful support of the medical and dental professions have made this day possible.

I believe with all my heart that in the fluoridation of our water we have something wonderful to be thankful for, in addition to all the other blessings we enjoy as American citizens.

Public Education Took Two Years

Two years of educational effort were required to make fluoridation of the water supply of Baltimore City possible. This effort began November 3, 1950, with the appearance in the newspapers of an account of the activities of the American Dental Association, at that time convened in Atlantic City. The dentists were pondering a resolution "urging addition of sodium fluoride to drinking water to help fight tooth decay."

The resolution was adopted. Immediately, Dr. Huntington Williams, the commissioner of health of Baltimore City, was requested by the mayor, and shortly later by resolution of the City Council, to study the possible addition of a fluorine compound to the municipal water supply. In response a report from the Bureau of Dental Care was submitted promptly.

The Mayor Gets the Facts

The bureau's report to the mayor was noted in Baltimore newspapers on November 14. Quoting the Sun:

City Weighs Dental Remedy in Water

A study of results in other cities where the water is so treated indicates that tooth decay would be reduced about 50 per cent among those who drank the treated water the first eight years of their lives.... Maximum benefits would follow such use of the fluoridated water during early life but there would also be retardation of decay for those who began its use later in life.... Sodium fluoride (is) one of the chemicals suitable for the treatment.... Treatment cost would be about $55,000 a year.... (The) decrease in tooth decay under the plan within about five years would begin to show results in better teeth among children and a drop in the cost of the dental care program.... Reduction of decay would be reflected in greatly improved teeth, health and appearance for tomorrow's citizens and in very substantial decrease in the presently staggering total of our population's unmet dental needs....

On the basis of the report, the mayor asked the director whether the sum needed for starting the fluoridation plan in 1951 could be provided without unbalancing the budget for that year, which had just been prepared and sent to the City Council.

Two days later, November 16, the Sun carried another article, "City to Treat Water to Cut Tooth Decay." This item reiterated much of the information published previously and added:

Although the fluorine program has its maximum effect on children who drink the treated water, tests in other cities indicate the benefits extend through adult life. . . . Fluoridation does not alter the appearance or taste of the water or render it capable of any known harm. . . . Enough evidence is available for Baltimore to, go ahead. . . . If the city adopts a policy of watchful waiting, it will have lost the benefits of the program in the interim period. . . . The loss in tooth protection among youngsters cannot be made up through subsequent water treatment . . . .

The budget director concluded that the money was available.

The Press Gets the Facts

By the middle of November, 1950, public interest in fluoridation had reached such a level that the Health Department began to receive inquiries directly from the press. Here was an opportunity to expand and clarify the material in the report to the mayor in order to call attention to many additional pertinent facts:

Fluorine added to Baltimore's water supply will reach the teeth via the bloodstream. . . . Once there it will cut decay 50 to 60 per cent. . . . How fluorine works is not precisely known. . . . It's like electricity. All we know is that it does the work. . . . Two theories are advanced. . . . One that it interferes with the activity of enzymes which indirectly break down tooth enamel. . . . The other that it hardens the teeth, making them less soluble to acids formed from sweets and similar foods.

A child whose teeth are nearly formed when fluorine is added to the water supply will receive some help, but babies born under the influence of fluoridated water will receive the greatest benefit. . . . After eight or ten years of age there is little to be gained by exposure to fluoride-bearing water. . . . Adults not exposed to a fluoride water in early life are a lost cause. . . . Trying to help adults prevent tooth decay is like locking the barn door after the horse is stolen.

Fluorine by itself is a gas. It is added to water supplies in a compound, sodium fluoride, sodium silico-fluoride or hydrofluosilicic acid, which bear the same relationship to fluorine that table salt, sodium chloride, bears to chlorides. . . . If too much fluorine, more than 1.5 parts in a million parts of water, is present in the water, the enamel of teeth formed under its influence in some children may be mottled enough to be noticeable. . . . However, there is no danger of mottled enamel from adding fluorine up to the 1.5 p.p.m. level. . . .

No opportunity was lost to remind people that fluoridation is a proved procedure. Pilot programs of many years duration in Grand Rapids, Mich., Newburgh, N. Y., Brantford, Ont., Marshall, Tex., Sheboygan, Wis., and Evanston, Ill., had amply demonstrated its effectiveness, and the experience of populations living in fluoride water areas, its safety. The Public Health Service, in an Associated Press dispatch dated October 27, 1950, said: "today it has definitely been shown that sodium fluoride added to the public water supply will 'substantially reduce' dental decay in children." In the final analysis, fluoridation is no more or less than the culmination of a condition in nature favorable to dental health. At present, more than 15 million people in about 800 communities are receiving fluoridated water.

During the last two months of 1950, the Baltimore papers carried numerous news items, editorials, and letters to the editor on the proposed fluoridation of the city's water supply. Most of them were favorable: some expressed caution; a very few were frankly opposed. Perhaps most influential were accounts of favorable actions by the Baltimore City Dental Society, the Medical and Chirurgical Faculty of Maryland, the dean and faculty of the University of Maryland's Baltimore College of Dental Surgery, and the Maryland State Board of Health. People were warned that fluoridation is not "the magic wand that completely prevents tooth decay." At the same time its safety was established in the public mind with statements like these by Dr. J. Ben Robinson, dean, and Dr. Myron S. Aisenberg, professor of pathology of the dental school:

With the one part in a million ratio planned here it would take 1,000 gallons of water—at one time—to be lethal. . . . The amount of fluorine which remains in the system is not cumulative to the extent of 4 grams (the lethal dose). . . . Animals and fish, dogs, cats and goldfish, even rats and mice, suffer no ill effects. . . . Studies of the use of the chemical in test cities over a period of years (yield) no evidence of any harmful effects on bone structure, eyesight, or other bodily development. . . . A test in New York State has shown a (significant) reduction in decay in a fluorine city. . . . The results should be even better as more time passes . . . .

Dr. McCauley is director, Bureau of Dental Care, City Health Department, Baltimore, Md. This paper was presented before the American School Health Association and the Dental Health, Public Health Education, and School Health Sections of the American Public Health Association at the Eighty-first Annual Meeting in New York, N. Y., November 12, 1958.
It is interesting to note that on November 27 the City Council conducted a hearing on the fluoridation proposal "because of report of opposition," but according to the Sun: "no one appeared to oppose the use of the chemical in the water supply."

The City Waits to See

On June 29, 1951, while the Bureau of Water Supply and the Health Department continued to study fluoridation as a practical procedure, the Baltimore papers published the content of a letter received by the mayor from the Surgeon General of the Public Health Service, Dr. Leonard A. Scheele: "It is my view that the City of Baltimore can no longer afford to postpone fluoridation of the drinking water supply." He noted that fluoridation was approved by the American Dental Association, the American Public Health Association, the American Water Works Association, the Association of State and Territorial Dental Health Directors, the American Association of Public Health Dentists, and the Association of State and Territorial Health Officers.

However, caution was the order of the day. The commissioner of health indicated to the mayor, and it appeared in the Sun on June 29, that:

While in general the reports of experience in other communities are favorable. . . . Baltimore should not take this step in the immediate future. . . . (T)here remains some considerable doubt in the minds of leading medical and sanitary authorities on the question of possible toxicity of a cumulative nature for adults.

It was decided to await the report of a National Research Council ad hoc Committee on Fluoridation of Water Supplies, which among its 10 members included the professors of medicine, epidemiology, and sanitary engineering of the Johns Hopkins University. In an editorial June 30, the Sun paved the way to public acceptance of the forthcoming report by this statement:

If (the) committee approves fluoridation, the Mayor will have firmer reason to get on with his plan for Baltimore. If the committee finds evidence that fluorine is harmful, the Mayor will have reason to thank Dr. Williams for advocating a wait-and-see policy.

The Dental School Is Heard

On July 6, the Sun made public a letter to the mayor by Dr. Robinson who urged prompt fluoridation of the water supply and reiterated the safety and benefits of the plan. From a previous report of the director of the Bureau of Dental Care it was noted that:

Several hundred thousand people spend their entire lives in areas where the chemical is naturally present in the water. . . . Certainly if low fluorine is toxic, it would during the last 100 years have been made known in the course of routine medical observation of these people. . . .

Of the 3,400,000 teeth (in Baltimore) which should be filled, dentists are able to fill only 500,000 each year and of 1,800,000 which should be extracted, only 300,000 are pulled. . . . The cost of adding fluorine has been estimated at $80,000 a year, $2,000,000 in 25 years. . . .

But Baltimoreans are now spending $2,000,000 a year for their inadequate care—500,000 fillings and 300,000 extractions. . . .

The present unmet need to fill 2,900,000 teeth can be reduced with fluoridation to 1,200,000 and the unmet need to pull 1,500,000 teeth can be reduced to 300,000. . . .

Fluoridated water cannot be expected to bring about a repair of damage already accomplished by decay. . . . People continuously residing in fluoride water areas not only have two-thirds less tooth decay but they lose their teeth at a considerable slower rate than people in fluoride-free sections. . . .

NRC Reports Fluoridation Safe

On November 29, 1951, a special dispatch appeared in the Evening Sun:

Fluoridation of public drinking water to reduce tooth decay as called for by a $90,000 plan in Baltimore is safe and practicable, according to a report by a special committee of the National Research Council.

An editorial follow-up stated further:

The committee reports that children in communities where there are small amounts (one part per million) of a fluoride in the drinking water have from one-third to one-half as much tooth decay as children exposed to fluorine-free water. The increased resistance to decay, the committee found, carries into adult life to an 'appreciable degree.' The fluoride can be added to fluorine-free water supplies with the same beneficial effects, and, if handled wisely, should not have harmful effects on the human system.

Baltimore had been given the evidence it needed. On November 30, the commissioner of health transmitted the National Research Council report to the mayor with this comment:
This report which is very satisfactory has just reached me during the past half hour, and I feel sure that now it will be well, on the basis of these findings, for Baltimore City to move forward with the plan you have sponsored so actively to take this important step.

The mayor announced the same day that authority of the State Board of Health had been requested for adding fluoride to the city water as a preventive of tooth decay.

The Opposition Is Heard

An important influence against the fluoridation plan in Baltimore appeared December 29, 1951, in a dispatch from Philadelphia under the headline “Fluorine Use Called ‘Risk.’” This voiced the opinion of Dr. Robert S. Harris of the Massachusetts Institute of Technology, who declared that because “much still is unknown about the long-time effects of small amounts taken every day” fluoridation is “a calculated risk.”

The keynote of the opposition, sounded by Dr. Harris, was enlarged upon during the following months, and the fluoridation issue rendered thoroughly confusing to the public by the publicized activities of the Delaney Committee of the House of Representatives.

On February 25, 1952, a resolution appeared in the City Council (No. 506):

WHEREAS, there is disagreement among scientists as to the effect of water fluoridation on ageing people;
WHEREAS, claims are made that fluoride is harmful to persons suffering from rheumatism and arthritis; now, therefore be it
RESOLVED by the City Council of Baltimore, That the Health Committee request the Commissioner of Health and the Water Engineer to give to it whatever information is available on this treatment by fluoridation of city water supplies.

The Opposition Gets the Facts

The commissioner of health and the water engineer appeared before the Health Committee of the City Council in an open hearing March 3, 1952, at which time the commissioner presented a prepared statement. This and a second hearing on March 7 were attended primarily by women (about 80 in number) who vehemently attacked fluoridation with claims that the chemical was a rat poison and an insecticide and would cause “hardening of the bones” and “conceivably . . . injuries to the kidneys, stomach, thyroid gland and the brain.” Fluoridation was declared “unconstitutional,” “a fifth column,” “social mass medication,” and “pagan.” Dentists were accused of interest in the chemical industry.

Drs. Williams and Aisenberg carried the debate for fluoridation. In addition to the statements of the commissioner, it was explained to the Health Committee and those present that fluorne fights acids in the mouth which cause dental decay. Although it makes enamel harder, it does not make bones harder or more brittle because the teeth take only what is needed from the water and the rest of the chemical is discharged by the kidneys without ill effect. Copies of the National Research Council report and “Fluoridation Questions and Answers,” a Health Department information folder, were distributed to interested persons.

An attempt by opposition council members to make fluoridation the subject of a referendum was unsuccessful, and on March 10, a new resolution was introduced in the City Council (No. 533):

WHEREAS, there seems to be considerable uncertainty as to the wisdom of placing fluoride in the water supply; and
WHEREAS, it seems desirable that further study should be given to this important subject in order to determine whether such chemical will be harmful to certain adults; and
WHEREAS, while such fluoridation of water may be beneficial to young children, if the result is that adults are seriously harmed; . . .
RESOLVED by the City Council of Baltimore, That the Commissioner of Health and the Water Engineer of Baltimore City be and they are hereby requested to delay the fluoridation of the City’s water supply until additional information has been secured in order to determine whether it is a wise step to take under all the circumstances; . . .

Consequently, on March 19, 1952, a third public hearing on fluoridation was conducted by the Health Committee. To it were invited any doctors or dentists who opposed the measure. None had appeared previously, and none appeared now. Instead the affirmative was confirmed by Dr. Francis A. Arnold, Jr., deputy director, and Dr. Isadore Zipkin, biochemist of the National Institute of Dental Research:
Three times as many teeth when they reached Boulder (Colo.) which has no fluorine lost water showed no had effects... Adults in town (Bartlett) with (8 ppm) fluorine in the have lived for 20 years or more in a Texas National Research Council study. The sor of medicine, who participated in the McGhee Harvey, Johns Hopkins profes­

sive. Only a chiropracter spoke out against fluoridation. Four days later the City Council voted 17 to 4 to reject resolution 533. On March 26, an editorial commented:

The contest has been decided and it turned out to be no contest. That being so, there is no legitimate reason to postpone the use of fluorine.

A Complaint Is Heard

The Baltimore Morning Sun for April 5, 1952, reported that the city was delaying fluoridation pending the delivery of storage tanks for the chemical. Meanwhile, two taxpayers, Ian Ross MacFarlane and Harry C. Hoffman, filed a complaint in court alleging that “introduction of fluorine into the water supply would be prejudicial to health, to religious rights and to other rights guaranteed by the constitution of the State of Maryland” and named the mayor, the City Council, the health commissioner, and the water engineer as defendants. Fluoridation was again the subject of debate.

On May 6, Dr. Harold C. Hodge, professor of pharmacology and toxicology of the University of Rochester, and Dr. Reidar F. Sognnaes, associate dean of the Harvard Dental School, addressed a meeting of the Maryland State Dental Association in Baltimore. They received favorable press coverage and answered pertinent questions: To what extent does the human body naturally obtain fluorine? Is there a reduction of acid in the mouths of users of fluorine? What effect has the use of fluoridated water on diseases of old age? The widespread prevalence of fluorine in natural foods and the toxicology of fluorine were cited as evidence precluding deleterious ef-

fects from a water supply fluoridated to the 1 ppm level. When fluoride was added to a cavity-producing sugar diet in experimental animals, the number of cavities dropped by three-fourths. There was “absolutely no scientific basis” to rumors that fluoride caused arthritis, rheumatism, high blood pressure, or other diseases. Both essayists stressed the need for fluoridation of water supplies.

The Court Gets the Facts

For two days, November 6 and 7, 1952, Judge Michael J. Manley of the Circuit Court of Baltimore City listened to testimony in the injunction suit brought to prevent the city from fluoridating the water supply. As in the case of the hearings conducted by the Health Committee of the City Council, recognized authorities from far and near were called upon to take the stand for fluoridation.* Only Mr. Hoffman, a Christian Scientist, testified against fluoridation. Mr. MacFarlane, the other complainant, failed to appear in the court room at any time during the proceedings.

Judge Manley signed a decree dismissing the bill of complaint on November 12.4 Two weeks later fluoridation was begun.

* Among them were Dr. Francis A. Arnold, Jr., and Dr. Isidore Zipkin of the Public Health Service; Dr. Aho M. Cheever, president of the Medical and Chirurgical Faculty of Maryland and dean of the Johns Hopkins School of Medicine; Dr. Maurice Pincotts, professor of medicine in the University of Maryland and member of the State Board of Health; Dr. Pierce S. Prather, deputy director of the Maryland State Department of Health; Dr. Huntington Williams, commissioner of health of Baltimore City; J. S. Strohwey, the water engineer; Dr. J. Ray Idly, secretary of the Council on Dental Therapeutics of the American Dental Association; and Dr. Myron S. Aisberg of the dental school.

REFERENCES


"As an engineer, and former head of the Washington School of Mechanical Engineering, I have, since being Mayor, followed the advice of experts in the various fields of municipal problems.

At the outset of my administration, when fluoridation was proposed I realized that this was primarily a medical and dental problem, which I was not personally qualified to determine without outside advice. Therefore, I appointed a committee of qualified medical and dental experts to advise me.

Our local problem was further complicated by the fact that our Water Commissioner, an engineer, was publicly opposed to fluoridation. As an engineer, I thought this was unwise because I did not feel that he was qualified by either experience or training to set policy on this question.

To make a long story short, the committee which I appointed unanimously recommended fluoridation and it was adopted by our Board of Aldermen.

Our experience with this public health measure so far has been entirely satisfactory, and exhaustive national tests over a long period of years conclusively indicate that this measure will materially benefit our community. The small but vocal opposition to this proposal has virtually disappeared in recent months."

R.R. TUCKER
Mayor
''Fluoridation of the Milwaukee water supply began on July 22, 1953 and has continued without interruption until the present time. Except for a very small and vociferous group of antifluoridationists, there have been no expressions of disapproval of fluoridation of Milwaukee's water supply during the past years..."

Since inauguration of fluoridation in Milwaukee no industry has indicated to the Health Department or to the Water Works, or to the Mayor or Common Council, that it believed the fluoridated water was in any way deleterious to its operation.

No specific individual has set forth any claim that his health was being damaged by the use of fluoridated water. Some antifluoridationists have made a general claim that the health of people was being adversely affected. The Commissioner of Health has, however, publicly proclaimed his willingness to arrange for the free hospitalization and detailed clinical study of any individual who might allege that his health was being adversely affected by the consumption of fluoridated water. Although this offer was made more than 1 1/2 years ago, no individual has in any way sought to take advantage of the offer.

In my opinion, there have been no significant political consequences associated with fluoridation. In any election there are, of course, many things which influence the people to support or oppose a candidate. In this connection it is of interest to note that the fight for fluoridation in the Milwaukee Common Council was led by an Alderman whose return to office in the Spring election of 1956 was by the largest margin he had ever obtained. The Alderman who was most outspoken in his opposition to fluoridation, and who was actually the only real opponent of fluoridation among the Aldermen, was defeated in his attempt to be re-elected in the Spring of 1956. The foregoing statement is not to be construed as meaning support or opposition to fluoridation resulted in the success of one candidate or failure of the other. I mention these cases only to point out that leadership in the Common Council in favor of fluoridation did not, apparently, adversely affect a candidate in spite of the fact that some antifluoridationists had threatened to 'get' him. On the other hand, if the antifluoridationists exerted any effort to re-elect the other Alderman, the results of their efforts were not discernable."

E. R. KRUMBIEGEL
Commissioner of Health
Privileged as I feel I am to be addressing you -- my purpose in accepting this invitation is more one of duty; and a feeling of shame that is comparatively wealthy State of Connecticut, wealthy in intelligence as well as worldly goods, should be no further advanced in its acceptance of fluoridation than it is. I have not only given up a half day from my office today but have devoted many such days to this crusade, because of the intimate association I have as a general practitioner in Dentistry with the frustrating mechanics of restoring teeth again and again. Now, I feel, we have at our disposal the only effective preventive and it is my duty, our duty, as dentists, to be in the forefront of the crusade.

I come from Torrington. A community of approximately 30,000 people. An industrial city, like so many other Connecticut towns, with 90% of its populace dependent upon the manufacturing facilities to provide their sustenance. It is no more intelligent nor less than others of its kind. No more nor less progressive or alert. How was it that Torrington succeeded in voting yes to the question of fluoridation with such a relatively large proportion of ayes to nays?

It goes back a long way. To 1949 to be specific. I believe at that time the first preliminary report was available from the experiment being conducted in Newburgh, N.Y. At my invitation the president of the local water company and our local health officer sat down at lunch to discuss the possibility of considering fluoridation for our town. From this meeting, having been assured of the cooperation of the Torrington Water Co., a private organization I might add, and aware of the enthusiastic sentiments of our health officer, I went to our local Dental Society and proposed that we actively take up the campaign. Without dissent and with some enthusiasts we notified our health officer to broach the subject for the first time to our city council. Knowing full well that the Newburgh experiment had run only four years of a proposed ten year experiment we were over-optimistic in our hopes that our city council would be the first to accept that then new concept. Of course, as you have no doubt surmised, it was too new, too untried, unproven and experimental to interest our city fathers in 1949.
However, each year, as new evidence came out in the press, both professional and lay, we returned to the city council and asked that it be considered. Evidence collected by our health officer and by a committee of dentists from material gathered from our national dental association and from the state health department and Mr. Scott of the Bureau of Sanitary Engineering, from reports submitted by the Torrington Water Co. and from succeeding reports of the Newburgh and Grand Rapids, Michigan experiments was submitted to the city council for consideration. Unfortunately, it is a rare community that does not believe in the old adage, "Be not the first to lay aside the old -- nor to take up the new."

It finally behooved the Dental Society that our approach had been wrong. We had started at the top. True, had it succeeded, that would have been the simplest solution to the problem. Now we must consider starting at the bottom -- the hard way -- by getting to the grass roots -- the people. Therefore in 1953-54 an active campaign was instituted to contact every organization willing to listen to our story. In that period we spoke to all but two of the eleven P. T. A. units in our town, the P. T. A. council, the Medical Association, the Chamber of Commerce, Kiwanis Club and to Rotary. We gathered over 1000 signatures from individuals petitioning the city council to consider the question of fluoridation. We used in conjunction with our talks to these various groups the film supplied by the A. D. A. and the State health department entitled, "A Drop In The Bucket." Dentists spoke of its value in their offices, pediatricians spoke of it and all of us kept a supply of small booklets and leaflets of pertinent literature available on our waiting room tables.

With these 1000 signatures petitioning the council to consider fluoridation and with the resolutions of the Medical Society, and the service clubs we again approached the Mayor and the city council with the hope that the tangible evidence we had to show them of our people's desire for this benefit plus, by now, the overwhelming evidence of many national professional organizations on record in favor, would be of sufficient weight to have them make a decision in its favor. At this meeting with the city council we arrayed ourselves in force -- three members of the dental profession, Frank Erlenbach of the State Department of Health, our local health officer, and a member of the P. T. A. council. Once again the council was courteous, responsive, but undecided and once again it was tabled. We would hear from the city council after all the evidence we had submitted had been considered and discussed.
I might here insert that vociferous opposition was rare, sporadic and weak. No organized forces appeared to fight the issue. Also no organized forces, other than the health officer and the Committee of Dentists fought for it. A relative inertia existed on the question both pro and con on the part of the public who would be those most to benefit and on the part of the city fathers who might have led the populace to achieve this benefit.

Months went by without further contact between the council and those interested in action. The situation lay in limbo and to those who are enthusiastic such is intolerable. Therefore, in the summer of 1955 it was decided to attempt another approach and allow the council to get themselves off the hook, so to speak. We were to propose that since they did not feel able or willing to make a decision upon this question themselves would it not be preferable to allow the people to make the decision at the polling place on election day in October? The proposal was made, some discussion ensued and we had it! With one proviso, however! The people may vote on the question, yes, but -- this may not be an edict whether the vote be yes or no. It must be simply a poll to ascertain the wishes of the populace.

Now our work was to begin. Under such conditions a simple majority vote would not be sufficient. We contacted our Connecticut State Dental Association Committee on Fluoridation for advice. We had come to the point of putting the quest on the machine. How should we proceed? Had they a plan? A modus operandi prepared for communities at this point? I'm sorry to say our Dental Association Fluoridation Committee was not prepared to be of assistance. No plan, no format to follow, no expert advice. Deplorable. Our methods must therefore be innovated.

Aware that other communities had arrived at this junction that we had finally achieved and been defeated at the polls we decided that their methods had defeated them. We had arrived at this point successfully. Why? Because we had quietly educated the public. Because we had not allowed emotionalism to get in its devastating work by steering clear of anything but hard clear facts. Because we had not allowed any opposition that was forthcoming to urge us into debate, name calling or mudslinging nor had we become so blatant as to arouse outlying opposition to rally its forces and invade our town. Then too, we had patiently worn down the council members to the point that further opposition or inertia left them in a poor position.
On those basic precepts we conducted our successful campaign for a favorable vote at the polls. No publicity, no big rallies, no more talks before groups, nothing that would arouse controversy until three days before election day. And we prepared for those three days. We called together those people representative of groups we knew to be vitally interested to map out the strategy, and the help of Dr. Erlenbach and Mr. Geyer, public education consultant with the State Department of Health. Each one at this meeting was given a job to do and did it to the best of his ability. One, perhaps, had the job of activating the telephone squads of the P.T.A. units reminding them of the coming vote on fluoridation. Another, to prepare for a squad of workers to be stationed in front of the polling places throughout the day to hand out 10,000 printed throwaways we had prepared reminding people just before going in to vote not to forget to vote YES on the fluoridation question. Another, to contact school authorities to request permission to distribute through the children, and thus to the parents, educational material reiterating the benefits of fluoridation and, of course, someone to handle publicity, both radio and newspaper.

The publicity consisted of the rehashing of all those arguments in favor of fluoridation to reacquaint people with what they are prone so easily to let go in one ear and out the other: small two or three line quotes from well known local professional people; ten to fifteen word spot announcements over the local radio station placed at strategic hours throughout the three days prior to election day; and on the final day before election a half page ad on the back page of the local paper -- once more concisely giving the reasons for favoring fluoridation and listing all those national and local organizations endorsing it.

Basically, that was our campaign. Our aim was to get not only a favorable vote but an overwhelmingly favorable vote with more, quantitatively, than would be expected to vote upon questions on the voting machine at a regular election.

Apparently, our strategy, as well as our years of educating the public, was the proper approach. We won and we won overwhelmingly. In looking at the results of the past three general elections we determined that approximately 25% of those voting on candidates, remembered, or cared, to vote on questions placed upon the machine. We succeeded in interesting approximately 46% to consider the question and of those close to 4100 voted in favor as opposed to about 1100 against. About a 4 to 1 majority. It was a proud day for all of us.
Now our next step confronted us. Those of you who have dealt in any manner with governmental agencies, municipal or otherwise, must be aware of the need to initiate, instigate, nag, or what have you, to get action. I am sorry to say that notwithstanding this large favorable vote, which, to my mind stood as an edict to our council, it became necessary to suggest action. The Mayor appointed a committee whose function it was to study and report upon the methods and cost of adding fluorine to the water supply of Torrington. This committee consisted of members of prominence in the various activities in town such as P.T.A., service clubs, labor, manufacturers, medical profession, health department, finance board, city council, etc. This committee, of which I was favored to be chairman, devoted three months to studying the problem after having been broken down into three working groups -- building facilities, cost analysis and cost apportionment. A copy of this report is attached.

May I summarize what we in Torrington did that may be used as effectively in many other communities. Men of repute, enthusiastic crusaders, and unemotionally aware of the facts salient to problem were the leaders.

We, over a long seven years, planted and nurtured and made blossom the bold idea in the minds of those most likely to benefit -- the parents. And, indirectly, the city council and Mayor for they, too, would benefit politically were they to be able to point to fluoridation as one of their accomplishments during their tenure of office.

We gathered evidence that all organizations of respect were endorsers of the idea. We persuaded a large number of people to personally sign their names to petitions asking that the council immediately consider fluoridation.

We placed the city council in the position of no longer finding it politically wise to continue inaction. They were therefore forced to place the question upon the voting machine.

We organized and effectively executed a three day whirlwind campaign of reiteration of education and of persuasion to vote in large numbers upon the question.

After a favorable vote we suggested and had appointed a committee, also of repute, to bring in a report that would make the city
council aware of the feasibility of fluoridation in Torrington in dollars and cents and the ease with which it could be accomplished.

All of the above, I believe, can be done, and done as well, in other towns. No community is better than its leaders -- its organizers of thought and action -- and few will deny the fact that all people are ready and willing to be led -- for their own good, or sometimes, unfortunately, to their detriment. If a community can be measured and evaluated, I should think no better measuring stick could be found than the relative welfare of its children.
"The determination to add fluorides to the drinking water furnished Chicagoans and the city's suburbs was made by the City Council after extensive studies were made by the Committee on Health of the City Council and public hearings and debates on the subject considered...

An action to enjoin the City from adding fluorides to the city's water supply, on the grounds that the cost thereof constituted waste, that it was detrimental to the health of the people and it violated the constitutional guarantees of freedom of religion, was filed in the Superior Court of Cook County. The complaint was dismissed by the court upon motion of the city.

There was some opposition to the determination to use fluorides apparently by chain-letter methods and particularly by people who felt that their constitutional rights were being invaded. Many courts have held otherwise.

In 1956 the City of Chicago installed the necessary machinery at the 79th Street Plant to add fluorides and a breakdown as to a per capita cost is not yet available. However, the estimated cost per capita is $0.15 per annum."

JOHN C. MELANIPHY
Corporation Counsel
"In 1953 the American people spent about 1.6 billion dollars for dental services, Philadelphia spent an estimate 16 million dollars for dental care in 1953. Yet less than one-third of our people receive adequate dental care. Even if there were sufficient income for dental care, there were not enough dentists to furnish the required volume of services. As an example of the inadequacy of dental resources—if Philadelphia were to organize a program merely to treat the 113,700 children three to fourteen years of age, whose parents are unable to pay dentists fees, it would cost the City more than three million dollars. The department would have to increase the number of its dentists ten-fold. All dental surveys have indicated that the existing number of dentists can not possibly meet the dental needs of our population...

The Department of Public Health requested an advisory committee of medical, dental, pharmaceutical, engineering, education and welfare experts to investigate the plan of fluoridating the water supply. They unanimously agreed that the process was an effective and safe caries-preventive measure and recommended that the City add 1 part of fluorine to a million parts of water. The Department obtained the approval of the State Department of Health and requested City Council to enact the necessary legislation and to allocate funds to implement the legislation.

City Council arranged a public hearing inviting opponents and proponents to present their opinions. So overwhelming were the numbers in favor of the project that City Council enacted the legislation and provided the funds for installing the equipment and for purchasing the fluorides for the accepted treatment of the water supply."

JAMES P. DIXON
Commissioner of Health
I. INTRODUCTION

Fluoridation of public water supplies as a safe and practical way of reducing dental decay has progressed well beyond the experimental stage. Evidence of its value exists in many communities across the Nation. Some have always had natural fluorides in their water supplies; others for a number of years have been adding fluorides to water supplies deficient in this protective element.

Throughout California there is an increasing interest in fluoridation. Several communities have already taken the necessary steps to fluoridate their water supplies, and numerous others are in various stages of taking action.

How does a community go about organizing itself for action? There is no one answer, no single pattern that can be drafted and then applied to every community. That is because communities differ - physically, socially, and in many other ways. And communities have their individual ways of getting things done.

The following suggestions for community organization in the development of a fluoridation program are just that - suggestions. Many communities already have the organizational framework and community resources that would permit them to proceed quite rapidly through all the suggested steps; others may need to build their program from the beginning. Some of the suggestions may seem quite elementary and all too obvious - yet, their neglect could mean the difference between success and failure in the development of a sound program of community organization for fluoridation. So if you are interested in seeing your community develop an effective fluoridation program, the following suggestions are offered to you for what they may be worth:

II. STEPS IN DEVELOPING A FLUORIDATION PROGRAM

Step 1 - Find out where the interest in fluoridation lies.
Discuss fluoridation with individuals or leaders of groups who might be most vitally concerned with community health, and dental health in particular. You may be a member of one such group. They would include such organizations as:

Local health department
Local dental society
Local medical society
Parent-teacher association
Community health council or health committee of the coordinating council
Chamber of Commerce
Business organizations and civic clubs (most of them have health chairman)
Council of Churches
City council or board of supervisors
Labor and management groups
Step 2 - Start the ball rolling.
If a health council exists (or a health committee of a coordinating council, or a council of social agencies)

-- and is active:
One of the interested individuals in that organization could call this problem to the attention of the council board and suggest it be introduced for council action.

-- if inactive:
This might be a good program to bring about reactivation of the council. A small meeting could be called of individuals with whom you have talked. You would be concerned with

1. Defining the problem
2. Planning for gathering the facts
3. Planning for expanding your organization

Step 3 - Define the problem and gather the facts.
These are some of the questions you may want to explore.

1. What is the community's dental problem?
2. What is the percentage of dental decay?
3. How many dentists does our community have?
4. What is being done to control tooth decay?
5. How much fluoride is in your water supply now?
6. What is fluoridation and how can it benefit our community?
7. What are the legal requirements in obtaining a permit to fluoridate from the State Department of Public Health?
8. Who operates our community water supply?
9. Where do we go for answers to our questions? (If your local dental society or health department is represented, they will be able to answer many of the questions or suggest sources of information.)

Step 4 - Build your organization.
The nucleus of a community organization could be the initial group which convened to explore the problem. If a health council exists, the central organization could be a fluoridation committee appointed by the council.

How a community organization develops is largely a local matter and may have as many variances as there are communities. However, its composition should be representative of all interested groups. All community groups should be given the opportunity and incentive to participate.

There are many things to be done and the work could be shared by a number of committees such as:

1. Fact finding committee
2. Materials committee
3. Speakers Bureau
4. Public Information Committee, to look after press and radio relations, liaison with community groups, etc.
A SUCCESSFUL FLUORIDATION CAMPAIGN

1. Participation at all social levels
   a. Unions
   b. Service clubs - P.T.A., Lions, Rotary, etc.
   c. Professional groups
   d. Social clubs
   e. Administrative - schools, etc.

2. A survey of the dental health conditions to show the need. Forms and tabulating can be done by the county health department.

3. Determination of public "attitudes" toward fluoridation at this point through the device of telephone, door-to-door quizzing.

4. Report on fluoridation - source material from dental publications, county health department - was issued and sent to:
   a. Every physician and dentist in town
   b. Every councilman and city administrator
   c. Every P.T.A. president and health chairman
   d. Every president of each civic and social club

5. Formation of a Dental Health Council with committees:
   a. Finance
   b. Technical Advisory
   c. Public Information
   d. Advertising
   e. Speakers
   f. Headquarters

Specialists in the appropriate lines chosen as chairman, i.e., bankers, biochemist, newspaperman, advertising executive, etc. Enough money to be raised so that a hard-hitting series of ads can be published and also to pay for activities such as printing costs, space rental, etc.

Technical advisory committee screens all printed material, all ads, and all speeches for accuracy, besides answering any questions workers were asked about fluoridation.

The public information committee might be organized with a captain in charge of specific areas, e.g., elementary school districts. This captain is to be assisted by block workers who contact neighbors two weeks before election and hand out "Give Our Children Better Teeth", pamphlet, or some other type of material which will briefly and simply tell the story.

Bumper strips saying "Vote Yes On Fluoridation" could be attached to cars by block workers and Junior Chamber men.
Newspaper ads can discredit the opposition as being unqualified to advise people on health matters and accuse them of trying to wage a campaign of fear and hatred. On the night before election, a full-page ad urging people to vote "yes" for fluoridation may be effective. Every physician and dentist's name might be listed under the text as being in favor.

Speakers may be trained by the technical advisory committee and speaking engagements may be made with every club in the city. Where possible, endorsements may be obtained after the speech.

The Health Council can rent space for a headquarters and staff it with volunteer P.T.A. workers. Displays and literature from the U.S. Public Health Department were displayed in the store windows.

At the bottom of each newspaper ad and at the headquarters, the slogan "Ask Your Dentist or Physician About Fluoridation". The slogan gives credence to our claims and has a heavy impact on the public.

Junior Chamber can obtain registration lists from the county registrar of voters and get enough valid signatures on a petition to put fluoridation on the ballot at the next general election.

Some suggestions that may be helpful:

1. Form a Dental Health organization and work for better dental health. It is pretty hard to work against a health measure that is part of a general dental health program. Don't form a "fluoridation" group and conduct a "fluoridation campaign". If you do, your opponents will easily get together an "anti-fluoridation" group and wage an "anti-fluoridation" campaign.

2. Take the offensive. Never let the opposition state something against fluoridation and then catch yourself answering him. Keep them on the defensive at all times.

3. Always challenge the opponents' technical training and education which qualifies them to advise the public on health matters. Do it publicly. Get the idea across that he is either misinformed or has an ax to grind, sometimes he might have a commercial motive in his opposition.

4. Whenever an opponent speaks at a public meeting, have someone oppose him and be sure that individual is properly prepared.

5. Get all the participation you can, especially civic, parent and women's groups.

6. Strategy and timing are extremely important. Set up a time table for every phase of the campaign.

7. Never, never, never underestimate the strength of the opposition. Nothing but an all-out effort will be successful.
Step 5 - Develop a plan to inform community.

There should be a well-developed plan for telling the story of fluoridation to the community. There needs to be a continuous flow of communication with all participating organizations. All community activities, such as endorsements of organizations, the medical and dental societies, the health officer, etc., should be publicized.

Step 6 - Follow the specific requirements for obtaining a permit to fluoridate.

The procedures to be followed to obtain a permit from the State Department of Public Health are set forth in a separate document which you may obtain through your local health department. Before applying for a permit you should first have written endorsements from:

1. Your local dental society.
2. Your local medical society.

The governing body which controls the community's water supply must submit detailed plans for the addition of fluorides to the water supply. These requirements are set forth in the document mentioned above.

Step 7 - The organization should remain active until the program is effected.

There is a continuing need to keep the public informed of all developments, to evaluate the organization's progress and plan necessary action as the need arises.
COMMUNITY ORGANIZATION

for

Fluoridation of Public Water Supplies

The first step is the decision to have a program.

In general, before a fluoridation program can be adopted it must be voted for by the people of a community. Since public desire can best be expressed when a wide cross representation of the community knows the story and bands together in united support for such program, early planning to this end is essential. The necessary educational campaign can best be assured through:

COMMUNITY ORGANIZATION

How to Get Started ......................

Community organization for fluoridation can be developed through:

a. The expansion of the activity and membership of an already existing group, such as a local health council, P.T.A., Chamber of Commerce, or any similar organization.

or by

b. The formation of a special Citizen Committee for fluoridation.

1. In either event, the first step here is to call together the group you wish to interest, initially, for a planning meeting. This group should include the following representation:

   Businessmen; teachers; health leaders; representatives of the medical, dental and legal professions; labor groups; P.T.A.'s; and allied parents groups; town officials; water works or public utility officials; the clergy; civic, fraternal, patriotic and social leaders; press; radio; theatre representative; and other key persons in the community.

2. Present the story of fluoridation to the group, calling upon such other persons to assist in the presentation as you need to lend support.
and variety to the presentation—physician, dentist, city engineer or comparable officials, a representative from the local or state health department.

Obtaining the advice of the group as to further steps to be taken in the community toward a widespread promotional educational campaign.

Some matters to be considered here:

a. The area to be covered by the campaign... usually this is the area served by the public water supply;

b. It is advisable that committee members obtain costs of fluoridation equipment from several concerns, and any related costs: any engineering problems that may be involved;

c. Other groups or persons who may need to be involved or interested in the program before action is started;

d. The organization of an active working group for the community campaign.

3. Assist in the organization of a working committee.

Suggested Organization Plan....

a. The appointment of a general chairman. Desirable qualifications: an active, aggressive, dependable person who is interested in the problem and who is acceptable to all groups, knows his community and how to get things done, will tackle the task efficiently and has the determination to carry it through to a successful conclusion.

b. The formation of a publicity committee; The chairman of this group should know all media available, all community channels for spreading the information as widely as possible. Committee should include local newspaper correspondent or other press representative; radio representative (local or area); sufficient committee members to handle:
i. Speakers Bureau
ii. Special Events, such as displays, exhibits, information booths, general mass media methods.
iii. Clubs and organizations publicity
iv. Churches and schools publicity, if desired.

c. The setting up of a technical committee: The appointment of a professional person as chairman of this committee would be highly desirable, since this committee will be called upon for supplying to the other committees much of the scientific data and information on fluoridation which is obtainable from any local, state, and national sources. This committee might well be considered the fact-finding group of the organization.

d. An Executive Committee is an important adjunct to the organization. Its chairman should be thoroughly acquainted with the legal requirements concerning fluoridation; should study these with the committee appointed to assist him and assume the responsibility of drawing up the requisite article on which the people will vote; safeguard the interests of the total Committee and community in this respect and take leadership toward the introduction of such article into town warrant or comparable voting roster of the community; assist in obtaining the required written approval from the State Department of Health and Welfare (Division of Sanitary Engineering) before the program is put into effect.

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IV. WHERE TO GET MATERIALS

Local and State Health Departments can supply such information as:

- current dental needs in your community;
- present fluoride content of your water supply;
- cities in your region with fluoridation programs;
- naturally fluoridated areas;
- legal requirements for getting fluoridation;
- local engineering factors.

Consult your family doctor and dentist; your county medical and dental societies; voluntary health agencies; dental and medical colleges. In addition, a selection of available materials is listed below:

American Dental Association
222 East Superior Street
Chicago 11, Illinois

- Fluoridation Kit - booklets, reprints and other source materials. $1.00
- Fluoridation Facts - answers to criticisms of fluoridation
  25 copies, $2.30. 50, $3.75. 100, $6.40.
  500, $30.00.
- Why Your Dentist Recommends Fluoridation - folder
  500, $3.00. 1,000, $5.25. 5,000, $22.90.
  10,000, $44.80.

Write for information on slides and exhibits

Committee to Protect Our Children's Teeth, Inc.
105 East 22nd Street
New York 10, N. Y.

- Our Children's Teeth - digest of expert opinion, 1957
  105 pp. $1.08
- Fluoridation, Pro and Con - by Dr. D. R. McNeil, reprinted from the March 3, 1957 N. Y. Times
  8 pp. $5.00 per 100, single copies free.
The Issue of Fluoridation and the Public Health - by Duncan W. Clark, reprinted from January, 1957 N. J. State Public Health News 8 pp. $7.00 per 100, single copies free.

Facts on Fluoridation - by H. Trendly Dean, reprinted from February, 1957 America. 4 pp. $5.00 per 100.

Many other reprints available. Arrangements can be made to lend tape recordings, TV kinescopes, radio and TV spot announcements.

American Association for the Advancement of Science 1515 Massachusetts Avenue, N. W. Washington, D. C.

Fluoridation as a Public Health Measure - edited by Dr. James H. Shaw, 1954. 232 pp. $4.50.

Oxford University Press (or your bookseller) 114 Fifth Avenue New York 11, N. Y.

The Fight for Fluoridation - by Donald R. McNeil, 1957 240 pp. $5.00.

Public Affairs Pamphlets 22 East 38th Street New York 16, N. Y.


New York City Department of Health 125 Worth Street New York 13, N. Y.

Report to the Mayor on Fluoridation for New York City - 1956 52 pp. single copies free on request.

FILMS

Leo Trachtenberg Films
90 Riverside Drive
New York, N. Y.

Science Fights Tooth Decay - Dental progress in Rochester, N. Y. after 5 years of fluoridation is explained by Dr. Basil Bibby, Director, Eastman Dental Dispensary, and Prof. Harold C. Hodge, University of Rochester. 14 min. B & W 16mm sound $75 purchase, $5 rental.

Science Workers Get the Facts on Fluoridation - 5 reporters ask questions of Dr. W. W. Bauer of the American Medical Association, and F. A. Arnold, Jr., Director, National Institute of Dental Research. 14 min. 16mm sound. $55 purchase, $5 rental.

Michigan State Dental Association
112 East Allegan Street
Lansing, Michigan

The Truth about Fluoridation - Study of fluoridation in Grand Rapids since program began in 1945. 15 min. Color. 16mm sound. $125 purchase.

Through State Health Department, in U. S. Public Health Service Regional Office:

A Drop in the Bucket - How one community put its program into effect. Shows procedure and public acceptance. 15 min. Color. 16mm sound.

RECORDS

The $100,000,000 Toothache - 33 1/3 rpm, 25 min. - documentary Available for public meetings. Also on broadcast quality tapes, through the Committee to Protect Our Children's Teeth, Inc.
FLUORIDATION: THE BATTLE OF HASTINGS*

By DEREK TAYLOR, Medical Officer of Health, Palmerston North, New Zealand.

HASTINGS (population approximately 21,000) was introduced to fluoridation in March, 1951, when the Hawke's Bay Branch of the New Zealand Dental Association approached the Borough Council. The Hastings Borough Council supported by their colleagues at Havelock North (population approximately 1,800) in turn approached the Minister of Health and the Health Department with enthusiasm. They established their case that Hastings, with Napier (population approximately 25,000) as a control town, would be ideal for a survey and the Government agreed to finance a pilot scheme for New Zealand. One survey only was decided upon, partly to establish that the excellent results obtained overseas could be repeated under New Zealand conditions, but also to gain experience with fluoridation equipment which would be useful to other communities at a later date. This decision has proved a wise one and much valuable experience has been gained. It was not fully realised at this stage that invaluable experience would also be gained in the tactics used by opponents of fluoridation.

The press at this time was wholeheartedly in support of the idea and favourably headlined such words as "Experiment", "Guinea Pig", and "Doctored Water". (These words were to reappear in print later with quite a different emphasis).

The scheme also received favourable Dominion-wide publicity and several other towns approached the Health Department seeking advice on fluoridation but for the reasons given above agreed to wait until more experience had been gained in Hastings.

In due course it was announced that the equipment had arrived.

and a few months later fluoridation began, still without opposition.

In November, 1953, after the plant had been in operation about eight months, opposition began. Several letters to the paper complained of dry mouths "traced to the water supply" and one writer hinted darkly at "worse to come". Day by day the letters of protest in the press continued and multiplied until at least a column was the routine. It became impossible to ignore them and although it was felt that the average citizen was not at all disturbed by the situation a letter in reply was made by the Medical Officer of Health who also arranged for a series of articles, by recognised health authorities, outlining the safety and advantages of fluoridation. Occasional letters supporting fluoridation and the council's attitude towards it also appeared from other sources. The early letters of protest were mostly signed by a *nom de plume* but those signed personally usually revealed the writer as a well-known crusader of public causes whose signature had frequently appeared below letters to the editor in the past. These earlier letters were unco-ordinated individual efforts ranging from a continuation of the dry mouth and taste theme to an occasional claim that nephritis, heart trouble, fibrositis, insomnia, cancer, etc., could result. Several writers objected on principle to being experimented on and several having admitted in their opening sentence that they were not qualified to discuss the subject proceeded to write some hundreds of words giving their opinion. Over the early weeks there also appeared the religious theme "water should be pure and free from adulteration as God made it" and the diet-crank theme "It is rubbish to say it may be beneficial . . . The water has nothing to do with dental troubles which are mainly due to inferior bread . . ." The Medical Officer of Health was upbraided for not concentrating on more orthodox aspects of public health but in general the letters were remarkable more for their number and the range of objections raised than for their quality as propaganda material. There was a ring of sincerity about them and one felt that with continued education on the subject the objections would die down and that some new crusade would be found for the diehards. There was in fact a lull over the Christmas period such as has occurred on battlefields in the past, but by January, 1954, protests were pouring in to the paper, the Borough Council and the Health Department.

There had been a local body election in October, 1953, which resulted in a change of Mayor in Hastings and the election of five new councillors who had not had to give any serious consideration to
fluoridation until then. Not unnaturally members began to question the advisability of the scheme and in January the Medical Officer of Health was invited to address the Council in Committee. From a statement made to the press afterwards it was clear that they stood firmly behind the previous council’s decision. One or two councillors questioned whether it should be compulsory as was inevitable with fluoridation of the town supply and this doubt apparently multiplied over the succeeding weeks as when put to the vote at the council meeting in February it was decided by only five votes to four that fluoridation should continue. (The one absentee had been a consistent supporter of fluoridation.)

By the end of February the objectors were organised and there were rumours of the formation of an Anti-Fluoridation Society. This eventuated following a public meeting on March 2, attended by little over 100 people. A committee of eight was elected with the object of “educating the public to the dangers attending artificial fluoridation of public water supplies and to take steps to terminate the experiment being conducted by the Hastings Borough Council”.

From then onwards the letters to the paper and the anti-fluoridation advertisements and slogans which began to appear showed signs of co-ordination.

Many “authorities” were quoted and it soon became obvious the society had ready access to anti-fluoridation literature originating in the U.S.A. It was later discovered that much of this came from an organisation called “The N.Z. Voters Policy Association”. Little is known about this association, whose only address is a post office box in Auckland and whose honorary secretary, E.C. Browne, signed his correspondence with a typewriter. Mr. Browne has since been identified but the aims and objects of his association remain obscure.

This imported propaganda was fed steadily into the newspaper and it concentrated on putting fear into the public mind, e.g., “Fluorine like insidious deadly Carbon Monoxide is tasteless, odourless and colourless. When you discover it has affected you it may be too late”, “Stop putting this poison in our drinking water”, “Wholesale medication of the people is an infringement of human rights”, “Fluoride is a poison that accumulates in the body and for which there is no known antidote”, “Promotes cancer and deafness”, “Apparent bad effect on school children’s ability to memorise”.

The following advertisement appeared on March 13, “New
York, Los Angeles, Chicago, St. Louis, Seattle and Cincinatti have recently refused to fluoridate their water. Detroit has dropped fluoridation because it is unhealthy and deadly dangerous.” This led the writer to write to the health authorities in these cities thus augmenting a correspondence with supporters of fluoridation in the U.S.A. which eventually proved invaluable in routing the Anti-Fluoridation Society. The replies from the seven cities mentioned above showed that Detroit had not rejected fluoridation and that in only two of the others had it been rejected and this in spite of urgent recommendations in its favour by the health authorities in the face of opposition similar to that being experienced at Hastings.

This advertisement typifies the unreliability of the propaganda that had to be contested. It consisted of bald statements against fluoridation made by “authorities” whose names in print looked most convincing. It took time to check their credentials with the U.S.A. health authorities and by the time one was discredited several more had been put forward.

The volume of newspaper and other correspondence was such that the writer and his head office in Wellington felt unable to cope adequately at a range of over 100 miles with a situation that was being organised by people both willing and able to devote a considerable amount of time to this single objective. It was clearly necessary to have sympathisers on the spot who were known and respected and could gauge local feeling and deal with situations immediately they arose. The obvious source of such support was the local branch of the Dental or Medical Association which had both published articles in the press supporting fluoridation and whose members were supporting fluoridation whenever the opportunity arose. However, before these bodies had been approached officially an inquiry came from the Hastings Junior Chamber of Commerce. All men under forty and with children of an age who could benefit from fluoridation, they had decided to investigate the situation and support the scheme if convinced of its value. The writer was invited to address them on the subject and this was later altered to a debate against the Anti-Fluoridation Society. The opposition speaker was a married woman from Napier (the control town) who had no special qualifications and who spoke along the lines that we would be better employed avoiding fluoridation and concentrating on eating a correct diet. Practically no reference was made to the dreadful consequences of fluoridation that had been claimed by the “Antis” in their press publicity and
letters either by the speaker or the two supporters who accompanied her. The audience could hardly have overlooked the conspicuous absence of a Hastings speaker from the ranks of those who had been so energetic in print and who could have taken this opportunity to attempt to discredit personally a project and a person whom they had not hesitated to criticise in no uncertain terms in writing. The Chamber of Commerce voted unanimously in favour of fluoridation and almost immediately a Jaycee Fluoridation Education Committee was formed.

The local newspaper had over recent weeks gone to some pains to publish both sides of the story and although always prepared to publish material supplied in support of fluoridation it also published with equal impartiality the statements and claims made by the "Antis". The editor had already insisted on all correspondence being signed and less than a month after the Jaycees entered the field he declared that no further letters on fluoridation would be received for publication. From May 8, 1954, therefore, with the exception of a few factual articles obligingly published to refute earlier misleading statements that had appeared in the correspondence columns, all propaganda had to be paid for.

The Jaycees raised funds and announced their intention to "by every means at their disposal combat false, misleading and sometimes scaremongering publicity disseminated by opponents of fluoridation". They proceeded to publish advertisements that systematically discredited the claims made by the "Antis" over the past months. Much of their material came from supporters of fluoridation in the U.S.A. whose prepared replies to objectors there had arrived in response to our requests.

In addition, a fabricated correspondence direct with Anti-Fluoridation circles in the U.S.A. resulted in a flow of their literature which enabled us to anticipate the attack here and have the answers ready. The Department of Health began a series of advertisements in support of fluoridation in the press and the Dental Association provided speakers to groups who wanted the situation explained to them. A rebroadcast was arranged from the local radio station of a talk on "Care of the Teeth and Fluoridation" given by Dr. Basil Bibby who was visiting his home country from the Eastman Dental Dispensary (U.S.A.) and who had been a member of the important Ad Hoc Committee on Fluoridation of Water Supplies which had reported favourably to the National Research Council in 1951.

In the meantime the Anti-Fluoridation Society had not been idle.
Soon after its formation a "Petition of Protest" to be presented to the Borough Council was organised and further scaremongering advertisements appeared in the press encouraging the public to sign the petition. To combat this the Jaycees conducted a quick Gallup poll and published their findings. Of 206 persons interviewed 149 supported fluoridation, 47 opposed it, and 10 remained neutral. They advised that many persons had announced they were losing their original fears and that 10 of the people interviewed who had signed the Anti-Fluoridation Petition had declared that they now wished to withdraw their names. One admitted he had signed "as a joke". This Gallup poll did much to undermine the success of the petition, particularly as most of the reasons given for objecting could be discredited by the public from their own experience—"It has an odour", "It killed my poppy plant", "It causes dry mouth", "My washing-up water won't lather", "It stains my tea cups".

The Jaycees played their trump card on May 18 when in conjunction with the Dental Association they arranged for Dr. F. A. Arnold (U.S.A.) and Dr. G. F. Parfitt (England) to give a public address on fluoridation. These two acknowledged authorities were by good fortune in New Zealand to attend a World Health Seminar, and their address was probably the turning point in the campaign. They were the answer to the criticism that none of the supporters of fluoridation in New Zealand had had personal experience of the subject. (Dr. Arnold has been associated with the Grand Rapids survey since it started and Dr. Parfitt has had many years of research on fluoridation in England and the U.S.A.) Their masterly handling of questions and their obvious conviction and sincerity was stimulating and of equal importance was a gathering held after the address at which Borough Councillors were able to seek information from Drs. Arnold and Parfitt and settle any lingering doubts they might have. The doctors' addresses were, of course, fully reported in the press.

The petition presented by the Anti-Fluoridation Society some ten days later was received somewhat coldly by the Council owing to the informality of its compilation and presentation. It was, however, "received". A cursory scrutiny by the Town Clerk revealed that many of its 4,700 "signatures" were invalid. Some were of persons resident outside the area concerned, others had signed twice or for several people and others were under age. In yet other instances the "signatures" appeared to have been written by the canvassers. The clerk was instructed to investigate the
position and at the Council meeting on June 27, he reported that the document was not a petition on several grounds, two important ones being that it contained only half the required number of signatures and none of these were verified by declaration. Consequently at this meeting in June the Council once again voted that the fluoridation scheme should continue and this time only two dissenting voters were recorded. Both these councillors objected principally to compulsion and considered that right of choice is desirable.

On June 26, a statement of over 3,000 words prepared by the mayors of Hastings and Havelock North was released to the press. It gave a clear account of events that had led up to the adoption and retention of fluoridation, stressed that local authorities must accept the advice of their medical advisers and pointed out, by giving a number of examples, that New Zealand's record in the Public Health field proves that "our advisers know their business". The statement summarised well the salient points in support of fluoridation and has been acclaimed by a number of overseas Public Health Authorities to whom it was sent. It concluded with these words:

"Every consideration has been given to the objectors' views and now that a decision has been made, if any of them still disagree we earnestly trust that they will accept what has been done with goodwill and co-operate in what we are assured is an important forward move in preventive medicine."

Little more was heard of the Anti-Fluoridation Society locally from then on and their efforts were concentrated on letters to newspapers outside Hastings and an abortive effort to petition Parliament to amend the law to prevent a local authority putting into the water supply sodium fluoride "or any other medicine to treat a specific disease". The petition was considered by a Public Petitions Committee who had no recommendation to make to the House of Representatives where the subject was discussed for about three hours. It received a considerable amount of support and a certain amount of criticism, particularly on the compulsion issue. In this regard the Hon. Minister of Health stated that a referendum is not the wisest for the community to decide. Properly the decision was one for the elected representatives controlling the water supply.

And there except for occasional letters in various newspapers the matter rests, but these occasional letters have appeared sufficiently often to suggest the necessity for communities to be
prepared to fight for this benefit for their children when the time comes. The major battle has been fought at Hastings but minor skirmishes can be expected in any community where fluoridation is contemplated. A heartening decision was recently made by the N.Z. Junior Chamber of Commerce at its Convention in October, 1954, to the effect that where a fluoridation scheme is being considered for a town's water supply "Jaycees" should ensure that all the facts are put before the people of the town. This may well be the answer to the problem.

Conclusions

The basic error made in many towns in the U.S.A. and repeated in Hastings was the failure to appreciate the necessity for an intensive and prolonged campaign to educate the public in this highly technical procedure which lends itself admirably to the type of opposition adopted by its opponents. It is equally important to educate and so gain the goodwill and understanding of the local press. This is a mistake that must not be repeated and any community undertaking this measure in the future would be well advised to remember the motto well known in this country "Hurry Slowly". On the relatively few occasions in the U.S.A. where fluoridation suffered a setback it was almost certainly due to insufficient health education on the subject, often occasioned by a premature referendum over which the health authorities had no control.

The ground must be prepared thoroughly and the local Junior Chamber of Commerce is the most likely organisation to do this. They will receive support from the Medical Officer of Health for the district, the branches of the Dental Association and Medical Association for the district and the Fluoridation Committee at the Head Office of the Department of Health is available for advice and guidance. Only by such a concentrated and prolonged effort can the Borough or City Council be guaranteed the support they deserve and will almost certainly need in deciding to adopt fluoridation. The position will of course become easier as fluoridation becomes better understood and we may soon reach the stage already being experienced in part of the U.S.A. where control towns will be difficult to find. Provided of course that New Zealand experiences the same reduced caries incidence as has been found overseas.

THE INTRODUCTION OF FLUORIDATION IN ANGLESEY

By G. WYNNE GRIFFITH, M.D., D.P.H.,
County Medical Officer of Health, Anglesey.

The story of fluoridation in Anglesey might be said to start in January 1951, when a memorandum on the subject was prepared for the Health Committee of the County Council. At that time preliminary reports were just appearing from the first American projects, though little had been heard of the subject in this country. Between February and May 1951, the views of the Education Committee and of the Water Committee of the Council were obtained, and here it should be explained that the Anglesey County Council, by virtue of a private Act of Parliament, is the water authority for the county. Having received favourable reports from these committees the Council adopted a resolution in June to apply to the Government for a grant towards the cost of introducing fluoridation. The Council had been particularly impressed with the results of an ad hoc survey conducted by one of the dental officers into the state of children’s teeth. This had shown that the number of D.M.F. teeth* was 4.7 at the age of 5—6, and 5.5 at the age of 15—16 years. Only 7.5 per cent. of school leavers had no D.M.F. teeth. All the major sources of water in the county had been analysed for fluoride content. With the exception of one area which had 0.2 p.p.m. there was no appreciable fluoride in any of the supplies.

The first mention to appear in the press was a small news paragraph in The Times of June 14th 1951, announcing the Council’s intention. The attitude of the Ministry at that time was not encouraging, and in September 1951 the Council expressed the

* D.M.F. means decayed, missing and filled. This is an index commonly employed to indicate the extent of dental caries.
hope "that consent to the application of the process in Anglesey would be forthcoming without delay". In February 1952 a Mission from the United Kingdom visited North America to study fluoridation projects in Canada and the United States. The Mission, in its report published in July 1953, recommended that fluoridation should be given a trial in certain selected areas, and the Minister of Health announced in Parliament that the Government had accepted this recommendation. In September 1953, on consideration of the Mission’s report, the County Council instructed its officers "to press for the inclusion of Anglesey as one of the selected communities referred to in the report of the Mission", and in the following June an invitation from the Ministry of Health to participate in a fluoridation project was formally accepted, on the recommendation of the Health and Water Committees of the Council.

Meanwhile, the County Medical Officer of Health had raised the matter at the Local Medical Committee, and that committee, representing all the general practitioners in the county, unanimously approved the proposal. A similar resolution of support was passed by the Local Dental Committee, representing the dental practitioners. Local industrial concerns had been consulted to ensure that fluoridation would have no adverse effect on their processes. Discussions with Officers of the Ministry of Health, the Welsh Board of Health and the Ministry of Housing and Local Government relating to the technical engineering aspects and the necessary dental surveys followed, and were reported to a special meeting of the Health Committee in September 1954, when the detailed scheme was approved.

Planning

The project was planned to be from the outset a controlled investigation, so that any difference in caries incidence between children receiving the fluoridated water and children not receiving it could be ascertained as precisely as possible. If the two groups of children could be in the one county there would be obvious advantages, not only in the administration of the dental surveys, but also because the groups would be likely to be more homogeneous than would be the case if another area were to provide the control group. The dental surveys were planned to include only children that satisfied two criteria; the child had to be continuously resident in the area, and the fluoride status of the water supply at the child’s home and at the school he attended had to be the same.
The intention was to repeat the surveys annually probably for seven years and as the county water scheme was likely to continue to develop in certain areas the second criterion would need to be checked constantly, particularly in the rural areas, as new mains extensions and connections were being made.

The techniques to be employed in the survey and in recording the results differed somewhat from those used in routine dental inspections. A dental officer and a dental attendant had, therefore, to be specially trained for the work. It was estimated that some 75 per cent. of the school population would need to be included in the surveys in order to give enough data to satisfy the statisticians. It was therefore arranged to conduct the surveys in such a way that they would not only supply data appropriate to the fluoridation project but would also serve as an annual routine dental inspection. The surveys were to embrace children from 3 to 15 years and special efforts by health visitors were to be made to bring pre-school children to see the dental officer when a neighbouring school was being visited. For budgetary purposes it was estimated that the surveys would occupy one third of one dental officer’s time.

To supplement the dental staff of the Council a dental officer from the Ministry’s staff was to visit the county for 4—5 weeks annually, and to avoid any possible ambiguity the Education Committee resolved to “engage” this officer for the purposes of medical inspection as defined in the Education Act, 1944.

In the course of the base-line dental survey several children were found who showed “mottling” of the teeth not dissimilar to that ascribed to excess of fluorides in the water supply. Colour photographs were taken of many of these children for the purposes of record. (It is not inconceivable, of course, that these photographs might have to serve some other purpose in the future).

The size of the supply to be treated was such that a solid feed of sodium fluo-silicate could not be used. A solution feed using saturated sodium fluoride in softened water was necessary. The engineering problems encountered arose largely out of the need to use a powdered form of sodium fluoride instead of the granular form in use in U.S.A. and elsewhere. A special saturator had to be built and various modifications in design were to prove necessary. In practice, the danger from dust in the operation of the plant is negligible, nevertheless the operatives were trained to minimise the hazard by the use of rubber gloves and a face mask. The control of the level of fluoride was subject to several independent checks. The volume of saturated solution pumped into supply
would be registered; the amount of solid fluoride added to the saturator would be weighed; the fluoride content of the main water would be checked several times a day by a colorimetric method and spot samples would be taken at intervals for analysis by the Government Chemist.

Such was the detailed plan approved by the Health Committee in September 1954, and in the event it has been followed without variation in any essential.

**Action and Re-action**

The Council's decision of June 1954, was widely reported in the local press and a deal of controversy ensued. It is clear from the correspondence columns that the people of Anglesey themselves were keeping silent and this has remained the case all along. With the exception of one or two individuals, all the letters against fluoridation were written by people residing outside the county, the most industrious correspondents being members of the British Housewives' League, the Scottish Housewives' Association and a senior lecturer in forest botany at the University College of North Wales, Bangor. The Anti-Vaccination League put in a solitary appearance.

This controversy was not without effect. The reactions of the local authorities in the county varied. Two parish councils passed resolutions of protest, but in one case this was done apparently under the misapprehension that a certain village, and that village alone, was to receive the fluoridated water. Another parish council expressed itself in favour. One urban and one rural district council passed resolutions of protest. The council of a borough asked the County Medical Officer of Health to address them and then decided not to make a protest. Another district council passed a resolution in favour at one meeting and a resolution of protest at the next. One local council was asked to protest but decided not to do so, and yet another responded by asking that more information on the subject be given to the public by the County Council.

Even before this request was received, the County Medical Officer of Health, on the instructions of the Chairman of his committee, had prepared material for publication in the local press. This took the form of a series of questions and answers and ran for five weeks in all the local newspapers in both Welsh and English. It is an interesting side-light that although the public were invited to submit questions for inclusion in the series very few people
did so. Other means of informing the public were also adopted. In an agricultural area, it was necessary to guard against the danger of confusion arising between fluorosis in cattle due to the industrial contamination of pastures and the fluoridation of water supplies. An authoritative opinion was obtained from the Animal Health Division of the Ministry of Agriculture, and the help of the county branch of the N.F.U. was enlisted to give this categorical reassurance wide publicity among the farming community. A symposium was held under the auspices of the local Medical Society to which all doctors, dentists, and others interested were invited and this was addressed by members of the United Kingdom Mission. A dental officer of the Ministry of Health addressed the Health Committee as well as a meeting of doctors, dentists, health visitors, and members of District Councils. The County Medical Officer of Health addressed numerous meetings, large or small, including, for example, Women's Institutes, National Union of Teachers, technical societies, Church and Chapel literary societies, Rotary Clubs, and even Old People's Clubs. Audiences varied from a dozen to a couple of hundred, but there was usually a lively session of questions to follow. If these audiences could be taken as representative, there was no general apathy; on the contrary, considerable interest was being shown by the general public.

At the same time it must be recorded that fluoridation was never made an issue at the local elections in April 1955. It has been claimed that one county councillor was unseated because he would not give an undertaking to oppose fluoridation, but this is not so. He was the only member of the Health Committee to lose his seat and no members of the Water Committee failed to be returned. The American film *A drop in the bucket* was shown on two occasions.

Meanwhile, the press controversy was being fostered by the opponents of fluoridation and barely a week went by without letters appearing from the sources mentioned. The press campaign was enlivened by a few satirical (and pseudonymic) articles and the odd cartoon. The opposition in the correspondence columns was frequently expressed with considerable violence of language. The council ("fluoridating cranks") was accused of "behaving like the Hitler Regime" and of introducing "the very shadow of the Totalitarian State". Comparisons with concentration camps and references to the Nuremberg Trials were commonplace. The County Medical Officer of Health, it was implied, was lacking in "medical knowledge, democratic conviction and even common charity and consideration for his fellowmen". It is again
emphasised that, with one or two exceptions, these letters all came from outside the county.

Various other means were tried by the opponents to get the council to reverse its decision. As far back as 1951, anti-fluoridation literature was being posted, usually in plain envelopes, to all members of the council and this has continued at intervals to date. The Clerk of the Council was asked to bring anti-fluoridation literature to the attention of the Council. Appeals for the Council to reverse its decision, all emanating, with one exception, from outside the county, were presented from time to time. A call, again from outside the county, to establish an anti-fluoridation committee, met with no response, however. People were urged to write to the Member of Parliament, but in fact very few indeed took the trouble to do so. The County Medical Officer of Health was subjected to abusive letters both from this country and from America, and, he was advised, some of the references to himself appearing in the local press were actionable. When it was understood that all branches of the County Library had had copies of the Report of the United Kingdom Mission, the Library Committee received a request from a prominent anti-fluoridationist to put copies of anti-fluoridation literature in all branches of the library. Anti-fluoridation literature was being sent to all members of the medical and dental professions in the county.

Meanwhile, this local activity was being reinforced by certain matter in the national press. A national daily, with one of the largest of circulations, in January 1955, for example, came out with “This water may poison millions” in bold, black headlines. In March 1955 a popular weekly illustrated paper carried a story “Hands off our drinking water” and in order to make sure that the residents of Anglesey did not miss the issue the journal put large advertisements in all the local papers and placarded the county with “You have been warned” posters. The decision of Norwich City Council not to accept the Ministry’s invitation to institute a fluoridation project was brought forcibly to the notice of the Anglesey public, and much play was made, too, of the alleged refusal of Liverpool to proceed with fluoridation. In fact there was never at any time a proposal before the Liverpool City Council to fluoridate their water supply. On the contrary, the Medical Officer of Health and the City Water Engineer had recommended that no action be taken pending the results of the trials arranged by the Ministry—a very understandable decision when it is remembered that the corporation sell water to a large number of
other autonomous authorities any one of which could have blocked
the scheme. It was perhaps too much to expect that the opponents
would explain such niceties—for them the whole matter was
simplified into the statement that Liverpool "had turned it down".

The problem of dealing with this type of misrepresentation by
over-simplification was a very real one, particularly as there was
sometimes considerable and inevitable delay in finding out the
full facts, by which time, of course, new hares would have been
raised. Typical of this type of case would be the statement that
the "Government of Ruritania (say) has vetoed fluoridation in
its area". On enquiry, it is found, in due course, that the
Government of Ruritania has permitted a limited number of
schemes but is prohibiting indiscriminate resort to fluoridation until
sufficient experience of the procedure has been obtained in these
initial schemes. Many similar examples could be quoted.

A "show-down"

When, therefore, the County Council in May 1955 held a special
meeting to discuss fluoridation (nothing else was on the agenda),
they did so against this background. The motion before the
council was a resolution instructing its officers to proceed with
implementing the council's policy as soon as the necessary
equipment had been installed. The debate reached a memorably
high standard and an amendment to postpone fluoridation was
defeated by 25 votes to 7. The motion was then carried with only
one contrary vote. This debate was reported at length in the
local press and undoubtedly created an important impression.
Suddenly the controversy died down, and apart from an occasional
letter in which "foreign" correspondents are at pains to keep our
people up to date with developments, real and imaginary, in this
field, there have been no more accusations of "poisoning",
"subjecting the people to veterinary treatment", and so on.

For technical reasons there was some considerable delay in
installing the necessary plant, but some members of the public
obviously thought that the council's decision of May 1955, meant
that fluorides were being put into the water supply the very next day.
At all events, a few complaints started to arrive. A bout of
diarrhoea, a sudden pain in the back, the corrosion of sanitary
fittings, the wilting of an aspidistra and other mishaps, were all
attributed—prematurely—to fluoridation.

It was not until 17th November 1955 that the plant was switched
on for the first time. It had been decided that there would be
no special announcement but that the matter should be reported in the ordinary way to the next meeting of the Health Committee. No secret, however, was made of the fact, and anyone who troubled to enquire was told that fluoridation had started. General practitioners were told of the start of fluoridation in advance of the public announcement and were asked to note any complaints made to them. The County Medical Officer of Health offered to consult with them over any illnesses which might be thought, however remotely, to be due to fluoridation. To date there have been no such illnesses reported.

The minutes of the Health Committee announcing the commencement of fluoridation were adopted without comment at the following meeting of the County Council. This, it so happened, was the annual budget meeting, and the local press gave a full account of the debate on finance, but no mention was made of fluoridation. The first press announcement did not appear until April, after a local newspaper man had enquired about the position and was, of course, given the information.

Only two complaints have come to the Health Department since fluoridation started. The first was from a man who complained that his razor blades were being blunted as the result of the fluoride in the water supply. He lived outside the fluoridation area so the complaint was baseless. The second was from a professional man who attributed an unpleasant mouldy taste on the potatoes grown in his garden to the fact that earlier in the summer the patch had been watered with fluoridated water. This interesting point is still under investigation.

Fluoridation has been operating satisfactorily now for ten months. The first "teething troubles" with the plant have been overcome, and a constant level of fluoride is being maintained in the water supply. In Anglesey the controversy has largely died down. It is now possible to get on with the long-term task of assessing how much dental benefit the procedure is capable of conferring at the present day under the conditions obtaining in a rural community.

Many individuals have had a part to play in the introduction of this, the first fluoridation project in Britain, but their efforts would have come to naught but for the solid good sense of the ordinary people, who refused to be panicked, and who had a council to represent them prepared to stand fast in the face of considerable pressure.

Printed in Great Britain by Jordison & Co. Ltd., London & Middlesbrough.
The Issue of Fluoridation and the Public Health - by Duncan W. Clark, reprinted from January, 1957
Midnight November 15, 1955, told the story for Orlando. The Fluoridation Referendum had been won! Those of you that have actually worked in a community while the 'battle rages' know what the feeling is to hear the final decisive news. There is a florious flare in your spirits, and realization of accomplishment, such as almost no other activity in dental public health work can bring. When you have helped a community to help itself to secure fluoridation, 'the greatest good for the largest number of people' has been accomplished.

The health educator of the Bureau of Dental Health at the request of the county health officer and the local dental society worked for a period of three weeks in Orlando prior to the referendum. During this campaign certain personal observations, impressions, and experiences were gained. In retrospect all these were valuable. Her personal convictions are that fluoridation referendums can be won with sufficient preplanning and community cooperation of the type herein explained.

In the educational campaign work was done with the basic belief in mind that the more groups that can be actively involved in the planning and conducting of an educational campaign, the better the understanding of fluoridation and its benefits, and the more certain you can be that the community can secure fluoridation through a referendum.

The Orlando Junior Chamber of Commerce sponsored the fluoridation project. The members believed that fluoridation was a preventive health measure vitally needed, and worthy of their wholehearted support. They contributed working time of their members, money for educational materials, and services of a full-time secretary for two weeks. Their own downtown office was set up as fluoridation headquarters.

The two daily local newspapers and the radio station strongly supported fluoridation. The one television station donated a fifteen-minute period to a pro-con discussion.

The intensive educational program was begun five weeks prior to the voting.

The county health department director was very interested in securing fluoridation. He was a capable physician, thoroughly schooled in the principles of public health education. He had harmonious working relations with the local dentists, physicians, and school personnel, as well as being known and respected by the average citizen. He encouraged his health department staff to know the answers on fluoridation questions and to do as much fluoridation education as they could work in during the course of their regular health department activities. He assigned a promising young health educator on his staff to full-time duty on fluoridation three weeks prior to the referendum. This health educator was a Jaycee himself, well known in the community, as were his parents. He had a good working relationship with the radio stations and civic groups and was able to inspire their interest in fluoridation. The health officer sent a letter to all registered voters explaining the benefits of fluoridation and asking them to vote "Yes" to the fluoridation question.
From dental examinations made in Orlando schools, the county dental health officer released a series of newspaper articles and made a number of talks. In all of these he gave concrete evidence of the great need for fluoridation. He worked tirelessly as a speaker before luncheon clubs, parent-teacher association and other civic groups.

The local medical and dental societies furnished money for materials and newspaper notices, and maintained an active speakers' bureau that never once failed to meet the many speaking dates for civic and social organizations arranged for by fluoridation workers.

The United States Public Health Service provided an experienced consultant for the dentists at their organizational meeting. Several fluoridation films, 16mm and 35mm, were loaned by the United States Public Health Service for community education.

The Bureau of Dental Health, Florida State Board of Health, provided the consultant services of the dental bureau director and the services of the dental health educator for three weeks in Orlando, as well as films, tape recording, radio scripts, flip charts, newspaper stories, form letters, and 2500 fluoridation pamphlets.

The Orlando Chamber of Commerce provided up-to-date lists of civic organizations and social clubs as well as a booklet listing all the industries and businesses in the community. These gave groups from which to solicit workers as well as placement centers for speakers and materials.

Practically every parent-teacher association group passed a resolution favoring fluoridation, as did thirty-three other organizations. Phoning committees were composed of PTA mothers who contacted other parents urging them to go and vote for fluoridation. The PTA also provided poll workers who distributed leaflets 300 feet from the polls on the day of the election.

In a fluoridation referendum, never feel a group is too small or insignificant to bother to reach, or that four means of educating the public will reach as many people as fourteen will reach. Never underestimate the ability and energy of your opposition despite their apparent unorganization and idiosyncrasies and sparcity of number. One extra vote on your side can win the referendum.

Some of the educational planning, techniques, and forms used in this referendum have been compiled in the hope that they may be helpful to those who may in the course of events be confronted with a fluoridation referendum.
REPORT OF THE ORLANDO COMMITTEE FOR FLUORIDATION

December 8, 1955

The Orlando Junior Chamber of Commerce, as a civic minded group of young men interested in the welfare of the community and the future health of its children, felt that fluoridation of Orlando's public water supply was a desirable health measure. In June of 1951 the Jaycees passed a resolution favoring such an action. Feelers were put out among various civic leaders and it was found that the city was not quite ready for such a measure at that time.

In April of 1955 the Jaycees, after studying available research on the subject, felt that fluoridation of Orlando's public water supply was STILL a desirable health measure of proven effectiveness and safety. Dental examinations made by the Orange County Health Department of elementary school children during the school year of 1954-55 had definitely indicated the need for fluoridation. Ninety-five per cent of the children examined were found to have dental decay.

IN VIEW OF THE ABOVE, WE FELT THAT THE TIME HAD ARRIVED TO ASK THAT ORLANDO ADD FLUORIDE TO ITS WATER SUPPLY.

Upon investigation it was found that many clubs, organizations and groups, both civic and social, had passed resolutions favoring fluoridation, but like the Jaycees they had taken no further steps to bring about its adoption.

In May 1955 the Jaycees went to the City Council and asked that they approve fluoridation of Orlando's public water supply. The matter was referred to the city attorney who advised that the Council had no authority in such matters and referred us to the Orlando Utilities Commission.

Several weeks later, along with the County Health Officer and representatives of the Dental and Medical Societies, we appeared before the Utilities Commission. They were receptive but would not give this group a positive answer. Because Orlando's water supply belongs to the people, the Commission wanted to be sure that this measure was one that the people wanted. It was decided that the question of Fluoridation would be put on the ballot November 15, 1955, as a STRAW VOTE to give the people an opportunity to express themselves on the subject. The commission made it clear that they would not be bound by the outcome of the election, but at the same time they expressed that they would certainly use it as a guide. WE FELT CONFIDENT THAT WITH A FAVORABLE VOTE ORLANDO'S WATER WOULD BE FLUORIDATED.

I would like to make it clear at this point that putting a health measure up to a vote of the people is not a recommended procedure. Defeat at the polls in a referendum cannot alter scientific fact, but it is a test of how well the public can be educated on a controversial subject in a short period of time.

We were aware of the past record of referendums on fluoridation. The outlook was poor unless something was done. We felt that the best approach would be to form an "Orlando Committee for Fluoridation," made up of those groups, clubs and organizations who had endorsed fluoridation and invite to the initial meeting all other groups whom we felt might be interested in working to bring about the fortifying of Orlando's water with fluoride.
The Jaycees Public Health Committee agreed to sponsor the Fluoridation Committee. Many planning sessions were held to map out exactly what line of action the Fluoridation Committee could take when it came into being. During this preliminary planning the local newspaper was contacted concerning publicity for our project. The Executive Editor and the editorial staff all agreed that there was need for Orlando's water to be fluoridated; also they were aware of all the propaganda that the opposition would use. After several visits the newspaper agreed to support Fluoridation and to help the Fluoridation Committee with the full resources of the paper.

Finally we were ready, and in early October letters and invitations were sent to more than eighty organizations and groups requesting that they send representatives to an organizational meeting of the "Orlando Committee for Fluoridation." In this letter we explained that these representatives were to act as liaison for the committee to their own organizations. The Fluoridation Committee's job was to act as a clearing house and overall planning group in order that each club would know what the others were doing in the cause and there would be no duplication.

The initial meeting was held at the Chamber of Commerce building and a chairman was elected. At this meeting it was agreed that all publicity and business matters would be handled from the Jaycee office. A budget was made and several of the groups agreed to contribute money, supplies, or to underwrite some specific expense. At this meeting an overall chairman was appointed and workers were asked for. Committees were appointed to handle publicity, telephone, displays, speakers, transportation, poll work, and section work.

The first project undertaken was to ascertain how many of the groups represented on the Fluoridation Committee had heard speakers on fluoridation, and how many of these same groups had endorsed this measure. Arrangements were made for speakers to attend the meetings of these organizations and give short talks and at the same time ask that they endorse or approve this health measure.

During the next several weeks, bumper strips urging fluoridation were distributed, posters were placed in offices and public buildings, displays were set up, film strips were run at all movies, articles and editorials appeared in the newspaper, spot announcements were broadcast, panels appeared on television, articles were placed in company or organizational papers, and literature was mailed to approximately 15,000 persons. During the last week of the campaign, the Parent-Teacher Association saw to it that the parents of every school child in the city were contacted. The private and parochial schools were handled by the Parent-Teacher Organization of the Lutheran Church.

At the end of the campaign we had some fifty groups supporting fluoridation of Orlando's water. We had had 480 mentions on the radio, two television programs, one front page cartoon, five editorials, 42 news articles in local papers, 27 letters to the editor, approximately 15,000 pieces of literature mailed, 33 endorsements from groups, and more than a hundred talks and speeches reaching 5,300 people.

On November 15 approximately 3,500 voters went to the polls, and in the final tabulation we were victorious by 157 votes. At the next meeting of the Utilities Commission after the election, the commissioners directed their consultants to bring
in a report in two weeks giving the cost, etc. of supplementing our water with fluoride. The report was favorable and the Utilities Commission voted unanimously to begin fluoridation of Orlando's water early in 1956.

Respectfully submitted,

John E. Stripling, Jr.
Health Field Worker

JES:mas

Approved:

Wade N. Stephens, M.D., M.P.H.
Orange County Health Officer
Atlantic City's Action

To the N. Y. Herald Tribune:
A protest letter written to you by Emily Mehr, president of Greater New York Committee Opposed to Fluoridation, on the decision of the Commission Government in Atlantic City to fluoridate its water supply is so replete with inaccuracies that a true statement of facts from Atlantic City is herein contained.

It is true, as stated by Miss Mehr, that in 1954 the Mayor stated that the City Commissioners would abide by the results of the ordered referendum. The resultant vote was 2 to 1 opposed to fluoridation. What made the commission change its mind on Dec. 7 when in first reading it voted to enact an ordinance for fluoridation?

The Mayor stated in the newspapers that the overwhelming scientific evidence presented by the medical and dental representatives of the community, the resolutions presented by every PTA in the city, the endorsement of the League of Women Voters, the Junior Chamber of Commerce, the American Legion, and many other groups demonstrated the true effectiveness of fluoridation.

A matter not mentioned was that the chief reason the referendum was lost by the proponents was that the night before the election 25,000 pamphlets were mailed to the voters of Atlantic City bearing a large skull and cross bones with the ominous caption: "Don't. Let Them Put Rat Poison in Your Water." This was followed by a list of the usual factless accusations with but one point in mind and that was to scare the daylights out of the voters. It succeeded. It was like shouting "Fire" in a crowded theater.

One has but to follow the referenda contests on fluoridation in various sections of the nation to observe that the opponents thrive on this sort of battle. It is so easy to frighten the masses of people who are unlearned in scientific matters.

On the day of the final hearing more than 200 persons jammed the commission chambers. The opposition came fully prepared with an "expert" from out of town and a large vocal following. The Mayor allowed each side thirty minutes for presentation of its case and five minutes for rebuttal. It could not have been more democratic. At the conclusion the commission voted unanimously to fluoridate Atlantic City's water.

HARRY SAUL, D. D. S.,
Atlantic County Fluoridation
Chairman for the New Jersey State Dental Society.

3-Year Fight Wins Water Fluoridation

OROVILLE, Calif.

A determined editor's sustained fight over a three-year period has won a California Public Utilities Commission order providing fluoridated water for his community.

Moreover, the battle was won through an unusual approach and by a means which may well pave the way for similar successes in other cities throughout the nation.

The continued efforts and the dramatic results are typical of Dan L. Beebe, editor and publisher of the Oroville Mercury for 30 years. He himself regards this as his "best achievement" in 47 years of newspapering.

Stands on Results

Aside from that admission, Mr. Beebe prefers to let the results stand in proof of the campaign's merit. The Mercury account of the victory is divided into the parts played by various individuals and groups.

Significance of the action comes from Dr. Lloyd F. Richards, chief of the division of dental health of the California State Department of Health, who pointed to the difficulties Mr. Beebe encountered and observed:

"I am thankful for the strength of Dan Beebe's convictions. This ruling helps not only California, but the entire country." Dr. Richards was a participant in the move for fluoridation; the Oroville water supply from its first rebuff. He was asked by Mr. Beebe if the utilities commission was not proper authority to order the action sought by the community.

1953 Beginnings

The issue, developed from a series of Mercury news stories in 1953 advocating the addition of fluoride to the water supply. The campaign lagged until the Oroville Business and Professional Women's Club adopted a resolution making fluoridation the club's project for the year.

The club's move gave the Mercury an anchor and its reports were stepped up until 25 clubs, school-parent organizations, lodges and labor unions endorsed the movement.

Under this added impetus, the move went before the city council and the Butte County board of supervisors. Then the private water company serving the area advised the council it "felt morally bound to require an election'' before proceeding with fluoride activities.

The rebuff sent the editor and publisher to San Francisco on a reporting trip. He visited PUC and State Health offices. He found a way, although Dr. Richards recalls that he was a bit reluctant to endorse Mr. Beebe's plan. He saw that a defeat could provide a disastrous setback for fluoridation.

Editorial Report

His reporting trip concluded, Mr. Beebe returned to Oroville and pounded out a February 19, 1954 editorial that called on the city to "carry the matter promptly to the one judicial body in California empowered to act."

In the editorial, Mr. Beebe said an election should not be necessary. Fluoridation is a technical matter, and should be referred to a judge rather than to a jury, he suggested.

"There is a court that can try this case and, if a conclusive showing is made, has the power to order the California Water Service Co. to fluoridate the water of Oroville.

"That court is the California Public Utilities Commission," the editorial explained. Meanwhile the city council voted 4 to 1 to ask the water company to fluoridate the water.

Survey Obtained

The community next obtained a State Health Department survey to determine the extent of tooth decay in local schools. The results of this were used in the presentation which won support from the county supervisors.

When the move went before the PULC, publicity was dropped on the theory the matter was then before a quasi-judicial body. Yet in the three years a partial clip book record was built up to 83 columns of stories, editorials and pictures concerning fluoridation.

Dan Beebe began his newspaper career with the Indianapolis (Ind.) News. He covered top Pacific Coast stories for United Press and rose to a UP bureau managership. He is a past president of the California Newspaper Publishers Association and a veteran fighter for improved editorial and advertising practices.

Reprinted from EDITOR & PUBLISHER for February 16, 1957
We in Peoria are quite happy and a little amazed at the results of the referendum held on November 6 of last year regarding this subject. Several years ago an effort was made to promote fluoridation of the public water supply. The City Council held a hearing or two on it at which rather vocal but not intensive opposition was made known. They tabled the proposition at that time. That effort was carried by a committee of the Peoria Dental Society. At that time, the local Medical Society and the Board of Public Health, as well as the Dental Society, approved of the fluoridation of our water supply.

The idea remained dormant for a considerable period of time, but many members of the Dental Society and we in the Public Health Department kept the spark of the idea alive. About a year ago, we approached some parent groups to find out about their interests. Some of the PTA groups and the Mothers Club groups decided to push the proposition and they sent a letter to the City Council requesting that fluorine be added to our public water supply. Those of us who had been working on it were not quite ready for this, but of course could not hold it back now. The Public Health committee of the Association of Commerce decided to assist in the promotion of this. Earlier, the City Council had approved of the fluoridation of the water supply but then decided to request a referendum on it, such a referendum being only an expression of feelings by the public and not at all binding. The committee formed by the Public Health committee of the Association of Commerce and by the Dental Society swung into action. A Speakers Bureau was set up and the whole idea of the fluoridation of the public water supply was pushed with a good deal of enthusiasm. There was no particularly special angle that was used. We got hold of a fairly large number of the pamphlets furnished by the American Dental Association to promote this subject. These were distributed at many meetings at which the members of the Speakers Bureau gave talks. Much to our amazement, no organized opposition developed. A few fadists and small radical groups voiced their opposition, but did not enter into widespread opposition to the referendum.

Among the problems that were encountered was the fact that the public water
supply here is privately owned. They had agreed to do as the public wanted at no increase in rate inasmuch as they had received a 40 percent increase in rates less than a year ago. This water company supplies water to another municipality adjacent to Peoria and to several precincts beyond the municipal limits. The water company had requested a majority vote in favor of the fluoridation of water from all these areas. The City of Peoria and the other incorporated village made official ballots for this; however, in the unorganized areas, they were not official ballots and had to be handed out by volunteer workers. They were collected by volunteers and counted by volunteers. We were much surprised to see the majority in every precinct an over-all two to one majority in favor of the proposition.

At the request of the City Council, the water company is proceeding with obtaining the necessary machinery and to install it at several locations as will be necessary because of the physical properties of the water system itself.

There has been no additional education promoted since the vote in November. It will still be several months before the fluorine is actually added to the water supply.

We will be happy to give any more details that might help another community to promote this health-giving procedure.

Very truly yours,

Fred Long, M. D.
Commissioner of Health
Benjamin Spock, M. D.
2040 Abington Road
Cleveland 6, Ohio

Dear Dr. Spock:

Early in our correspondence, I promised to let you know how the fluoridation question came out in the City of Green Bay. I have been remiss in my promise and I apologize for it.

The chronology of the problem is as follows:

(1) Early this year, several of us approached the League of Women Voters so that they could make a study of the Fluoridation issue. They were gracious enough to undertake such a study and accelerated it so that when Lake Michigan water would be in the Green Bay distribution system in mid-July or early August, the fluoridation issue would be settled.

(2) In early April, one of our councilmen offered a resolution that the City Council direct the Water Department to put fluorine in the Lake Michigan water. Immediately after, opposition started forming and was headed by our Mayor.

(3) The Board of Health of the City of Green Bay requested the council to approve fluoridated water.

(4) In June, the League of Women Voters, after a thorough study, approved fluoridation of Lake Michigan water—unanimously. The League then held a dinner meeting and invited all the interested parties, all the councilmen along with the Mayor, and the Board of Health, etc.
(5) On the 3rd of July, the Council voted 23-0 to fluoridate Green Bay water. One councilman walked from the councilroom to avoid putting himself on record. The one-sided decision came despite the Mayor's decision to veto the action anyway.

(6) The Mayor signed the City Council resolution to fluoridate Lake Michigan Water supply on the 5th of July realizing that his veto would have been overridden.

We feel that the matter is well in hand, but that we are not dropping our guard because a referendum can still be called for at any time.

Yours truly,

J. M. Rose
President

jmr/javf
## Status of Court Actions on Fluoridation

### Courts

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<tr>
<th>State</th>
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* Refused to Review
** Case Dismissed
FLUORIDATION
WHY ALL THE CONTROVERSY?

By WILLIAM ATTWOOD
LOOK STAFF WRITER

ASK AN AMERICAN at random to define "fluoridation." Chances are he will reply that "it has something to do with water." That's as much as most of us know about a process that has provoked more heated debate in the land than any health measure since vaccination. Towns and cities from coast to coast are confused, divided and swept by strife over a word that was not even part of our vocabulary a generation ago. And the debate shows no signs of slackening.

Fluoridation does have something to do with water. It means adding a fluorine compound to the water supply in order to reduce tooth decay, which affects 95 per cent of the population and costs the country well over $1.6 billion a year. Since most water naturally contains some fluorine compounds, the process usually involves increasing their proportion to about one part per million parts of water. More than 20 years of research have shown that a child drinking this kind of water from birth will have harder tooth enamel and about 60 per cent fewer cavities.

Artificial fluoridation was started in 1915 on an experimental basis. Since then, 1,644 American communities with a population of 33,416,779 have adopted water-fluoridation programs. If you add another 1,600 towns whose water naturally contains enough fluoride for dental-health protection, you have some 40,000,000 people from Washington, D.C., to San Francisco (including President Eisenhower) drinking this controversial water.

Today, the fluoridation process has been endorsed by the American Medical Association, the American Dental Association, the United States Public Health Service, the health departments of all 48 states and scores of lay and professional organizations. The overwhelming majority of doctors and dentists say there is no longer any serious medical question as to the safety and efficacy of fluoridation.

So why all the fuss? Don't people want better teeth and lower dental bills for their children? Obviously, they do. But many fear the effects of sodium fluoride (a poison in concentrated form) or oppose, on principle, what they regard as mass medication by the state. Moreover, since fluoridation only works on growing teeth, adults without young children often object to having their water treated for someone else's benefit.

The result has been the mushrooming of local and national committees opposed to fluoridation. Their membership includes, among others, many Christian Scientists, food faddists, organic gardeners, chiropractors and people who are chronically suspicious of authority or opposed to change. They have the support of the Daughters of the American Revolution and various self-styled patriotic organizations. Perhaps 3 per cent of the nation's doctors and dentists have also lent their names to the cause.

Their arguments run a shaky gamut. They say that sodium fluoride is a deadly poison (so is table salt taken in quantity); that fluoridation is unconstitutional (it has been upheld in the courts of all 14 states where it was legally challenged); that it is socialized medicine (though it is backed by the conservative A.M.A.); that it endangers the health of other people (although no life-insurance company considers fluoridation in issuing a policy); and that it is expensive (though total cost per consumer averages 10 cents a year).

Some ants even contradict each other. On the one hand, fluoridation is alleged to be part of a Communist plot to poison our water supply; on the other, the Aluminum Corporation of America is accused of foisting it on the country in order to sell sodium fluoride. Similarly, some opponents will recommend the use of fluoride tablets in place of treating the water, while others claim that even one part per million of the chemical will shorten your life.
Among uninformed people, the volume and stridency of these arguments often drown out the logic on the other side. By raising a din where fluoridation is under consideration, the antis manage to create the impression that "where there's smoke, there's fire." Thus, where referendums have been held, fluoridation has been rejected by 227 communities and approved by only 162. And of 49 other towns that have adopted fluoridation, anti committees succeeded in getting the decisions reversed by referendums in 35.

Some of the tactics of the opposition so enrage doctors, dentists and health officials that they frequently react ineptly. They will contend that voters are not competent to evaluate a technical question. Or they will merely rely on charts, graphs and professional dignity to refute the stories about Red plots, mottled teeth and rat poison.

However it is disputed, fluoridation arouses emotion wherever it is put to a vote. Such a town is New Canaan, Conn., where the issue came up this spring. The pictures on these pages show what happened when the profluoridationists realized they were involved in more of a political scrap than a medical debate.

The antis: "When in doubt, do without."
The pros: "Do you trust your doctor?"

New Canaan, Conn., a town of 12,000 on the fringe of New York's commuting area, has the growing pains of most suburban communities: schools, taxes, zoning. But until last winter, its problems did not include fluoridation. The issue arose when its privately owned water company announced that it would fluoridate town water this summer with the approval of the local health director, Dr. Charlotte Brown. Within weeks, a committee opposed to fluoridation was in action, buying newspaper space, mailing out literature and collecting hundreds of signatures. The strongly profluoridation New Canaan Advertiser was deluged with letters protesting the water company's "arbitrary decision" and citing arguments provided by antifluoridation groups across the nation.

Stunned by the reaction, the proponents first opposed a vote on the grounds that this was purely a health measure and that, in any case, the result would not be binding on the water company. But when the antis mustered enough signatures for a referendum, Dr. Brown and her supporters got ready for a showdown fight. A pro committee was set up to get people to vote: 32 of New Canaan's 34 doctors and dentists signed a statement endorsing fluoridation; handbills entitled "Do you trust your doctor?" were circulated by volunteers: local Democrats urged a "yes" vote (the Republicans, whose officers included members of the anti group, took no position); and the Advertiser provided editorial support.

On election eve, the antis called a public meeting featuring two outside medical lecturers. Bitterness welled over as town doctors challenged them from the floor. When the polls opened the next morning, New Canaan seemed evenly divided. People on both sides agreed that the outcome would be either a personal victory for Health Director Charlotte Brown—or a personal defeat. Fearing a vote of "no confidence," she had already written her letter of resignation.

"Let's vote on it."

For Dr. Charlotte Brown, election day culminated weeks of tension and exasperation. She didn't know whether the people of New Canaan would believe her and their own doctors—or the antifluoridation lecturers. At noon, local politicians told her the vote would be close: a rumor had started in one section of town that fluoridation would make you impotent. In the afternoon, between patients, she used two phones to stir up late voters. By 6 p.m., when the polls closed, she was at the town hall, her letter of resignation in her pocket. Friends tried to reassure her, and A. Leland Glidden, water-company president, said he favored installing fluoridation regardless of how the vote came out. (The antis promised court action if he did.) Her fears turned out to be groundless. When the results were announced—1,513 "yes" and 673 "no"—Charlotte Brown and her fellow doctors discovered that the people of New Canaan trusted them after all.
The real nature of the opposition

Why are people against fluoridation? Generally, because antifluoridation is a made-to-order cause for the millions of Americans who, for a variety of reasons, dislike change and always suspect the worst. Seldom has any cause rallied so many different kinds of supporters to its banner, ranging from some skeptical doctors and hard-boiled citizens who just don't want their water tampered with to a weird array of anti-Semites, charlatans, die-hard McCarthyites and flustered old ladies.

In between is the man in New Canaan who said of referendum, "I always vote no, and I'm usually right."

Studies in other communities have shown that antifluoridationists tend to be older and to have less education, lower income and fewer children than the proponents. Psychiatrists suggest that some antis are "fear-directed" people who need something like fluoridation to give substance to their inner anxieties.

So far, the opposition has no central organization, apart from active local groups like those in New York and Detroit, which furnish material and speakers to towns where the issue arises. It is a loose but dedicated coalition financed by individual contributions. But it has slowed the spread of fluoridation. Although more than half of the nation's cities of 500,000 or more population have adopted it, New York is still holding out. The fight promises to be long and bitter, for not only the emotions but the prestige of people on both sides of this issue are too involved for anyone to back down gracefully.

Yet it's a safe bet that fluoridation will become as widespread as chlorination is today. For the present controversy is beginning to generate some light as well as heat. And the opponents can be decisively beaten, as they were in New Canaan, when people like Dr. Brown start punching back. As Dr. Louis I. Dublin, a former vice-president of the Metropolitan Life Insurance Company, predicted last year, "This opposition will disappear like a bad dream, once citizens make it their business to learn the facts."

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Prove It!

ONE statement in the latest mailing of local anti-fluoridationists is relatively true. The Advertiser has refused to publish three letters opposing the proposed program here. It was no secret that this newspaper had adopted a policy against printing unsubstantiated "anti" allegations.

Among the authors of the three letters was a woman who discussed this policy at length and in person with the editor. She also brought to the office another letter written by a man who wanted to know if he could buy space in the People's Forum column or elsewhere in the newspaper for it.

The only basis upon which such material will be accepted editorially can be summed up in two words: Prove it! If evidence of any harm to health caused by fluoridation, attested by a court or other impartial agency, can be produced, then and only then, the Advertiser will print statements to this effect.

Since this policy was adopted, none of the opponents has submitted such proof. These people offer only the statements of the physicians and dentists who share their views. And they say there are 1,000 to 2,500 in this group out of 270,000 members of national medical, dental, and public health associations.

Of this better than 100-to-1 minority in the professions, none has presented proof in a court of law or elsewhere to prove the "anti" case. Some have tried to do so in court or before the national associations of which they are members, but have been unsuccessful in every instance.

While the opposition submits the opinion of this minority as "fact," its more rational members are not very proud of some of the company they're keeping. These people would like to soft peddle talk about the fluoridation program being a plot of the communists or the Aluminum Company of America.

Yet such leaders of the "anti" movement as Dr. Frederick B. Exner of Seattle, Wash., scheduled to visit New Canaan next week, harp upon the "plot" theme. And the latest ally in their cause, the Daughters of the American Revolution, lean on propaganda about the communist influence.

As the people of New Canaan approach a vote on the issue of fluoridation, let them examine the sources and the references quoted on each side. We have tried to help our readers in this examination. And it's a bit frightening to discover the number of people who dismiss the truth as "bias."

If it be bias to seek out and state the facts, if it be bias to accept the word of recognized authorities, if it be bias to insist upon proof of statements to the contrary—then we're biased. We'll continue in that stand until somebody accepts and meets our challenge: Prove it!

Since the local opposition has seen fit to present a ridiculous personal reference as to what water the editor of the Advertiser drinks, let's set the record straight. He has been and will be drinking more water from the New Canaan reservoir than many of those who are so active against adding fluoride to it.

Let it be remembered how many of the statements made by this group have no more valid foundation than this one. Remember, also, that our reply to it will not stop the use of this canard. Ask these people, as we have, to prove what they say and examine their arguments with an open mind.
"... and we take the position that it is un-American not to have a few cavities!"

Editor New Canaan Advertiser:

I have enclosed a drawing which I hope conveys some idea of how I feel about this issue.

There have always been those who violently resist that which in time has become a matter of accepted practice. I need not cite examples.

Should we listen to the objective voice of recognized medical authority, or the hysterical shoutings of people either uninformed or irresponsible?

When I have a toothache, I go to a dentist, not an orator.

Robert Bugg.
WE TRUSTED OUR DOCTORS

The fight for fluoridation in New Canaan, Connecticut

by W. Harry Siemon, D.D.S.

How it all started

The campaign for fluoridation of New Canaan's water supply actually had its start in February 1952. An official of the Connecticut State Dental Association spoke to the members of the Kiwanis Club during Children’s Dental Health Week and told them about fluoridation. The Club then decided to make fluoridation one of its projects.

Attitude of the water company

It was felt that a group of citizens should approach the privately owned New Canaan Water Company with the idea of the townspeople contributing funds to purchase the necessary equipment. The then president of the firm agreed to the plan. Joining the Kiwanis Club in a town-wide fund campaign were the Lions Club, Exchange Club, Chamber of Commerce, Parent-Teacher associations, and the local medical and dental societies. Favorable response was spotty and donations fell far short of the quota. With part of the money raised deposited in the bank, the plan received a further setback when the ownership of the water company changed hands.

Although there was no firm commitment from the new owner, a second drive to get the rest of the money was started in 1955. Special emphasis was given to the effort when the parents of a child killed by an automobile while riding a bicycle requested funds for fluoridation in lieu of flowers. Although the needed money was raised, it was evident that there was still an educational effort required before fluoridation became a reality.

By the time the American Medical Association reaffirmed its endorsement of fluoridation in December 1957, the new owner of the water company had been convinced of its worth. Talks with state and local health officials had been most helpful in convincing the water company. Its president also felt a high moral responsibility and as he stated, "It was just as bad not to do the right thing as to do something wrong." Once convinced of the merit of water fluoridation, the water company remained steadfast in its determination to proceed with the measure.

Facts and fiction

From the beginning the opposition was outspoken and vigorous. The anti letters to the newspaper came fast and furious. After the water company announced that it would install machinery to fluoridate the water, the anti group swung into action. They circulated a petition to force a town meeting and to make the issue a referendum to be decided by using voting machines. The selection of a voting date to coincide with a school holiday period indicates that the antis were hopeful that many parents of school age would be away.
Letters to the editor of the local newspaper took on a better balance when the health director and individual dentists and physicians, as well as townspeople, replied to the opposition charges. Anti literature began to appear in mailboxes and at meetings with the usual talk about poison, mottled teeth and sinister plots. Each charge was checked and answered. Top professional experts were quoted in news stories and in editorials. President Eisenhower's personal physician, Dr. Jonas Salk, Dr. Frederick McKay of Colorado Springs and the U.S. Public Health Service were quoted to show how data was being distorted and misinterpreted by the antis.

Finally the New Canaan Advertiser announced in an editorial entitled "Prove It!" that it would publish no letters containing such allegations unless the writers could produce documented proof of their statements. No valid proof was produced, but the opponents leveled attacks on the newspaper for "refusing to give both sides" in their direct mail attack.

By thoroughly investigating all the opposition claims and by showing their falsehoods, the proponents appealed to the basic rules of fair play and truth.

**Debates and forums**

At the town meeting on fluoridation a physician, a dentist and a municipal court judge spoke in favor of the measure. They were opposed by a salesman, a radio executive and a contractor. Several other professional persons spoke favorably from the floor.

At another meeting the antis were unable to find any local professional spokesmen so they invited long time opponents from New York, New Jersey and even as far away as Seattle, Washington to participate. The director of health sent letters to a good number of top professional experts asking them to join in the debate. Most of these people declined the invitation either because of a crowded schedule or on general principles. A number of those contacted stated that there was no point in trying to refute arguments founded upon a purely emotional appeal. When informed of this reaction, the antis decided to present only their point of view at the public meeting. However, several New Canaan physicians and dentists did attend the meeting and asked sharp and demanding questions. Often these anti "experts" became entrapped in their own logic. Faced with a quotation from his own writings, one of them denied he had ever said anything of the kind. It was a case of high frequency remarks with low fidelity.

It takes an informed and articulate group of persons to take part effectively in this kind of meeting and ask the kind of questions that are necessary to deflate the opposition statements. However, the effort is well worth it.
Role of local dentists and physicians

The doctors, aroused by attacks upon their integrity, campaigned openly and vigorously with their fellow citizens in the ranks of proponents. Of New Canaan's 34 dentists and physicians, 32 agreed to the use of their names on a poster supporting fluoridation headlined, "Do You Trust Your Doctor?" The two who didn't give permission refused for personal reasons other than scientific ones and did not publicly oppose. This theme proved most effective and the poster and flyers were circulated about town.

Before proceeding to work with the professional group it is necessary to acquaint them with the facts and the scientific material. Lawyers were sent material on legal aspects of the question. Once this is done, these groups can be your most effective weapon in winning the confidence of the public.

Newspaper support

The New Canaan Advertiser supported the proposal from the beginning in 1952 to the successful culmination in the spring of 1958 with the vigor and spirit of traditional crusading newspapermen. An editorial appeared in the paper on December 12, 1957 headlined "Isn't it Time?" The recent AMA action was cited and the question was raised as to when would New Canaan fluoridate its water supply. This editorial was the trigger for renewed activity. Shortly thereafter the director of health urged the adoption of the program. As indicated previously the editor set up a policy governing the material he would accept for publication and stuck to his guns. The paper printed the answers to the misleading allegations and editorially stood up to be counted among the staunch supporters of fluoridation.

Grass roots organization

A decided effort to educate the people of the community became apparent as a grass roots committee rallied around the health director and her husband, also a physician. The proponents sent out their own mailing pieces and concentrated on a telephone campaign as the time for a decision drew near. In the final hours before the vote, the group worked as if they were in a political campaign. Telephone calls were made to get out the vote. A careful approach was prepared to avoid arguments and to keep the calling rapid. Transportation was provided to those needing it. The director of health staked her job on the outcome of the vote. The water company stood firm in its determination to go ahead with fluoridation.

Victory

On May 3, 1958 the voters of New Canaan decided 1513 to 673 in favor of water fluoridation. The equipment was ordered, installed and in operation about a month later.

As the New Canaan newspaper said in an editorial after the referendum, the intelligence of the community was "Equal To Test."
In 1951 the City Council authorized the City Manager to introduce fluoride into the water supply. In 1952 Concord became the first city in New Hampshire to fluoridate its water supply. During the campaign to elect a mayor and Board of Aldermen to replace the city manager form of government, the issue of fluoridation was made part of the platform. Mayor Johnson pledged that if elected he would stop fluoridation. He was elected and the fight started.

The Mayor asked for immediate action to suspend fluoridation. A hearing was called for February 24. An Emergency Citizen's Committee To Save Fluoridation was formed. Mrs. Judith R. Kamin, Secretary of the ECCTSF, comments on the fight in Concord as related by the newspaper headlines produced here.

**CONCORD MONITOR** FEB 15, 1958

**Hundreds Sign Petitions For Continued Water Fluoridation**

Emergency Committee

Claims Response Is 'Overwhelming'

**MANCHESTER UNION LEADER** FEB 11, 1958

**Concord Calls Hearing On Use of Fluorine**

"Actually our fight was an easy one compared with some of the real struggles going on elsewhere against ignorance in this matter. After all, we already had fluoridation; all we had to do was repulse a threat. We learned that you've got to get out and work. There is no substitute for hard work. You have to organize your campaign, you have to ring doorbells."

**CONCORD MONITOR** FEB 18, 1958

**Save-Fluoridation Group Says Opponents Peddling Falsehoods**

Check on 'Authorities' Used by Opposition Shows Discrepancies

"An essential for victory is effective use of public communications media. You must pepper the newspapers, radio and television stations with daily doses of propaganda and you must answer each and every argument raised by your opponents quickly and honestly."

"It is suicidal to depend on the logic of your arguments in favor of fluoridation overcoming the distortion, passion and lies of a fanatical opposition which pretends to know only one thing--'It's rat poison, isn't it? You just cannot afford the luxury of saying 'Why, that's ridiculous. I'm not going to dignify it with an answer.'"
**No Referendum Likely If City Ends Fluoridation, Is Charge**

Mayor's Resolution Is 'Rigged' to Eliminate System Without Vote

"There must be very close liaison between the professional people—the experts in the field—and the lay people, citizens like myself who want to keep our children's teeth strong. These fights are very much like wars—there must be advance planning, careful preparation and skillful work."

**Fluoridation Views To Be Out Tonight**

City Auditorium Doors To Open at 6:30 For Hearing

Mayor Johnson Ill, May Not Attend

Medical, Dental Experts To Present Evidence For Continuance

**Overwhelming Backing For Fluoridation At Aldermanic Hearing; Auditorium Packed**

CONCORD HEARING VOTES 3-1 FOR FLUORIDATION

Mayor Johnson’s Plan To Halt Water Treatment Opposed 3-to-1

Petition Signed By 3,379 Favors Fluorides

Board of Aldermen to Act On Proposal March 10; 'Mandate' Challenged

"The dentists took care of presenting most of the evidence submitted at a very successful public hearing which foreshadowed our victory. We 'ordinary citizens' with our committee backed them up and took the lead in the in-fighting and in the propaganda war that preceded the public hearing."

"For reasons best known to themselves, most dentists and physicians are reluctant to take any public part in favor of fluoridation while freely conceding that it is demonstrably effective and safe. This proved to be one of my biggest disappointments. It's all very well for the professional people to take the attitude that they don't want to become engaged in public brawls but I submit that here is an issue on which we must have top-flight medical leadership."
Mayor Serves Notice On Aldermen He Intends To Ask Referendum In 1959

"For what it's worth, I personally feel that the Letter to the Editor column of the local papers must be hit hard. Anti fluoridationists who feel strongly about fluoridation bombard the press with letters which altogether too many of our 'intelligent' pro-fluoridation people pass off as unimportant. I feel it might not be a bad idea to assign the chore of writing letters in favor of fluoridation to a wide variety of people. Unhappily when you're opposed to something, you tend to be more vigorous in your approach than when you're for something. This results in our being beaten in the vox pop column and there's just no excuse for it--if we mean business and get out and work."

Aldermen Vote 10-5 to Keep Fluoridation In City Water Supply, Over Mayor's Protest

"We learned that money is difficult to obtain and a little of it is essential for newspaper advertising and printing etc. For example, it wasn't until more than a month after the conclusion of our fight that we managed to pay all our bills--and they were really quite modest. We donated a $2 surplus to the Concord Chapter, American Red Cross."
SEATTLE VOTES ON FLUORIDATION

Prepared by Sanford P. Lehman, M.D., M.P.H., and Barbara L. Kahn, M.P.H. for Western Branch, American Public Health Association
Denver, June, 1952

Seattle voted two to one in the municipal election, March 11, 1952, against the addition of the fluoride ion to the municipal water supply. This resulted in spite of the fact that fluoridation was endorsed, in addition to national scientific bodies, by the local dental society, the local pediatric society, the Executive Board of the King County Medical Society, the local health department, and the Seattle P.T.A. Council. Such doubting by the vast majority of citizens of scientific evidence presented by qualified medical and dental persons suggests pause for reflection.

BACKGROUND OF DENTAL PROGRAM

Interest in dental health on a community wide basis began sometime in 1949 when the P.T.A. selected dental health as their health program for the year. They learned of instances where Public Health Service teams came into a community to put on a demonstration program of topical fluoride application. P.T.A. members approached the health department and dental society regarding its feasibility. A city-wide dental committee was formed composed of representatives from the Seattle P.T.A. Council, the Seattle District Dental Society, the Seattle Public Schools - both medical and curriculum departments, the Catholic Diocese representing parochial schools, the Washington State Department of Health and the Seattle-King County Department of Public Health. It was decided by the committee that before any program be carried out a survey of dental needs be first undertaken. This was accomplished in March, 1950, with the assistance of the Public Opinion Laboratory of the University of Washington, 91 local dentists who volunteered half a day each, the Director of Dental Health for the State Department of Health, and over 200 P.T.A. volunteers. Six thousand students from grades kindergarten through twelve were inspected and answered questions on dental health. The results showed a high decay rate, with the average 11th and 12th grader having 14.8 decayed, missing or filled teeth.

The committee turned its attention to supporting and implementing dental health education in the schools and in the P.T.A.'s. It felt that topical application of fluoride on a city-wide basis to school children at this time would be impractical and expensive.

FLUORIDATION RECOMMENDED TO CITY COUNCIL, JANUARY 1951

The Director of the Seattle-King County Department of Public Health had meanwhile been studying the results of fluoridation of municipal water supplies, and was impressed with the results.

Here was a real public health measure: a safe method of disease prevention, the fruits of which would be enjoyed by the entire population of the next generation.

He had also discussed the problem with the dental health committee and individual leaders in the Seattle P.T.A. Council. He received their backing for the fluoridation of the municipal water supply. The Executive Committees of the Medical and Dental
Societies were likewise consulted. With their endorsement, and that of the P.T.A. Council and the Health and Welfare Council of Seattle and King County, the local Director of Public Health recommended to the City Council (in January 1951) that fluoride up to 1 part per million parts of water be added to the city water supply.

The City Council held a public hearing on the matter early in February, 1951. The room was crowded with citizens most of whom were P.T.A. members. The Director of Public Health for the Seattle-King County Department of Public Health, and the new Head of the Dental Health Section, State Department of Health, presented the case for fluoridation. The Superintendent of the Water Department expressed the belief that insufficient study had been made on the problem to warrant adding fluoride at this time. P.T.A. members expressed their support, as did the President of the Health and Welfare Council for his organization, and the Chairman of the Public Health Committee of the Junior Chamber of Commerce for his organization. With the exception of the Superintendent of the Water Department, no individual or group expressed any opposition. Council members voted that two ordinances be prepared, one to allow for fluoridation and one on the cost and method of payment, with the Water Department responsible for preparation of the latter, and the Health Department of the former.

EVENTS FROM FEBRUARY 1951 to DECEMBER 1951

An Institute at the University of Washington on April 27, 1951 was the only educational program carried on for the public at large from the time of the hearing until the decision, November 1951, to let the people decide by referendum. Leading research men on the subject of fluoridation from throughout the nation were speakers at the Institute. These included Frederick McKay, D.D.S., from Colorado Springs; Philip Jay, D. P.S., University of Michigan; J. Roy Blayney, D.D.S., University of Chicago; and Francis A. Bull, D.D.S., Director of Dental Health, State of Wisconsin Board of Health. There was also a "Panel on Policies and Viewpoints of Interested Groups in the Field of Fluoridation" in which the Assistant Superintendent of the Seattle City Water Department as one member of the panel expressed his views that "insufficient evidence had been accumulated to assure the safety of adding fluoride to the water supply".

Letters opposing fluoridation began coming into the City Council. Also the Water Department began receiving crank letters about the difficulties they were having since the water was fluoridated!

A new Director of Public Health for the Seattle-King County Department of Public Health took office March 1, 1951. He and the Acting Director of Environmental Health conferred with the Water Department concerning the ordinances, but the question of cost caused delay in their preparation.

The Public Utilities and the Finance and Taxation Committees of the Municipal League of Seattle took up the question of fluoridation. They were interested in maintaining the low water rates which Seattle enjoyed. In August, 1951, they recommended that the City Council put the question on the ballot as was to be done in San Francisco. It was not until after the City Council's decision to do this (November 1951) that the Public Health Committee of the Municipal League met and endorsed fluoridation. The Executive Board of the Municipal League, however, took a neutral stand. This was about the best the Public Health Committee could hope for, since the early study and adverse action of their subcommittees (utilities and finance) had been augmented by prejudices of the Water Superintendent and two prominent and influential officers of the Executive Committee who were Christian Scientists.

2.
In November, 1951, the Corporation Counsel was instructed by the City Council to draw up a single ordinance embodying the requirements to fluoridate and to incorporate in the same ordinance the cost of the fluoride which would be borne by the water users. When the Health Department inquired why a single ordinance was being requested, the Water Department officials replied that they did not want to be caught with a mandate from the people to fluoridate without the funds with which to do so.

The Health Department was asked to work with and to advise the Water Department concerning the cost of materials, operation, and wording of the ordinance. The Health Officer's chief concern was that the cost of the fluoride seemed very high (double that used in other large cities). The explanation of the Water Department was that the cost of the equipment should be amortized over a ten-year period, the silico-fluoride, the type commonly used, would be exceedingly difficult to obtain, so we should plan on sodium fluoride. This is the most expensive to obtain. Seattle uses approximately 200 gallons per person compared with one-half that used by most cities the size of Seattle.

The surprising speeding-up of activities of the official bodies after the issue lay dormant for so many months aroused the interest, and to some extent the anxiety of Health Department officials. They attempted to dissuade the Council against putting this issue before the public for decision by suggesting this was too technical and scientific a matter to be decided by the average lay citizen. Four members of the Council, strongest advocates of fluoridation, were coming up for re-election on March 11th. The election period was nearing, which undoubtedly must have modified some of the action taken by some of the members of the Council.

To ease the position of the Council, the decision was made to place it on the ballot as had been done with the same issue in San Francisco. This was just what the opposition was hoping for. From this point on, the Council never spoke of fluoridation in open session, nor did any of the candidates for office in any of their campaign arguments. It appeared to be too controversial an issue for any of the candidates to discuss. No one knew how the votes were lining up on fluoridation, even after the primaries in February 1952, and I am sure no one would hazard a guess.

Fluoridation of the municipal water supply was made Referendum No. 1 on the March 11 ballot, and read as follows, "Shall a source of fluoride ion, approved by the State Department of Health, be added to the water supply, the cost to be paid by water users through a monthly charge of ten cents for each premises served, all as contemplated by Ordinance No. 8052?"

THE CAMPAIGN

Organization and Speakers Bureau - Following the announcement late in November that the fluoridation issue would be referred to the people, the local Director of Public Health met with some of his Division heads. It was decided that a committee should be formed to bring the facts before the public. It was felt that the Dental and Medical Societies should first be contacted to ask them to reaffirm their stand endorsing fluoridation, and to encourage the Dental Society to take leadership in sponsoring the committee. The Director of the Dental Health Section of the Seattle-King County Department of Public Health, who had just been appointed Chairman of the Public Health Committee of the local Dental Society, called his committee together, which in turn made its recommendation to the Executive Committee of the Dental Society. Meanwhile, the Public Health Committee of the King County Medical Society recommended to the Executive Board of the Medical Society that it make firm its stand on fluoridation. The Executive Boards of both Societies announced again their endorsement of fluoridation, as they had done the previous year.
A meeting was then called late in December to discuss organization of a Citizen's Committee for Fluoridation. Present at the meeting were the President of the Seattle District Dental Society, the Chairman of the Public Health Committees of the Medical and Dental Societies, respectively, the Director of Public Health, the health educator from the local health department, the Director of Dental Health for the State Department of Health, the President of the Seattle P.T.A. Council, a representative from the Board of the Seattle Visiting Nurse Service, the Executive Secretary of the State Health Council and the Secretary of the Health Division of the local Health and Welfare Council.

The Executive Committee of the Dental Society, believing in fluoridation and showing real community spirit, agreed to take the leadership and sponsor the organization of the committee, which would have both a lay and professional division, with a lay person as chairman. Accordingly, lay and professional medical and dental persons to be invited as members of the committee were discussed, and a meeting date set for January 10. It was decided that headquarters would be set up in the office of the Dental Society, with a separate phone, and that the health educator and another representative from the health department, and the Executive Secretary of the State Health Council, who is a publicity expert, would devote most of their time to the fluoridation program. The Executive Secretary of the State Health Council deserves special credit for the hours of hard work he devoted to the committee. A Speakers' Bureau was to be organized immediately. It was felt that dentists and physicians were the ones to bring the facts before the people. It was also agreed that a pamphlet, similar to the one used in San Francisco would be printed.

At the regular meeting of the Dental Society on January 8 (about 65 members were present), the fluoridation issue was brought before the members and discussed. The only opposition was expressed by a member of the faculty of the University of Washington School of Dentistry who felt that insufficient study had been made on the subject. However, in order for the Society to present a unanimous front, he withdrew his objection. This lack of opposition is significant, for late in February, about 20 dentists announced publicly that they had never favored fluoridation. This group was recognized as advocates of applied nutrition and were influenced by the opposition to voice their views.

The Seattle Committee for Fluoridation met two days later on January 10 in the Medical Dental Building. The meeting was planned for the Public Safety Building, but because it was learned that hecklers from the opposition were planning to attend, the meeting place was changed. (Such heckling had been experienced the day before at a P.T.A. Council meeting when a panel of speakers presented the facts for fluoridation. It was felt that this wrangling and discord would be undesirable for an organizational meeting.) Facts on fluoridation were presented, an alert and competent insurance man was elected chairman, and a sum of money was promised the committee from the Dental Society. The P.T.A. Council agreed to pay for the pamphlets needed for its organization. Anticipated expenses were for the pamphlet, the telephone and mailing.

At a later meeting, committees were appointed: 1) publicity and 2) organization, including the Speakers' Bureau. Work on the Speakers' Bureau and some publicity stories had already started - even before the January 10 organizational meeting. Post cards were sent to about 400 organizations telling them that a speakers' bureau had been formed to give them the facts about fluoridation. Thirty-seven dentists, twelve physicians and several lay persons volunteered to do the speaking and speakers' kits were supplied each one. Two dentists served as co-chairmen to secure the speakers, and the health department representatives received and filled requests, which by March 10, totaled 143.
During most of January the speakers from the Committee for Fluoridation met with little opposition from the platform, but the same faces of a small group of fanatical objectors began appearing in meeting after meeting with questions intended to stump the speaker and to raise doubts in the minds of the audience. When a speaker did encounter the debate type of program, the opposition speaker was usually an elderly homeopathic physician, noted for his opposition to other important public health measures, including pasteurization of milk, water chlorination, and vaccination of dogs against rabies. He is not a member of the County Medical Society. To the average citizen, however, he had equal status with the physician or dentist speaking in favor of fluoridation.

At the beginning of the campaign, persons vocal in opposing fluoridation formed the Washington State Council Against Fluoridation which was backed by the National Nutrition League, Inc. Most of these were owners, operators and patrons of so-called "health food" stores. Later, about the first of February, Christian Scientists, deploring "compulsory medication", took the lead in forming the Anti-Fluoridation Committee. An attorney served as chairman, a trained publicity man worked with them, and a speakers' bureau was formed. Billboards opposing fluoridation appeared the last week or so of the campaign. From all appearances, the Washington State Council Against Fluoridation, for the rest of the campaign, was absorbed by this latter, well organized committee. (Following election day this committee decided to remain organized on a permanent basis as the Northwest Committee Against Fluoridation.)

Following the formation of the Anti-Fluoridation Committee the first part of February, opposition speakers appeared on practically every program. Added to the ranks of the opposition were three physicians from the Medical Society, and several well-known attorneys who appeared at meetings, on the radio and on television to debate the issue on the basis of invasion of individual rights, and pressure for the program from Oscar Ewing and the U.S. Public Health Service. Their suggested alternative was to add fluorides to salt.

The editor of the leading Northwest medical journal and chairman of the Health and Welfare Council as spokesman for ten local physicians reported to a local newspaper "as professional men and citizens we wish to express our unqualified support of this measure". A few weeks later this same physician appeared on television as an opponent of fluoridation.

In order that all physicians and dentists might have the facts about fluoridation, the Committee for Fluoridation mailed to each a copy of the A.D.A. booklet on fluoridation, mimeographed copies of the summary report of the National Research Council, and the Statements of the Councils on Pharmacy and Chemistry and Foods and Nutrition of the A.M.A. Later a letter was sent to each physician and dentist asking whether they would be willing to (1) be a member of the Committee for Fluoridation, (2) mail an accepted leaflet on fluoridation with their monthly statements, and (3) serve as a speaker. About 150 responded to the first two, and several additional speakers were secured. A total of three meetings were held by the Committee for Fluoridation. The Speakers' Bureau met twice.

Publicity - The Publicity Committee was composed of the Executive Secretary of the State Health Council, an ex-reporter of the Seattle Times, and a person who served as publicity chairman for various community organizations. They arranged for newspaper stories to the dailies and weeklies, and arranged for the radio and television programs. They also prepared materials for the speakers' kits, and set up the leaflet which was distributed by the overall committee. They were active in urging people to write letters to the Editors. They wrote to authentic sources
all over the country seeking facts on fluoridation and answers to oppositions' questions. Replies were mimeographed for distribution to particular areas of interest.

The two daily newspapers from the beginning took a neutral stand. They printed as much material in opposition as they did pro. The majority of "Letters to the Editors" were opposed to fluoridation, even though those in favor of fluoridation were urged to write. The topic of fluoridation became front page material and a subject for editorials. It was the most controversial and talked of issue on the ballot. Several neighborhood weekly papers came out against fluoridation.

Radio and television stations became additional media for publicizing the controversy. The seven radio programs and two television shows all presented pro and con, and the debates became quite heated.

The pamphlets which were prepared by the Committee for Fluoridation were distributed at every P.T.A. meeting in February (about 30,000 copies). In addition, speakers gave them out at other meetings, a few volunteers distributed them within their own neighborhoods and about 150 physicians and dentists mailed them with their statements. A letter was written to every A.F. of L. Union in the city, with a copy of the pamphlet attached. Further distribution of the pamphlet was stopped when a labor union official questioned the chairman of the committee about the fact that no union label appeared on the leaflet. The type for the leaflet was set in a union shop, but it was multigraphed in the Department of Public Health. How much influence this had on the final vote is difficult to say.

The opposition distributed quantities of literature. The first pamphlet that appeared was seven pages with a skull and crossbones on the front, and was put out by the Washington State Council Against Fluoridation which was sponsored by the National Nutrition League, Inc. Later they distributed mimeographed copy entitled, "Correct Answers to Common Questions About Fluoridation." This was in refutation to that put out by the Committee for Fluoridation headed, "Answers to Common Questions About Fluoridation". The opposition also distributed reprints of an article that appeared in "Northwest Medicine", and one that appeared in the commercially published "Oral Hygiene" - both in opposition. The latter included accusations of socialized medicine, and recommendations for a "campaign for better systemic health through natural nutritious foods". "Don't Be a Guinea Pig" was the heading of another mimeographed throw-away. Another "anti" publication distributed was one called, "Fluoridation", by H. G. Anderson, Secretary, Citizens Medical Reference Bureau, Inc., 1860 Broadway, Suite 1215, New York 23, N. Y. This contains excerpts from articles which oppose fluoridation. The various materials published by the opposition were distributed at meetings, through health food stores, and in some areas, from door to door. They contained quotes from scientific articles no longer considered valid - even by the authors, and quotes from some unrecognized and unreliable sources. The average lay person, however, did not know this.

The campaign then, to summarize, included pro-and-con debates at meetings, on the radio and on television. It included the distribution of literature by both sides, and pro-and-con news releases. Each side formed a committee to take the lead in spreading information. The campaign in the community extended for nine weeks up to the March 11 election.
POSITION TAKEN BY VARIOUS INDIVIDUALS AND ORGANIZATIONS

**State Department of Health** - approved such a program for Seattle. The Director of Dental Health worked actively for the passage of the referendum.

**Seattle-King County Department of Public Health** - recommended the program to the City Council and to the people. They took a stand as a body for fluoridation and worked actively on the program. All members of the department attended orientation sessions. Two members were appointed to work full time if required with the Committee for Fluoridation, during the active campaign (two and one-half months).

**State Health Council** - approved fluoridation, and its Executive Secretary worked actively - long hours - as information and research clearing house - for the passage of the referendum.

**Seattle District Dental Society** - Executive Committee approved fluoridation of the water supply in January 1951 and reaffirmed its stand in December 1951. This was approved by the Society as a whole in January 1952. Members worked actively for fluoridation, 37 serving as speakers and 100 or more distributing leaflets. Two dentists who were originally on the Committee for Fluoridation publicly announced their opposition late in the campaign. This announcement was followed by the public announcement through the newspaper that 18 other dentists were against fluoridation. Most of these were members of the Academy of Applied Nutrition. They insisted they had not had an opportunity to discuss the subject at a Society meeting.

**King County Medical Society** - The Executive Committee, following a recommendation by the Society's Public Health Committee, endorsed fluoridation in January 1951. This was reaffirmed in January 1952. It was never brought before the entire membership for a vote. At the membership meeting in February 1952, however, a physician moved that the Executive Committee take no stand on the issue. This was tabled on vote from the floor. Three members of the Society campaigned actively against fluoridation of the water supply, maintaining, among other things, that it was an invasion of individual rights, constituted socialized medicine, and that it would be equally effective to fluoridate salt. Twelve members of the Medical Society served actively on the Speakers' Bureau of the Committee for Fluoridation, and an additional one hundred or so included in their monthly statements the pamphlet endorsing fluoridation.

**Seattle P.T.A. Council and local P.T.A.'s** - the P.T.A. Council was behind fluoridation from the beginning. During the campaign the Council paid out $125 for leaflets on fluoridation to distribute at P.T.A. meetings during February. Without question the great majority of individual P.T.A.'s were in favor of the program. A small group of members through a public announcement in the newspaper opposed fluoridation and accused the P.T.A. Council of handing down a decision from the top without giving individual P.T.A.'s the opportunity to decide for themselves. The P.T.A. Council countered with the fact that local P.T.A.'s had been working on the problem of dental health for several years and had been looking to the authorities for help. The separate P.T.A.'s had been in favor of topical application, but had been told it was impractical in Seattle due to lack of personnel and funds. Fluoridating the water supply they felt was a way of reaching all the people.

**Junior Chamber of Commerce** - The Junior Chamber of Commerce endorsed fluoridation in February, 1951, at the public hearing held by the City Council. During the campaign in January and February 1952, one of the programs of the Junior Chamber of Commerce was a discussion of fluoridation, with both sides presented, after which no further action was taken.
Labor Unions - The Director of the CIO Regional Office was a member of the Committee for Fluoridation. Meetings at which only the pro aspects of fluoridation were presented were held with the A.F. of L. Central Labor Council and the CIO Central Office. Neither group officially endorsed fluoridation. A letter was sent by the Committee for Fluoridation to all A.F. of L. Unions asking for their support. The Aeromechanics and the Communication Workers of America invited pro and con speakers to their meetings. The week before the voting, the Aeromechanics' weekly paper published an editorial expressing the belief that the issue would be defeated badly, and giving the arguments of the opposition only.

Municipal League of Seattle and King County - the Public Utilities Committee and the Finance and Taxation Committee of the League discussed fluoridation in the spring and summer of 1951 and recommended to the Executive Committee that the issue be placed on the ballot. The Public Health Committee did not take up the matter until January 1952. This committee recommended to the League Executive Committee that the League take a stand in favor of fluoridation. The Executive Committee decided to take no stand and in its regular publication, The Municipal News, presented the arguments on both sides.

Seattle League of Women Voters - Arguments on both sides were presented by the League of Women Voters, both in their publication on the issues to be voted on, and at their regular Town Meeting. Individual members spoke actively for fluoridation, although through policy of their organization they took no official stand on the issue.

Health & Welfare Council of Seattle and King County - Following the recommendation of its Health Division, the Executive Committee of the Health & Welfare Council endorsed fluoridation in January 1951. After the decision was made to place the matter on the ballot, the Health Division reiterated its former stand. The Chairman of the Health Division, a physician, however, reversed his stand and spoke for the opposition. His argument was that fluoridation of the water supply was an invasion of individual rights and a trend toward socialized medicine.

University of Washington - The Deans of the Schools of Medicine and Dentistry were members of the Committee for Fluoridation. Also, individual professors in these schools worked actively for the passage of the referendum. It was mistakenly mentioned in a small article in the paper that the two schools were backing fluoridation. The Deans of the two schools refuted this in a letter to the Editor, explaining that the University could take no official stand on such matters, but members of the staff were free to express their opinions. A prominent professor of engineering, a Christian Scientist, spoke for the opposition, as did the ex-Dean of the Law School.

Daily Newspapers: Seattle Times and Seattle Post-Intelligencer - Both papers took a neutral stand and published as much information against fluoridation as in favor of it. The same was true of the radio stations.

Others - Other organizations endorsing fluoridation included the Women's auxiliary of the Seattle District Dental Society, the Seattle Pediatric Society, the Washington State Dental Hygienists Association, the Local Dental Assistants Association, the Seattle Dietetic Association, the Seattle Visiting Nurse Association, the Gyro Club and the Active Club.

Candidates for Office - None of the candidates for office expressed any opinion on the issue, evidently feeling it was too hot to handle.
MAIN ISSUES

1. The basic claim of proponents of fluoridation remained uncontradicted. That was that fluoridation reduces tooth decay in children. Communities which have tried fluoridation have less decay than similar cities which have not tried it. Persons reared in cities where there is naturally occurring fluorine in the water also have less decay. The opponents asserted that reports from cities where the fluoride ion has been added are inconclusive because they cover too short a time.

2. The opponents rang out warnings on the poisoning effects of fluorine - "rat poison", they termed it. It brings out, they insisted, hardening of the arteries, interferes with kidney excretion, causes bones to become brittle, causes mottled enamel and weakening of the tooth structure and may cause cancer.

Fluorine, they continued, "may tend to accumulate within the body so that symptoms of fluorine poisoning may take as long as ten years to appear". When pinned down, however, the opposition could find no examples of persons who had been poisoned by the addition of one part per million fluoride to the water supply.

3. Other arguments were that mechanical failure of fluoridating equipment, accidently or through sabotage, may destroy the community and that fluorine was used in Germany after World War I to "weaken the wills of the people".

4. The proponents pointed out the large list of qualified scientific bodies who had endorsed fluoridation. The opposition emphasized that the local medical and dental societies were not unanimous in their support - that even the experts could not agree.

5. The opposition pointed out that only children would benefit: adults would be paying out the money and deriving no good.

6. A substantial part of the opposition to the issue among some doctors and dentists was based on considerations other than the medical-dental problems involved. Heading these considerations was the assertion that fluoridation is an invasion of individual rights, would constitute "socialized medicine", and the source of the movement for fluoridation was Oscar Ewing, head of the Federal Security Agency. The great majority of physicians and dentists, however, did not agree with this, since it was well known that the request to fluoridate had originated locally through the groups that have been mentioned.

7. Alternatives to fluoridation of the water supply proposed by the opposition were fluoridized salt or fluoridized milk. The former had been tried for several years by one of Seattle's leading physicians, but he himself stated in a newspaper interview that he was doing it on an experimental basis and he would much prefer that the water be fluoridated. It was also pointed out that there has been no body of evidence proving the efficacy of adding fluorides to salt as there has been for adding fluorides to water. Difficulty of control was the main argument against fluoridating milk.

8. Cost - The opposition asserted that a large amount of money would be paid out and only a small proportion of the population would benefit. Those in favor pointed out that 10¢ per meter per premise - or per family - was small considering the benefits derived. In the long run, the pro forces said, money would be saved.
GENERAL OBSERVATIONS AND SIDELIGHTS

1. The campaign seemed to be one of appeal to facts versus appeal to emotions.

2. Placing doubt and fear in the minds of the people was the main tactic of the opposition.

3. Numerous anonymous letters, post cards and telephone calls were received by leaders of the pro forces, accusing them of such things as communism and Hitler tactics, and making such statements as "the Almighty will mete out your retribution", and "you'll probably get a mink coat from a chemical company".

4. Members of the opposition attended all meetings they heard of for the purpose of harassing the pro speakers and raising doubts in the minds of persons present.

5. Dr. E. A. Bronner, Research Chemist from Los Angeles, who was quoted frequently by the opposition, and who incidentally, manufactures and sells "Dr. E. A. Bronner's Organic Mineral Salts", appeared in Seattle for one week to lead mass meetings of the Anti-Fluoridation group. Dr. Bronner called the Committee for Fluoridation requesting that a speaker for fluoridation appear with him. He was turned down on the basis that persons present at that meeting were not there to learn but to heckle the opposition. Neither of the daily papers covered these meetings.

6. The feeling of many of the young physicians and dentists who spoke for fluoridation was that the majority of older people were against fluoridation, and that perhaps more effort should have been made to have older speakers direct appeals to older people. Older people were more susceptible to the poison argument. Also they knew that fluoridation would not benefit them.

7. Several informal polls were carried on in the course of the campaign. The journal "Northwest Medicine" polled 50 Seattle physicians with the result that 78% favored fluoridation. Another poll was reportedly taken in the Medical Dental Building in which the results showed a majority opposed fluoridation. At the University of Washington, students conducted a poll of 500 persons from which they predicted fluoridation would pass by a slim majority. Results of the nation-wide Gallup poll appeared in the paper during the campaign. This showed that the majority of people favored fluoridation.

8. It was felt by many observers that the large turnout at the polls on March 11 was due in large part to the widespread community interest over fluoridation of the public water supply.

9. Consumers Research which opposed fluoridation was often quoted by the opposition.

10. Dentists on the Speakers' Bureau for Fluoridation felt that another time they would not consent to the pro-and-con type of discussion. Said one, "If organizations wanted us to speak on fluoridation we would simply say that we will furnish a speaker...and if they want the opposition to give their views, they will have to have them speak at another time. The reason...is that if you have the pro-and-con type of debate, it gives the proponents very little time to explain their case; but it gives the opposition ample time to discredit, lie, and if nothing else, to confuse the audience - which is tantamount to victory for the opposition".
11. Sample Quotes - A City Council member, "I think the cost will beat it".

Letter to the Editor: "...$99.25 out of each $100 worth of fluoride added to our water would be wasted down the sewers".

Homeopathic physician: "...treatment of drinking water with inorganic fluorides would not provide the same benefits derived from the organic fluorides provided naturally in foods, such as green vegetables and fish".

An attorney: "...So far as I am concerned this is simply another step in indoctrinating the people along the socialists' line, which means ultimately Communism or complete government controls".

A former resident of Grand Rapids: "...I think it important that Seattle voters next Tuesday know that residing in Seattle is at least one family which can bear witness to the tremendous advantages of fluoridation and discount, at least as far as our experience goes, the dire forebodings of the opposition to fluoridate Seattle's water supply".

An attorney, Chairman of the Anti-Fluoridation Committee: "Salt is the answer to fluoridation. Fluoridized salt is feasible and will be available in the not too distant future. It's as simple as that".

Same attorney: "The Public Health Service is out to get us".

A dentist from the University of Washington School of Dentistry: "One of the great benefits, however, of a public vote on fluoridation is the fact that it gets the entire population thinking and talking about the problem of dental decay in children. Regardless of the outcome of the issue, thousands of people will be acutely conscious as they never were before of the need for better dental health".
The question of fluoridating the local water supply first came to the attention of our town when it was placed on the warrant or agenda for the 1952 town meeting. At the time most people gave fluoridation little chance for our town is traditionally conservative, particularly on public health issues. However, at the town meeting there were persuasive speeches citing the experience of other towns and cities in greatly reducing dental decay among children by adding minute amounts of fluoride to the water supply. Two local dentists testified that the American Dental Association had endorsed fluoridation as a safe and effective way to reduce dental decay. So, unexpectedly, the measure passed by the overwhelming vote of 302 to 2.

But this was only the beginning of what was to prove a long story - a story by turns tragic, comic, and frightening - and a story with many ramifications. The issue of fluoridation itself, while surely not of as great magnitude as many which come to public attention, is by no means unimportant. A state public health official recently characterized it as one of the best gifts which any town might give its children. But beyond the immediate issue, the controversy that it raised in our town has presented, in capsule form, many of the urgent and unsolved problems of public discussion in a democracy.

The scene of the story is a small picturesque and rather isolated New England town. Of its approximately 5000 population a few hundred are connected with the local college; another several hundred are professional people, many of them connected with local and nearby industries; the rest are laborers (local industries are nonunionized), small businessmen, farmers, and retired people. Long-time residents look with scorn and suspicion on newcomers. It is sometimes said that a man must have lived here for twenty-five years before he applies for naturalization.

Soon after the town meeting there were rumblings of opposition. As a consequence, the selectmen acted slowly in carrying out the voters' mandate. But when the opposition failed to materialize by midsummer, they investigated and placed an order for equipment. It did not arrive until January, 1953. By that time opposition was vocal and vigorous. An item was placed on the warrant for the forthcoming 1953 town meeting to rescind the action of the previous year and to sell the recently purchased equipment. In the face of such developments the selectmen decided not to operate the new equipment until after the 1953 town meeting, scheduled for early in February. Advocates of fluoridation asked what authority the town fathers possessed to stall in carrying out the people's vote. Some charged that the selectmen had dragged their feet throughout the year. Meanwhile, those who claimed to have a finger on the public pulse, predicted that fluoridation would be overwhelmingly rejected.

*The author, a graduate of Lafayette College and Union Seminary, received his Ph.D from Columbia University. He has taught philosophy and religion at the College of Wooster, and at present is the Cluett Professor of Religion at Williams College. He was a participant in the fluoridation fight described in the present article.
The opposition expressed its views in a series of letters to the local paper. One letter charged that fluoridation was a dangerous practice, foisted upon the town by an evil alliance of misguided doctors and the companies that sell fluoridation equipment and supplies. Another said that fluorides were rat poison, and that if an enemy were to gain control of the town water supply our whole population could be silently and efficiently exterminated. Several charged mass medication and socialized medicine. Another letter asserted that too little is known about the subject and asked for an unbiased and expert committee to study it. Others cited data alleging to prove fluoridation harmful to the sick, aged, and to pregnant women. Cities which had adopted fluoridation were claimed to show a marked increase in heart disease, kidney disease, bone fluorosis, mottled teeth, stillbirths, and a variety of other maladies. Some added bluntly that they just didn't want any more chemicals in the drinking water.

Opposing attitudes ranged the whole spectrum of belief from the thoughtful conservatism which argued that we ought to wait a few years until more is known, to the dogmatic and frantic assertion that fluoridation is a satanic (or communist) plot. Individuals known throughout the region for their opposition to such measures as pasteurization, compulsory vaccination, and chlorination of water, entered the discussion and made their views heard.

Advocates of fluoridation sought to meet the issues. They read scientific articles and wrote letters to the paper, stating facts and figures from the Newburgh experiment, giving statistics from areas of the country where fluorides occur naturally or are added to drinking water, showing that dental health is greatly improved and also that no harmful results follow. The opposition countered with the distinction between fluorides which occur naturally, "as God made them," and "man-made," or artificial fluoridation, the former being beneficial and the latter harmful. They also quoted the Report of the Delaney Congressional Committee with its counsels of caution and its suggestions of possible long-time harmful results. A Harper's Magazine article entitled "Fluoridation - Go Slow," was widely read. Opponents spoke darkly of local doctors who were "agents" of sinister but unspecified powers and of dentists who were promised a cut in the sale of fluoridation equipment and supplies. But above all, they bore down on the argument that long-time effects of fluorides are unknown. Who knows their effects? Who knows? Who knows? They repeated this with almost hypnotic effect.

Advocates sought arguments to stem the tide of misgiving and fear. They pointed out the high rate of dental decay in our region. They read and analyzed the Delaney Report, with its inaccuracies and its innuendoes, and also the American Dental Association's devastating analysis of the report. They mimeographed and distributed figures for death rates in regions having fluoridation, showing no divergence from the rates of the country as a whole. They argued that the issue came down in the end to a question of whom the people are to believe, of what authority they are to trust. On the one hand were the American Dental Association, the American Medical Association, the Federal Public Health Service, the state health board, the American Waterworks Association, and many other reputable and competent organizations which have endorsed fluoridation. On the other hand were the few individual doctors, dentists, scientists, and self-constituted local experts who questioned or opposed it.

Feeling ran high at two preliminary public meetings where the issue was discussed. At one meeting, called by the League of Women Voters for the purpose of discussing the warrant for the town meeting, there were speeches pro and con. One opponent raised the issue of constitutionality, arguing that fluoridation is an infringement of individual liberty and citing legal decisions purporting to prove the point. Another spoke of an alliance between local "so-called doctors" and the
Aluminum Company of America, which would presumably supply fluorides. She also stated knowingly that Oscar Ewing, recent Federal Security Administrator, had formerly been an official of the same company.

At another meeting called by advocates of fluoridation, there were speeches by a representative of the United States Public Health Service and by a medical man with years of research experience in fluoridation and its effects. Opponents came to heckle and filibuster. The net outcome of the meeting was aptly expressed in the newspaper headline, FLUORIDATION DISCUSSION LEAVES 125 MINDS UNCHANGED.

A climax was reached at the town meeting. Of a total of approximately 3200 registered voters some 600 turned out, a fairly good number and about all the local school gym will hold. Many had come to vote only on this issue. Feeling ran so high that when this item on the agenda was reached, the moderator called a ten-minute recess. He introduced the issue with an appeal "not to let angry passions rise," saying that he would alternately recognize pro and con speakers.

The first speaker, an advocate, urged the meeting to defeat the motion to rescind, emphasizing the benefit of fluoridation to children's teeth and the recognized safety of the procedure. The first opposition speaker, a man well-known in town meetings for his practice of making speeches in opposition to almost everything, said that in his observation our children's teeth are good, but that few people over fifty have stomachs that are worth anything. He did not spell out the implications that fluoridation was harmful, but the point seemed widely understood.

A doctor who is a member of the town health board, and who had studied the issue carefully and extensively, explained the experimental work which had led up to its approval by the dental and medical associations. He also described the scientific investigations supporting the conclusion that fluorides in the amount contemplated are harmless to everyone, old and young, sick and well. An opposing speaker dwelt upon the possibility of poisoning the whole population if excessive amounts were dumped into the water supply at one time. Scientists attending the meeting writhed in silent anguish while the speaker confused and misconstrued elementary scientific facts. Another doctor and two dentists added their testimony that fluoridation was a safe and a desperately needed step toward better health.

An opposition speaker said that her ancestors had fought for their lives in this region against the Indians and that the time had come to fight with equal vigor against fluoridation. She said that it had been proven useless and harmful in many cities and she defied the proponents to deny this. A local lawyer stated that he had checked the legal issues and that in his opinion fluoridation was legal in our state - an opinion in which the state's attorney general had recently concurred. A final opposition speaker, sensing that the tide of argument was running against her side, made an impassioned plea for the "little people" to rise against authority. They had done so in the American revolution, she argued, and should do so in the present emergency, defending the right of the individual "to control what goes into his own body."

The vote was a victory, 291 to 249 for fluoridation. Proponents heaved a sigh of relief, thinking that the cause of science and public health had been vindicated in our town. The result was headlined in the newspapers of many surrounding towns and cities. However, the relief was premature. Feeling was still intense and bitter; one person who had spoken for fluoridation in town meeting was accosted on the main street of town as a "stinker" and a "communist." One of the leading opponents of fluoridation said to a friend as they left town meeting that their work was now cut out for them. Meanwhile, instructed by two successive years' town meetings, the selectmen proceeded to put the fluoridation equipment into operation.
Newspaper articles and pictures heralded the event and state health officials described inspection procedures and safeguards. One lady telephoned the water department complaining of stomach pains which she attributed to the fluorides, only to be told that she lived in a part of town supplied from a reservoir not then being fluoridated.

For a few days the town wondered if the issue would be dropped. This uncertainty was soon removed. After a series of discussions an Anti-Fluoridation Association was organized, officers elected, and a statement formulated, charging the moderator of the town meeting with bias, alleging that illegal votes had been cast, and raising the issue that the whole meeting had been illegal since it had been held in a hall too small for all the town's 3200 registered voters. The last charge, which is technically correct, would invalidate all of our town meetings for many years past. They made plans and raised funds for a hard campaign. They circulated petitions asking for a special town meeting at which there would be a secret ballot on fluoridation. The work was done thoroughly, and as a result 932 signatures were secured for the petition. The committee reported mysteriously that several other pages of names had been stolen from their headquarters.

The campaign against fluoridation gained momentum. Flushed with success in the petition, some members of the Anti-Fluoridation Association boasted that once they had won this fight they would turn their attention to other issues of good government. They did not specify what they meant. They continued to fan the flames of fear. Fluoridation is harmful to the kidneys, to the heart, and to the bones. Who knows what results may follow from its use? Who knows?

This phase of the campaign came to a climax in a public meeting, billed as The Facts on Fluoridation, and addressed by three dentists opposed to it. The leading speaker was billed as senior dental consultant of a well-known hospital in our region. A phone call revealed that the position is purely honorary, that he is not at present a member of the hospital staff. He claimed to have the signatures of 119 dentists in his city who are opposed to fluoridation. The signatures turned out to be several years old, a large percentage of the signers have subsequently changed their minds and endorsed fluoridation. At the meeting a package of sodium fluoride labeled "Poison" was plainly displayed at the front of the room. At the opposite side of the platform was a large container of nonfluoridated water from which the speakers drank freely during the meeting. The speeches rehashed the half-truths, the discredited arguments, and the misinformation. A few supporters of fluoridation who attempted to ask questions were heckled. The meeting ended with a spirited diatribe from the floor against the current addition (without popular mandate) of a water softener in our water supply.

The proponents of fluoridation were puzzled to know what course to take. If a large number of people were frantically opposed to fluoridation, however invalid their reasons, was it wise to press the issue? It was felt that misstatements of fact should be publicly corrected. But in limited time and without an expense account, it was impossible to trace and check all statements. Furthermore, a correction, however fully and accurately documented, did not in this case, as so often it does not, undo the effect of an original false statement. It seemed to them that many people were not open to facts, often rejecting carefully stated factual evidence from competent and reliable authority in favor of gossip and hearsay based upon the flimsiest evidence, and full of loopholes and contradictions. But most of all, proponents of fluoridation were puzzled to know why this issue had generated so much heat that long-time residents of the town can remember nothing comparable.
Seeking answers to such questions they recognized a basic error in strategy in bringing the issue to a vote without a long and thorough campaign of education. Failing this, they found that they had a tiger by the tail.

They also noted that the issue was made to order for exploitation by fear and demagoguery. It is a highly technical question on which only a few trained experts have any first-hand right to an opinion. The public, knowing little or nothing of the technical questions of chemistry and biology, and hearing claims and counter claims bandied about by self-styled experts, is justifiably puzzled as to whom to believe. While all major medical and health organizations have endorsed fluorideation, there is a small minority of dentists, doctors, and scientists who have misgivings or are opposed. The public asks, "Since the experts disagree, should we not wait awhile?"

No science, except perhaps pure mathematics, ever achieves complete certainty in its results. What it offers is an impressive body of overwhelmingly probable facts - facts which gain in probability with each successful experiment but which never achieve complete certainty. Moreover, scientists, as men of intellectual integrity, do not want to claim too much for their results. Thus, when a scientist is asked to give absolute assurance for what will take place in the distant future he hesitates or demurs. But this limitation of scientific knowledge provides the opening wedge for deep-seated fear. So the unanswerable question recurs, "Who knows what results will follow?" Who knows? Such fears are also accentuated by the new and unfamiliar nature of the scientific processes involved in fluorideation.

Deeper than any specific fears or issues lies a free-floating fear or anxiety in the subterranean depths of men's minds. This unreasoning anxiety attaches itself to different and often unrelated issues. Thus, questions as far apart as Senator McCarthy's investigations and the fluorideation of a small town's water supply shows a similar emotional pattern. It is this attitude, expressed in so many ways, which has led some observers to charge that American public opinion is in the grip of a fear psychosis. In our town this fear psychosis found a vehicle in the fluorideation issue. Health issues impinging directly upon individual lives have been effective in dredging up such fears, from the first days of compulsory vaccination to the present. The fruits of this fear, in bitterness, dogmatism, charges of guilt by association, misrepresentation of facts - as often to oneself as to others - suspicion, and intolerance of any disagreement, were all illustrated in our controversy.

But perhaps the most fundamental attitude was a deliberate rejection of reason and rational authority by the antifluoridation forces. In an age when storms of unreason have swept like devastating floods over many nations it is significant to trace such attitudes to their source in fear. Truly, big lies from little misstatements grow when they are fed by fear.

A further observation is the ineptitude of the time-honored New England system of direct democracy in the face of attitudes and problems of this sort. Any sharply controversial issue tends to disfranchise those citizens who are dependent upon public goodwill. For this reason many merchants in our town have stopped coming to town meetings. Systems of indirect or representative democracy provide means for giving weight to expert opinion on technical matters. No such means exists in the town meeting system.

As the time for the secret ballot drew near, the Anti-Fluoridation Association bought advertising space in the local paper, repeating and underscoring its charges. A crescendo was achieved the day before the election in the warning that fluorideation would produce a "third generation, degenerated to crippled Pygmies." The only organized effort of the profluoridation forces was a letter to the newspaper, signed
by six of the seven local doctors, stating that they had faith in the reliability of federal and state health agencies, and that in their opinion fluoridation would be both beneficial to dental health and harmless to the population at large. A college professor of science pled in newspaper letters for reason against emotion. The result was a vote, 1114 to 415 against fluoridation. It was an authentic social revolt on the proto-fascist pattern. Advocates suggest that in a few years after emotions have cooled and public judgment is restored, the issue can be raised again and can receive a fair hearing. Opponents reply that fluoridation will take place in our town over their dead bodies.
A Study of the Anti-Scientific Attitude

It has been clearly demonstrated that fluoridation tends to prevent tooth decay and does no harm. Then why are many people violently against it? How the question was investigated in Northampton, Mass.

by Bernard and Judith Mausner

Many people, particularly scientists, believe that we are suffering in the U.S. from a national epidemic of irrationality—what Senator J. W. Fulbright of Arkansas has called the "swinish blight of anti-intellectualism." The current outbreak has expressed itself in many manifestations, but they are reducible to two well-recognized symptoms: a deep distrust of "intellectuals" and rejection of ideas or discoveries that conflict with entrenched beliefs. Can we do anything more than name the disease and describe its symptoms? It would be helpful to have more data on the causes of the malady and possible methods of combatting it. This article will report the results of a case study which may offer some light. The place of the study was the town of Northampton, Mass., and the occasion was a dispute over fluoridation of the town's water supply.

Fluoridation is an excellent example of the careful application of scientific knowledge to a problem. As David B. Ast, director of the Bureau of Dental Health in the New York State Department of Public Health, has said, no other public health measure has ever been so thoroughly studied and tested before it was introduced. Ever since 1908 it has been observed that people living in regions where fluorides occur naturally in the water have a remarkably low incidence of tooth decay. In 1945 controlled studies of artificial fluoridation of the water supply were started in three communities: Grand Rapids, Mich., Newburgh, N.Y., and Brantford, Ontario. The nine-year results of these tests, plus many others, have convinced the scientists who have investigated the matter that artificial fluoridation can greatly reduce dental caries among children who drink the water during their teeth-building period and that the procedure is perfectly safe. Fluoridation has been recommended by an impressive list of scientific organizations, including the American Medical Association, the American Dental Association, the National Research Council and the U.S. Public Health Service. And more than 1,000 communities in the U.S., with a total population of more than 17 million, have adopted it so far.

However, from the beginning there has been opposition. The opponents, mostly laymen but also including a few scientists, have formed two national organizations—the National Pure Water Association and the National Committee against Fluoridation—and many local committees to fight adoption of the idea. The issue has twice been argued before committees of Congress. In 57 out of 104 communities where the question has been voted on by the electorate, the opponents have defeated fluoridation.

A content analysis of the anti-fluoridation argument shows that it has three main themes: (1) fluoridation is an experiment which has not proved its value and may hold unknown dangers; (2) fluorides are poisons; (3) treatment by public agencies of the water that everyone must drink is a step in the direction of socialized medicine and an invasion of individual rights.

As for the first of these objections, public health and dental authorities believe that the effectiveness of fluoridation has been so well proved that it need no longer be considered an experiment; objections that the case has not been proved, they feel, betray a lack of understanding of epidemiological research. Many people find it difficult to accept conclusions based on statistical analysis rather than on laboratory or clinical "proofs." The most careful evaluation to date of the supposed dangers of fluoridation, carried out by a committee of the St. Louis Medical Society, found no good evidence that it is dangerous. Populations who have been drinking fluoride-containing water for some time show no unusual death rate or incidence of degenerative disease, cancer or children's bone fractures—all dangers mentioned by the opponents.

The poison theme is based on a failure to appreciate that a substance may be safe or even beneficial in small doses.
SCIENTIFIC BODIES LIKE THE AMERICAN DENTAL ASSOCIATION AND THE U.S. PUBLIC HEALTH SERVICE ARE THE BEST SOURCES FOR FACTS ABOUT FLUORIDATION.

A GOOD REASON FOR OPPOSING FLUORIDATION IS THAT IT INFRINGES ON INDIVIDUAL RIGHTS.

FLUORIDATION IS NOT A STEP TOWARD SOCIALIZED MEDICINE.

DENTISTS WILL PROFIT FROM FLUORIDATION BECAUSE IT MOTTLES (DISCOLORS) THE TEETH.

SINCE FLUORINE IS ONLY BENEFICIAL TO CHILDREN, EVERYBODY SHOULD NOT BE FORCED TO DRINK IT.

FLUORIDATION HAS BEEN A SUCCESS WHEREVER IT HAS BEEN TRIED.

CHEMICAL INDUSTRY IS FOR FLUORIDATION EVEN THOUGH IT MAY BE DANGEROUS BECAUSE THEY WILL BE ABLE TO PROFIT FROM SELLING THEIR FLUORIDE WASTES.

VOTING ON FLUORIDATION IS AS SENSIBLE AS VOTING ON THE USE OF PENCILLIN IN TREATING DISEASE.

PEOPLE SHOULD NOT BE FORCED TO DRINK SOMETHING WITHOUT THEIR CONSENT.

THE BENEFITS OF FLUORINE COULD NOT BE OBTAINED BY HAVING DENTISTS GIVE IT DIRECTLY TO CHILDREN IN THE SCHOOLS.

THE WATER COMMISSIONERS WERE TAKING ADVANTAGE OF THEIR POSITION IN STARTING FLUORIDATION WITHOUT CONSULTING THE PUBLIC.

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INTERVIEWS of the Northampton study were based on these 11 statements. The 397 people interviewed a week before the fluoridation vote were asked (1) to give their opinion of each statement and (2) to indicate whether they intended to vote for or against fluoridation. The responses of the pro- and anti-fluoridation groups are separated at the right in per cent.

though it is toxic in large amounts. Opponents of fluoridation have pointed out that sodium fluoride is a rat poison and fluorine is a component of deadly "nerve gases." This theme has inspired some bizarre, irrational fears. It has been suggested that in the event of war saboteurs could poison our water by dumping large quantities of fluoride into the reservoirs from the fluoridation apparatus. Actually it would be hard to imagine a more cumbersome method for sabotaging water supplies. Enormous amounts of fluoride, more than is ever normally stored at a water-treatment station, would be required to produce a concentration high enough even to mottle the teeth. Despite these sober facts, the lurid picture of a saboteur poisoning the entire population by pulling a switch has apparently been easy to evoke. One anti-fluoridation pamphlet has suggested that fluoridation is a part of a subtle conspiracy on the part of our enemies to "paralyze, demoralize and destroy our great republic from within" by undermining us with a nerve poison in the water.

The third argument, that fluoridation is an invasion of individual rights, raises a complex issue. In innumerable public statements the opponents of fluoridation have called it compulsory mass medication. However, so are compulsory smallpox vaccination and many other modern public health measures. The proponents of fluoridation consider that the invasion of individual rights involved in compelling everyone in a community to drink fluoridated water is minor when weighed against the incalculable benefits to our next generation from the reduction of dental disease.

There has been a host of other objections to fluoridation: its cost (about 10 cents per person per year), the allegation that it makes water taste foul (in the small amounts used the fluorides are actually tasteless), the complaint that it kills goldfish and makes dogs and cats ill (actually there is no evidence of harm to animals). The power of suggestion has been vividly demonstrated on several occasions. For instance, in New York's Westchester County and two or three other localities the announcement that the water would be fluoridated was followed by a flood of complaints of bad-tasting water, sudden aches and pains, and dead goldfish and dogs—even before any fluoride was put into the water! A witness before a Congressional committee declared that he had fainted from drinking two cups of coffee made from fluoridated water.

In short, the objections to fluoridation, however unrealistic or unfounded, have deep psychological roots. To what extent does the general public share the fears and attitudes of those who have campaigned against fluoridation? It was this aspect that we set out to investigate in Northampton, where the issue came to a referendum. Before the election we (Allan Leavitt, Sidney Robbins and Bernard Mausner) surveyed the attitudes of leaders of the community and a representative sample of the city's population.

The fluoridation controversy in Northampton had followed a typical course. A local committee of the Dental Society had recommended fluoridation after an investigation of its merits made at the mayor's request, and the City Council had then held hearings, voted approval of the step and appropriated money to carry it out.

Opponents of fluoridation continued to argue against the practice, and the foremost objector, a professional chemist, actually installed a still in his home to prepare fluoride-free water. He was elected mayor some months later, and on taking office attempted to halt appro-
priations for fluoridation. An ad hoc anti-fluoridation committee obtained the signatures of more than 10 per cent of the town's voters on a petition demanding that fluoridation be stopped. A local judge issued an injunction against it. The injunction was loosely worded; it banned the addition of all chemicals to the water. The water commissioners therefore halted chlorination as well as fluoridation, and one melodramatic evening issued a radio appeal to the public to boil drinking water. This literal interpretation of the injunction was greatly resented by the public. The injunction was eventually voided, but by that time opponents of fluoridation had succeeded in having a referendum on the subject placed on the ballot for the following November.

The pro-fluoridation leaders, mainly dentists, felt that the weight of scientific evidence and authority was so strong that they did not need to campaign intensively; moreover, they were justifiably unwilling to make enemies in the town. The anti-fluoridation forces, on the other hand, continued vigorous activity. They kept up an active telephone and letter-writing campaign. The night before the election the local newspaper carried two advertisements. One, signed by a majority of the dentists and physicians in town, soberly explained the virtues of fluoridation and urged its adoption. The other, sponsored by "The Northampton Non-Political Anti-Fluoridation Committee," was couched in these terms:

"DO YOU KNOW THAT--
"... Fluoridation is mass medication regardless of the needs or wishes of the people. . . .

"Fluoride is a poisonous waste from aluminum manufacture. It is dangerous and costly to dispose of. . . .

"Fluorine is a powerful poison that gradually depletes the body of calcium whether children or adults, with ill effects on organs as well as bones. . . .

"Fluoridation could play into the hands of our enemies. America is too big to be conquered by invasion, but with fluoridation machines at the reservoirs, the population in important centers could easily be wiped out or made non-resistant. . . .

"J. Edgar Hoover, head of the FBI, has warned the public to be on guard against any attempts at poisoning of public water supplies. (AP Dispatch, Feb. 27, 1951.)"

"THINK THIS OVER.
"LET US KEEP NORTHAMPTON'S WATER PURE AND NORTHAMPTON SAFE! VOTE 'NO'
ON THE FLUORIDATION REFERENDUM ON NOVEMBER 3, 1953.

Fluoridation was defeated by a vote of two to one.

I n our opinion survey, made during the week before the election, we interviewed a sample of 397 potential voters, selected on a quota basis to give accurate representation of the sexes and age and occupational groups in the town. That our sample was indeed representative was proved by later tests.

The persons interviewed were asked their opinions on pro- and anti-fluoridation statements representing the major themes in the controversy; on each item the respondent was asked to express his opinion on a five-point scale: agree strongly, agree, no opinion, disagree, disagree strongly. He was also requested, at the end of the interview, to indicate how he expected to vote.

The questionnaire was designed to answer two questions: first, how pro- and anti-fluoridation attitudes were distributed in the population; second, what role each theme played in determining how people would vote.

Who were against fluoridation? They were predominantly people of the older age groups, people without children under 12, people of the lower income brackets and middle- or lower-class occupations. Support for fluoridation came mainly from the younger groups and those in professional, managerial and other white-collar occupations. One of the most striking differences was in education. A large proportion of the anti-fluoridation voters had failed to finish high school. Among high-school and college graduates, the majority favored fluoridation. Yet there was a large number of graduates, even some with postgraduate education, who accepted the anti-fluoridation arguments.

Thus the demographic factors show two independent trends: (1) the younger people are more likely to be for fluoridation than older ones, probably in part because they are more likely to have children under 12, and (2) the people of higher education, occupations and incomes are more likely to be for it than those of lower social status.

The pro and anti groups were significantly different in their responses to specific arguments or statements about fluoridation. The disagreement between them was especially clear-cut on the question whether fluoridation had been a success wherever tried. The anti voters overwhelmingly refused to accept reports of its success or to accept scientific organizations as the best authorities on fluoridation. Many of them felt that public health officials, dentists and the chemical industry were in a conspiracy to impose the measure on the public; they agreed with the statements that "dentists will profit from fluoridation because it mottles the teeth" and that the "chemical industry is for fluoridation, even though it may be dangerous, because they will profit from it."

The deciding factor may be not the specific content of education but rather the set of attitudes toward scientists developed during schooling.

The anti-fluoridation voters on the whole seemed to be more impressed by the few deviant scientists and professional people who opposed fluoridation than by the organized medical and scientific groups that favored it. Some, indeed, as we learned in a later survey, voted against it under the impression that "dentists and chemists say it...is bad for children's teeth." In any case, a layman, not being trained to evaluate authorities, generally must commit an act of faith in choosing among conflicting points of view. This suggests that a major function of education should be the establishment of criteria, if these can be defined, for weighing authorities.

We were struck by the pervasive attitude of suspicion among those who opposed fluoridation. They were suspicious not only of scientific organizations but of the scientists themselves. To them, as to all those who fear the "egghead," it seems perfectly reasonable to suppose both that scientists would lend themselves to a conspiracy with enemies of our country, and that, at the same time, they would permit themselves to be used by a giant monopoly. During the campaign in Northampton (as elsewhere) it was rumored that the American Dental Association and the U. S. Public Health Service had been subverted by the Aluminum Company of America; the Dental Association was said to have received large research grants from Alcoa at the price for favoring fluoridation. Thus even those opponents of fluoridation who did not see a saboteur lurking in every corner were able to invest it with an odor of conspiracy by claiming that fluoridation was being promoted for profit.

The fear of conspiracy, which has
been such an important component of the anti-fluoridation cause, is often strengthened by the manner in which fluoridation is introduced. Usually it is arranged primarily in conferences between local dentists or public health authorities and town officials and technicians; public hearings are often held, but they rarely achieve wide publicity. The anti-fluoridation forces often move into the battle with full vigor only after fluoridation has been started. It is hardly surprising that they are able to convince a large portion of the population that fluoridation has been "put over" on them. In Northampton, for instance, 82 per cent of the antis, and even 32 per cent of the pros, agreed with the statement that the water commissioners had taken advantage of their position to start fluoridation without consulting the public. This despite the fact that there had been public hearings and an appropriation by the town council before treatment of the water began. The same sequence of events apparently occurred in Williamstown, Mass., in Seattle and in Cincinnati. The Cincinnati case is especially interesting because one person, a radio announcer, succeeded in creating violent anti-fluoridation sentiment in a city in which fluoridation had been adopted without much debate.

The case of Mt. Clemens, Mich., offers a contrast. There the director of water purification, on deciding that fluoridation was a desirable procedure, brought into play the active cooperation of such groups as the Parent-Teachers Association, the District Health Service, the school health services and local U. S. Public Health Service officials. The climate of public opinion was carefully prepared. Speeches presenting the facts were made at a large number of public meetings. There were demonstrations of the virtues of fluoridation by the P. T. A. in a local home exposition. When fluoridation was introduced, there was no opposition, and so far as we have been able to determine there has been no opposition since.

Undoubtedly for many of the 1,000 communities in which fluoridation is now a routine matter, such careful preparation was not necessary. This suggests an interesting research project: to compare communities which have erupted into a volcano of protest over fluoridation with those in which it was adopted with relatively little controversy.

Can scientists draw any lessons from the anti-fluoridation outbreaks? The strength of the opposition to fluoridation can be attributed to three important factors. Firstly, the anti-fluoridation arguments are understandable, easy to follow. Their weaknesses are often difficult for a layman to grasp. Secondly, these arguments are grounded in some of the most widely held ideas and emotions of our culture. In their appeal to respect for individual rights, to fear of poison, to a watchful conservation of public funds, they ring a bell for most people. Thirdly, they are clearly related to the Zeitgeist, the current suspicion of scientists, the fear of conspiracy, the tendency to perceive the world as menacing.

In contrast, the proponents of fluoridation have all too often ignored public psychology in presenting their case. They have relied too heavily on the fiat of organized science and have tended to dismiss opponents as "crackpots" and to deride their arguments. The greatest flaw has been the failure to prepare the public adequately. As a result there develops a polarization of attitudes which makes it very difficult to change opinion.

While it would be foolhardy to attempt generalizations about anti-intellectualism on the basis of this one phenomenon, our analysis of anti-fluoridation sentiment does suggest a pattern for the study of other manifestations. In examining any anti-intellectual movement we can ask what kinds of people participate in it, what fundamental motives and thought processes support it. If the fluoridation case is any indication, we shall find the motives understandable, if irrational. In our attempts to overcome anti-intellectual feelings we can try to avoid the errors of relying on prestige, of name-calling and of failing to reach people before issues become polarized. Unfortunately the pressure of events often makes this last step impossible. However, an attempt, at least, to understand anti-intellectualism and to meet it on its own ground should make it easier to defeat.
How A Community Loses — Case History of Cincinnati

by Al Schottelkotte

I'd like to amend the topic assigned me to read, "How a Community Loses Temporarily—"

Admittedly the program was defeated, and soundly, in a public vote in November, 1953. The final tally showed 76,612 persons against and only 55,904 in favor of fluoridation. But my own newspaper, The Cincinnati Enquirer, and the Scripps-Howard newspaper, The Post, both of which campaigned vigorously for the measure, have pledged that the fight hasn’t ended.

Our Cincinnati health authorities, too, have promised to give all assistance possible at any time it is considered practical to revive the issue. We have had a pretty bitter controversy, one which went to extremes no one could have anticipated. But some day the fluoridation of the public water supply in Cincinnati will be accepted. I might say too that we have litigation pending and any opinions expressed here are my own, not those of my newspaper.

As far back as 1948 The Enquirer carried an editorial on the pilot studies in fluoridation, and there were occasional mentions of projects in succeeding years. In late 1950 the Public Health Federation — our local health council — recommended that the city adopt the program. Approval came next from the Cincinnati Academy of Medicine and the Cincinnati Dental Society. The Board of Health assigned Dr. Francis Heyroth, a member and assistant director of the Kettering Laboratory at the University of Cincinnati, to make an independent study. His favorable report led the Board to recommend to the City Council that fluoridation be adopted.

On January 29, 1952 the Council, after a public hearing, unanimously approved fluoridation. On January 29, 1953 — one year after the Council’s approval — the superintendent of the waterworks announced in the papers that fluoridation of drinking water would begin by March 1.

No stir of opposition through all these years — then it came. A radio commentator who had been doing radio news in Cincinnati for 15 years and was the most listened-to radio personality in town, opened a crusade to bring out what he called the “other side” of the story.

This commentator was a vigorous anti-Communist and an enthusiastic supporter of Senator Joseph R. McCarthy. He did a 2-hour combination talk and record program early each morning and, each week day, at eleven, noon, five, and six o’clock, 15-minute news programs which included personal commentary. On his early morning program February 17 he called attention to an article in the then current Harper’s by James Rorty, “Go Slow on Fluoridation,” based on the hearings more than a year previous by the House Select Committee to Investigate the Use of Chemicals in Foods and Cosmetics — popularly known as the Delaney Committee.

The report already had been denounced and debunked by the American Dental Association and others, but it gave Rorty fine material for a scare article — and our commentator fine material for a crusade.

As a result of that first broadcast — which by inference and innuendo if not flat statement left you with the impression that all teeth could be discolored, bones softened and enlarged, unborn babies affected, and so on — a councilman asked the Board of Health for a new opinion on fluoridation.

The commentator’s blasts continued and dozens of letters from his listeners, many of the “screwball” type, began to arrive at City Hall demanding that the fluoridation plan be killed or postponed. Considering what they were hearing, you could hardly blame these people for being frightened. In virtually every one of his five programs a day, the commentator kept at it.

The mounting opposition described by Mr. Schottelkotte involved a much publicized television debate; organization of the “antis” under
leadership of a college sophomore and a retired school teacher (eventually the group split into two), and a new Council hearing. The City Council reaffirmed its approval of fluoridation of 14 months earlier by 8 to 1.

**Circulate Petitions**

But the opponents still had 30 days to circulate petitions for a referendum to overturn Council approval. By now fluoridation was the talk of the town. And the petitions, needing 15,000 signatures, came in with 22,000. That was in April, 1953 and the vote was set for November.

Both “anti” organizations opened headquarters in downtown hotels. Their money source never could be pinned down but their poison scare literature turned up all over town. This much is known — the out-of-town people who make a good living stirring up these fights and selling scare literature made a real killing in Cincinnati.

The pro forces were concentrated in a group which took the name “Crusade for Dental Health.” Its active members were comparatively few, and were primarily dentists, physicians, and persons interested in public health work. They sought donations from dentists and doctors without much success although the “antis” actually were calling doctors killers. Sixteen of the city’s top medical, health, religious, labor and civic leaders agreed to serve on the committee, and their endorsements were given wide publicity. The public schools’ PTA gave its endorsement.

As it happened, 1953 was a City Council election year and two Republican candidates, seeing what they thought to be an excellent chance to get votes, ran mainly on an anti-fluoridation platform. They lost, but their speeches and the publicity they received didn’t help the fluoridation cause any.

**Reasons for Defeat**

I’ve already told you the result of the referendum. Although there is danger of oversimplifying, the reasons for the defeat would include:

1. Certainly the availability of so much radio time to a commentator who had a lot of people believing that, since he was against Communism, anything else he said or did must be right.

2. The failure — and no one really can be blamed for it — to anticipate such a vigorous and vicious “anti” campaign.

3. Failure of dental and public health people, nationally, to bring home to the public the seriousness of the tooth decay problem.

4. Success of opposition in confusing the voters. The illusion was created that there was a definite split in medical ranks over the safety of fluoridation. The opposition did this with pamphlets and statements quoting the half dozen or so alleged “authorities” who, for one reason or another, choose to lend their names to the “anti” campaigns. I wouldn’t even venture an opinion as to how to handle this problem. You can’t deny a man his right to speak or write what he thinks. All you can do is try to show that the person is voicing just one opinion in the face of overwhelming evidence backed by all of the reputable medical and health groups.

5. The Delaney Committee hearings and report, which gave what seemed to be Congressional support to the credibility of many arguments of the so-called opposition “experts”. It isn’t the factor now that it was in 1953.

6. Natural reluctance of the public to accept something which is new.

7. Inability of the proponents to stay out of debates, which give the public the idea that, yes, there are two worthwhile and legitimate sides to this picture from the safety standpoint.

8. Failure of the physicians and dentists, for the most part, to realize that they were in a political slugging match rather than a scientific discussion. For instance, a suggestion that they get volunteers to the polls on election day with suitable handbills was not even given serious consideration. But the opponents were there with their rat poison stuff.

9. Failure of the city’s dentists and physicians, generally, to contribute money and time. There were some who just about abandoned their practices for the campaign, but they couldn’t do it alone.

I’m afraid the dentists and doctors were remiss in another way. They never did quite grasp the fact that “dental caries” may mean to the average person a group of female dentists named “Carrie.” You can’t talk to the public in technical terms and expect to be understood.

A representative group from the medical and dental societies should go to the editors before the campaign gets started and be very frank about telling them what the situation is and what is liable to happen. It is a tragic mistake to let people find out about the campaign through the rat poison literature on their doorsteps. The fight is really in laymen’s circles, however.

That’s how the Cincinnati story was read by the unpracticed eye of this layman. A much better appraisal of it will be available soon when a University of Cincinnati sociologist completes a detailed study, and I urge you to watch for it.
History of Fluoridation in San Diego

In the Spring of 1951, the San Diego City and County Boards of Health began to study the value of fluoridation of the city's water supply as a means of preventing dental decay in children. During the next seven months, they discussed fluoridation with the San Diego County Dental Society and San Diego County Medical Society; Community Welfare Council; Ninth District, Parent-Teacher Association; Chamber of Commerce; Central Labor Council; American Federation of Labor; and other organizations interested in the health of San Diego.

In turn, each one of these groups made its own investigation of fluoridation as a way of preventing tooth decay. In the end, every one of them endorsed fluoridation and petitioned the City Council to supplement the naturally existing 0.3 part of fluoride per 1,000,000 parts of water already present in our city water system.

In October, 1951, after several public hearings and considerable study, the Mayor and Council of the City of San Diego adopted an ordinance which authorized supplementing the naturally existing fluoride content of the city water supply up to 1.0 part per 1,000,000 parts of water. Before taking this action the San Diego City Council secured expert evidence on this technical and scientific issue. During their investigation, the Council found that every recognized dental and medical authority in San Diego County, the State of California, and the United States supported and recommended fluoridation. These authorities included the San Diego County Dental and Medical Societies, Sand Diego City and County Boards of Health, and the state and national counterparts of these organizations.

Although the Council ordered fluoridation commencing in 1951, San Diego did not actually start the fluoridation program until November 10, 1952. This delay was due to legal action. Those persons in San Diego who were opposed to fluoridation obtained a temporary injunction against San Diego city officials, restraining them from carrying out the fluoridation program. On April 3, 1952, Judge Dean Sherry of the Superior Court of San Diego County agreed with the defendant (City of San Diego) that the plaintiff did not have a case. The following excerpts from Judge Sherry's opinion for the motion for non-suit:
"Therefore, no constitutional rights of any of the citizens of San Diego to freedom of religious belief would be invaded or violated by the adoption of the proposed program."

"Plaintiff complains that the program, if carried out, would constitute a trespass on his person by compelling him to take medicine against his will. Ordinarily, a trespass must be founded on an injury. Plaintiff has not shown that he will be injured by the adoption of the program."

"For the reasons stated it must be held that the plaintiff has not proven that the program here under attack has or will invade any of his constitutional rights, or that the carrying out of the program mentioned will in any wise injure him. On the other hand, the facts in evidence and the authorities cited herein demonstrate convincingly that the adoption of the fluoridation program here involved is a valid exercise of the police power of the City."

On April 9th, a motion by the plaintiff for a new trial was denied and an appeal was filed. This delayed fluoridation until November, 1952. Subsequent review by the Appellate Court, and denial of hearing by the Supreme Court of the State of California as well as the United States Supreme Court, upheld the decision made in 1952 by the Superior Court of San Diego.

The opposition then circulated an initiative referendum petition and was successful in obtaining the required 17,488 qualified signatures. During this time, considerable unsubstantiated propaganda was circulated in San Diego by local, out-of-city and out-of-state individuals and groups opposed to fluoridation. The local organizations were the Citizens' Health League; Citizens Against Mass Fluoridation; and the Organic Health Foundation of America, San Diego Chapter. The work of these organizations was publicly endorsed by the chiropractors, certain religious groups and individuals who hold what could be described as extreme opinions in regard to nutrition. Later, when the issue was placed on the ballot, the opposition to fluoridation was represented by the Citizens' Pure Water Committee, which was composed of individuals from the same groups who supported the petition.

At the time that the opposition to fluoridation circulated the initiative referendum petition, various individuals and agencies in the community formed the Citizens' Committee for Children's Dental Health to promote interest in retaining fluoridation. The sponsoring organizations who
were active members of this committee included the San Diego County Dental Society; San Diego County Medical Society; San Diego County Dental Society Auxiliary; San Diego County Board of Health; San Diego Chamber of Commerce; San Diego Junior Chamber of Commerce; San Diego County Service Club Presidents' Council; San Diego County Tuberculosis and Health Association; Cerebral Palsy Foundation of San Diego County, Inc.; Central Labor Council, American Federation of Labor; Community Welfare Council; Coordinating Councils of San Diego County Board of Directors; Ninth District, Parent-Teacher Association; plus many prominent citizens representing many aspects of community life. The action taken by the Citizens' Committee for Children's Dental Health was also strongly supported by the State Board of health and the State Director of Public Health. When fluoridation was placed on the ballot, the Citizens' Committee for Children's Dental Health raised funds to employ an executive secretary and carry out a program to inform the citizens of the true facts of fluoridation. At this point, in accordance with County Counsel opinion and established legislation, the San Diego Department of Public Health was limited in its participation. Once the issue appeared on the ballot, the opposition immediately called the attention of county officials to the Hatch Act and other legislation which limits participation of official agencies in matters referred to the electorate on the ballot.

On June 8, 1954, the citizens of San Diego who voted at the State Primary Election decided against continuing fluoridation. Proposition "A" appeared on the ballots as follows: "Shall the ordinance initiated by petition of the required 10% of the registered voters of the City of San Diego prohibiting the fluoridation of the San Diego municipal water supply, be adopted?" The final vote on this proposition was:

YES................. 50,789 or 53.3%
NO................. 44,463 or 46.7%

It should be noted that because of the confused wording of the ordinance, a YES vote was against fluoridation by favoring adoption of the initiative referendum petition and a NO vote was in favor of fluoridation by rejecting the petition. According to the Registrar of Voters there was an extremely light turnout for the election with only about 55% of the voters going to the polls on June 8th.
The Citizens' Committee for Children's Dental health was handicapped by a limited budget and the amount of time necessary to organize. Members of the committee also found that the greatest obstacle was to convince those in favor of fluoridation that the vociferous minority opposed to fluoridation would secure substantial citizen support. Many persons felt that the extreme claims and sensational propaganda against fluoridation would be rejected by the citizenry. However, the fears and half-threats that fluoridation would be harmful, together with the confused wording of the proposition on the ballot, influenced the majority of the voters against fluoridation. The fears of many people plus the feeling on the part of those in favor of fluoridation that the program was not seriously in jeopardy, were the factors largely responsible for the discontinuation in San Diego.

Many individuals have asked questions concerning the future of fluoridation in San Diego. The reactions of citizens following the discontinuation of fluoridation are evidence that there exists a great deal of interest in reopening the subject in San Diego. We in public health, together with the Medical and Dental Societies and the hard-working members of the Citizens' Committee for Children's Dental Health, took the loss of fluoridation very seriously, for the dental health of our children is of grave concern to all of us. We would certainly support a citizens' movement which would again bring this matter of the fluoridation of the city water supply before the people for their further consideration and vote. If the citizens of San Diego do take such action, the wording on the ballot will be such that a YES vote will be in favor of fluoridation and a NO vote will indicate opposition. In the final analysis, whether fluoridation will ever be considered again in San Diego depends entirely upon the wishes of the people of San Diego.

Compendium of Replies to Inquiries

1. When the water of San Diego was fluoridated, were there any clinically established ill effects on the residents?

There is ample evidence in scientific literature establishing the safety of fluoridation of water supplies up to one part of fluoride per million parts of water. On November 10, 1952, San Diego supplemented its naturally occurring fluorides (.3 ppm) up to one part per million. During the 18 months that fluoridation was in effect in the City of San Diego, there were no reported
instances of harmful effects that came to the attention of any recognized physician and surgeon or dentist in this area, and according to the literature, there have been no reported cases elsewhere in communities fluoridating their water supply.

2. Was there any significant change in the mortality rates?

The crude death rate of the City of San Diego has continued to decline while the birth rate has continued to increase. The provisional crude death rate per 1,000 population was 7.5 for 1953 in San Diego, which is well below the crude death rate of 9.2 for the State of California, and the rate of 9.6 for the nation.

3. Was the taste of the water changed?

The water supply of the City of San Diego is primarily derived from the Colorado River which has hard water with a high mineral content. There was no noticeable change in the taste of the water when fluoridation began or when it ceased.

4. What were some of the arguments advanced in San Diego on behalf of the discontinuation of fluoridation?

The salient points against fluoridation were summarized as follows in a leaflet which was distributed by the Citizens' Pure Water Committee, the organized group which opposed fluoridation. This summary appeared at the end of the leaflet and was preceded by questions concerning fluoridation which were very similar to those that have appeared in other areas:

"Here is why you are urged to Vote YES ON PROPOSITION 'A' to pass the ordinance that will STOP FLUORIDATION:

"(1) According to reliable authorities, there is conflicting evidence about the effects of fluoridation. There is a REASONABLE DOUBT about it. And when the experts disagree, the public should beware.

"(2) After all, fluorine IS a deadly, cumulative poison. It is therefore important to your health and the health of your family that you be ABSOLUTELY SURE about its safety.

"(3) There are several safer, cheaper, more scientific ways to get fluorine treatment for those who want it, without forcing it on EVERYONE, and increasing the tax load to pay for it."
(4) Scores of cities and towns that have tried artificial fluoridation have later discontinued it. WHY? There must have been a good reason.

(5) Finally, and most important of all: No amount of arguing or statistics can cover up the fact that artificial fluoridation is COMPULSORY MASS MEDICATION, and it has been so described by medical authorities. Fluorine is added to your water for just one primary purpose—to give you a dose of medicine... and with no control over the amount of the dose or who is to be dosed. If you can be forced to take poison—even in small doses—what next?"

The appeal to fear and the use of unsubstantiated facts in a manner that implied authenticity were dominant characteristics throughout the campaign against fluoridation.

5. What were the salient points advanced by those in favor of fluoridation?

Here again, the arguments in favor of fluoridation are essentially based on the proven facts in the resource materials available through medical and dental societies. Therefore, the materials used in San Diego in favor of fluoridation are similar to those that have been used in other communities. In addition, the City of San Diego conducted a survey of public and parochial school children which was also included in the literature for fluoridation, as follows:

"A survey made in the San Diego City Schools in 1953 revealed that by age 17, 98.3% of the children have had some dental decay. It also showed that the average 17-year-old has already lost at least one permanent tooth."

Also, San Diego has been fluoridating the water for over one year and this was another factor emphasized in refuting the claim that harmful effects resulted if the water was fluoridated.

6. What was the attitude of the medical and dental practitioners to fluoridation?
The medical and dental societies endorsed and supported the program of fluoridation when it was first proposed in 1950-51, and generously supported the continuation of fluoridation during the court injunction as well as before the primary election of June 8, 1954, when the issue of fluoridation appeared on the ballot by an initiative referendum petition. Both of these professional bodies, being public health minded, supported the organization to keep fluoridation in effect by participating in a Speakers' Bureau and providing some of the funds necessary for a campaign to inform the citizens of San Diego.

7. Is it possible to secure copies of any materials, pamphlets, etc., used during the fluoridation campaign in San Diego?

The material used by those opposing fluoridation is very similar to that used by such groups throughout the nation. The materials in favor of fluoridation, which were distributed by the Citizens' Committee for Children's Dental Health, were all used during the campaign. We are sorry, but we do not have copies for distribution to interested persons.
PARENTS DOUBT TABLETS CUT TOOTH DECAY

City can't give away fluoride pills

Almost an entire shipment of 100,000 fluoride tablets are collecting dust on shelves in the Newark Health Department because parents apparently still doubt claims the pills cut down tooth decay in children.

Since the Health Department received the tablets in mid-May for free distribution on prescription, only eight parents have appeared to take home 300 pills. That leaves 99,970 tablets laying around.

Health Officer Aaron H. Haskin said public apathy toward taking the pills apparently is influenced by doctors and dentists, most of whom prefer fluoridation of the water supply.

"NO EVIDENCE"

Dr. Haskin, also an advocate of fluoridation of water, claims a majority of doctors and dentists do not believe the tablets are effective in reducing cavities.

"There has been no evidence to date," Dr. Haskin declared, "that fluoride tablets will reduce dental caries (cavities)."

He said the problem of tablet distribution and the tendency of individuals to take them improperly would cut down on any possible good effects.

"As for fluoridation of water," he added, "there have been reports that tooth decay has been reduced by as much as two-thirds."

CITIES PARENTAL FEAR

Dr. Haskin said public apathy toward the tablet program was also probably due to a small degree, to parents who fear fluoridation is harmful.

City Council adopted the program last February after a proposal to add fluoridation to Newark's water supply was beaten.

The action came after a long study and public hearings at which proponents and opponents argued whether fluoridation of water is harmful.
Why Fluoridation Was Defeated

in Long Beach, California

YES. We lost an election but the dentists of this West Coast city of 300,000 think the people of Long Beach lost a great deal more when they turned down the proposition to add fluorine to their public water supply. The children here may not have the highest caries rate of any city in the United States, but it is far higher than it should be.

In a recent survey of preschool children between the ages of two and six, it was found 43 per cent needed dental attention, and in the older group the percentage was higher.

The Harbor District Dental Society, of which Long Beach makes up the greater part, worked carefully in the four years before election to prepare and educate the people on this vital health measure.

The Public Health Officer and his staff stood strongly behind the project. The medical society needed no education to swing it over to our side. Members of both the dental and medical societies, along with the health officer, gave talks on fluoridation to the children in the schools, to their mothers and teachers at PTA meetings, and to their fathers at luncheon clubs and lodges. Most of the dentists tried to educate their patients on this caries preventative in their own offices, but the day of the election only one-sixth of the population came out to vote and the opposition won by a slim 8000 majority.

Naturally after all the efforts the dental society had put into this, the members were discouraged. At first with many dentists the attitude was, "To heck with the people. If they don't know enough to help themselves, we'll go on filling their teeth." But after the first re-action faded, the dentists knew they could not let the public down. This was only a first round. They would try again another time.

Doctor Dan E. Tannehill, chairman of the fluoridation committee; Doctor Virgil Ridgeway, co-chairman; Doctor Frank Blair, Harbor District President; Health Department officials, and others advocating fluoridation, got together to find out why the proposition had been voted down and perhaps figure out how to profit by the mistakes made.

Reasons for Defeat

After much study the committee decided on five reasons why fluoridation had not won, any of which might have turned the votes in its favor. When we checked dental societies in other cities that had lost the fluoridation vote, they found similar reasons for defeat.

1. The first reason fluoridation lost was the measure did not have the full cooperation and endorsement of the press. The supporters forgot that the editors and publishers of our newspapers, and feature writers, were dental patients, and more likely to accept and evaluate scientific facts if properly presented than almost any group of the lay population. However, these men should have been able to convince them fluoridation was needed. Supporters of the measure did take the time to do this with one Sunday feature editor, and from him they had favorable articles and editorial comment. The others they took for granted, and when the opposition sent in a flood of copy against fluoridation, it fell on ears unprepared to evaluate such information. The result—no definite stand by the newspapers, which left the way open for the opposition's campaign of fear and confusion.

2. The opposition had their campaign carefully planned in advance, and apparently by a national organization, as the news releases followed the same pattern as in other cities that voted on fluoridation. The opposition's headlines were sharp and to the point. They stressed one thing, fear. Fear of being poisoned, fear of socialism, fear of a communist plot. When the advocates of fluoridation published a claim, it was always supported by clear scientific proof endorsed by leaders in the medical and dental professions both nationally and locally known for their honesty and integrity. The opposition held frequent meetings and threatened people present; they reported their meeting to the newspapers in such a way as to garner headlines that usually followed a pattern stressing fear and creating confusion in the ranks of the pro-fluorine followers. Headlines read, "Pyorrhea Caused By Fluorine," "No Proof Fluorides Will Prevent Dental Decay," "Speaker Claims Russia Behind Fluoride Move To Poison Children," or "Chemists State Fluorides Present In Rat Poison."

Had we known the opposition would flood the papers, signboards and the airways with such a mass of unbelievable drivel, we would have warned the people about it beforehand; but although we had read something about the tactics of the anti-fluoridation group, we never thought they would go to these extremes. At first we laughed at the stories we saw printed; then as we began to talk to patients and lay friends we found that although most of them did not really believe the opposition's claims, the resulting confusion was enough to keep many from giving fluoridation their full unreserved support.

A member of the Harbor District Dental Society tells why their campaign for fluoridation failed, and how they plan to correct their mistakes in the future.

BY DOUGLAS W. STEPHENS, DDS*

*Doctor Stephens is Editor of Harbor District Journal and member of the staff at Sea Side Hospital, Long Beach.
3. We learned when fear is employed expertly it can swing more minds than cold figures and facts. This fear program undoubtedly was the reason the PTA did not come out and give fluoridation its full membership support. We had educated the leaders of the parent-teacher organization and thought we had also done a good job on the rank and file, but the fear and confusion campaign showed us our educational program had not been as thorough as we had thought. A strong active PTA on our side, using their telephones and automobiles to bring out the vote would have been a great aid to our dental group.

4. Wrong timing in holding the election was the fourth reason fluoridation lost. Instead of bringing the proposition up for a vote at a general election when important state and county measures and perhaps state or national officers would be voted on, we presented it at a minor local election when only a few unimportant items other than fluoridation were on the ballot. The result—no crowds at the polls.

5. The fifth reason for losing was the amount of money spent by the opposition. This was and still is a great mystery to those of us who favored fluoridation. The dental, medical, and pharmacy societies each bought half a page in the local papers the day before election and published good statements in favor of the bill, listing the prominent professional men and others in town who advocated approval. The bar association did the same. However, our society, and I expect the other professional societies, did not have sufficient funds budgeted from the society's treasury to spend on the election. On the other hand, the opposition spent money on every form of advertising, even to sound trucks going through the streets blaring, "Don't Poison Your Children. Vote No On Fluoridation."

And where did the funds come from? They surely did not come from the thirty odd thousand who voted against the bill, for there was no collection from the little people!

It is true a few outspoken citizens were strongly opposed to the measure, but on close study these people were found to be ones who always take the minority side in any measure on the ballot for the pure joy of a political fight. None of these people has ever been known to spend anything but their time and their voices on any of the causes they have supported.

The next time the dentists of Long Beach put this measure on the ballot, they plan: First, to win over the press; Second, to warn the public what to expect from the opposition before they start their campaign of fear and confusion; Third, to get the wholehearted support of the PTA behind the measure, making sure not only the leaders but the rank and file know the true story of fluoridation; and finally, to put the measure on the ballot during a general election when there are other important issues to be voted on at the same time and an assurance that a more representative segment of the population will turn out to vote.
Just who is winning this controversy over water fluoridation? Despite all the hullabaloo emanating from the opposition, the answer is — the people. Currently, controlled fluoridation of community water supplies is in operation in 1,048 communities throughout the United States. These water supplies serve a total population of more than 20,275,000. In addition there are about 3,500,000 persons residing in communities where water supplies naturally contain fluoride ions. In other words about one-fourth of all the people in this country served by a communal water supply are drinking fluoridated water. Many have approved fluoridation and can reasonably be expected to place it in operation in the very near future.

There is good reason to believe that in time fluoridation will be as common and as uncontroversial as the pasteurization of milk and the chlorination of water are today. However, we cannot sit idly by and ignore the small but highly vocal group of self-appointed health “authorities” who are opposing fluoridation. This group includes some of the nation’s outstanding quacks and medical phonies. The worst they can do is to delay fluoridation. But the cost of such delay in terms of needless dental decay is staggering.

Some leaders of the anti-fluoridation movement are motivated by religious beliefs; others are attention seekers, pamphleteers trying to make a few dollars, dissidents and malcontents among the professions, and a large assortment of emotional characters. But no matter what their motives, they must be dealt with in almost every community where fluoridation is proposed. In some, the opposition has collapsed in the ridiculousness and tremendous diffusion of its own arguments. In others, the opposition has prevailed rather effectively as Mr. Schottelkotte has reported so well.

Support by health agencies and by the health professions simply is not enough. Why do citizens refuse to accept the word of health authorities on health procedures? Bernard and Judith Mausner, writing in *Scientific American,* suggest that the defeat of fluoridation may be attributed to a growing anti-intellectualism, to a “current suspicion of scientists, the fear of conspiracy, the tendency to perceive the world as menacing.” Whether this be right, the health team is apparently inadequate by itself to convince a community a public health procedure should be adopted.

This inadequacy does not apply solely to fluoridation. Not long ago, several communities that should know better refused to permit a test of a polio vaccine simply because some gossip columnist had warned against it. Vaccination, chlorination, and pasteurization all were opposed viciously. It does seem, however, that an undue amount of superstition, emotional prejudice, and outright deceit has been gathered together in some of these anti-fluoridation camps. These forces, however, are more vocal than numerous as the continuing approval of fluoridation programs throughout the nation indicates.

**The San Francisco Story**

One of the earliest of the successful fluoridation campaigns was conducted in San Francisco. Early in 1951, the San Francisco Dental Society proposed to the Board of Supervisors that 40 per cent of the city’s water supplies be fluoridated. Nine supervisors approved fluoridation but protests from two led to a referendum.

As the issue was moved from the scientific to the political arena, a truly representative Citizens’ Committee for Fluoridation was formed. Among its members were a member of the Board of Supervisors, the superintendent of schools, a member of the board of education, a past president of the Chamber of Commerce and former chairman of the Community Chest, a professor of biochemistry, a vice president of a large insurance company, PTA leaders, and officers of such groups as the League of Women Voters and the Junior League. A local labor leader was elected chairman.

At this point the dental profession wisely limited its activities to assisting the Citizens’ Committee.

With little financial support, the committee concentrated on less expensive activities such as providing speakers for civic clubs, neighborhood groups, and business organizations, a “letters to the editor” campaign, and the endorsements of various groups. Several thousand copies of a pam-
Palo Alto Referendum

While the “antis” defeated fluoridation in several cities last November 2, an outstanding example of their own defeat was provided at Palo Alto where fluoridation was approved 7,500 to 6,000. Considering the violence of the opposition this vote is significant.

The movement for fluoridation in Palo Alto was launched in 1953 by the Junior Chamber of Commerce. For several months, it consisted primarily of an education program. Some three months prior to the November 2 election, the Dental Health Council, which was the community group sponsoring fluoridation, decided to operate its campaign strictly along political lines.

The campaign concentrated on three main points:

1. “For the facts about fluoridation — ask your own physician or dentist.” The community’s professional men unanimously backed fluoridation.
2. “This is the time to be known by the company you keep!” — names of more than 1,000 community leaders were used in advertisements.
3. “The merchants of fear send their salesmen to Palo Alto — but we don’t scare easily.” The anti-fluoridationists imported professional men opposed to fluoridation from San Diego and Seattle.

The opposition was organized under the name of the Pure Water Association of America. The chairman was a 44-year-old religious book and health food salesman. One of their principal activities was a “letter to the editor” campaign which was fairly effective in confusing the voters.

In July, basic decisions were made regarding the pro-fluoridation campaign organization and campaign finances. A steering committee met weekly. It was composed of committee chairmen working as a team. Represented were the committees on finance, public relations, precinct organization, professional liaison, speakers’ bureau, and ways and means.

Precinct workers were organized by school areas to coincide with Parent-Teacher groups. Women conducted a doorbell ringing campaign which revealed accurately that the older, more conservative sections would vote against fluoridation while the newer sections populated by young married couples with children would favor it.

The total budget was $2,000 and expenses came within $100 of this figure. Many services were donated including those of a competent public relations man. The principal item of expense was for newspaper advertising, which the committee believed to have been a “must.” In addition to the advertisements, the Dental Health Council distributed auto bumper strips, hand out pamphlets, and used direct mail.

This successful campaign proves that once a scientific measure is plunged into the political arena, political measures are necessary if it is to survive politically.

Report to the People

Another point which I believe has been demonstrated time and time again throughout the nation is the need for a full and objective report to the community on any plans for fluoridation. I do not believe, however, that there should be a formal debate. That would be like having a debate on the composition of salt.

As a matter of fact, the anti-fluoridationists do not always appear. There was not a ripple of opposition as Osawatomie, Kansas celebrated the fact that it was the 1,000th community in the United States to start fluoridation of its local water supplies. Everyone knew about the plans for the celebration and the decision to add fluoride ions to the local water supply seemed unanimous.

I think we can agree that any community that really wants fluoridation can have it...

Dr. James H. Shaw, of the Harvard School of Dental Medicine, in a preface to a recent monograph of the American Association for the Advancement of Science, said: “... there appears to be no doubt but that, through the providence of nature, no other public health procedure in the annals of history has been so thoroughly tested in field trials under the widest variety of controlled circumstances.”

The scientific evidence is overwhelmingly favorable regarding the benefits and safety of fluoridation. Its legality has been upheld in every case. The problem remaining is the matter of obtaining community acceptance. And that is a problem which each community must utilize its own resources to resolve.
REFERENDA FOR FLUORIDATION*

Charles A. Metzner**

The original title suggested to me was "How to Win Referenda for Water Fluoridation Projects." I mentioned that it might well be less optimistic, not only to be honest with you, but more important to you, to be honest with myself. While the academic tradition of a four volume work entitled "Preface to an Introduction to Some Consideration of the Problems That May Be Found in Certain Communities Concerning Fluoridation of Public Water Supplies" is not altogether a happy one, it does have the merit of inducing humility. And we do have trouble between our own conception of the importance of what we know and the realization of its limitations. It is the realization of its limitations that keeps us working and prevents us from succumbing to the fast sell that brings fleeting fame and some difficulty with mirrors. The temptation is all the more great when we are honored, as I have been by you, in having our advice asked on a subject of real importance. Since I do not want to keep repeating, "I believe" and "the evidence suggests," notice is now given that, while I believe what I have to say is true and useful, it cannot be swallowed whole as a pat answer to relieve you of all responsibility for checking your own situation. Indeed, much of what I say is simply a guide to things to look for. But I need not dwell on this longer. In the United States, in the Fall of 1956, I can get the point across by saying that if I were really so good at telling people how to get votes for their side, there would be much competition for my services from at least two other organizations. Contrariwise, it is instructive that more and more frequently interview surveys and social analyses are being used politically.

Analysis: The Two Situations

Two situations in which there may be an effort to secure fluoridation can readily be distinguished. These are the period of relative calm before fluoridation has become a political issue, and the period after.

The first situation has all of the advantages of its calm for the presentation of facts and their consideration without pressure for immediate decision. It is one of my major theses that a hasty decision in the absence of sufficient knowledge will be for postponement. Notice that I do not say a decision against fluoridation. I do assume insufficient information on the part of many and no pressing desire for the claimed advantages, but of this more later. It may be said here, however, that I have confidence that if the facts were known, there would be a demand for fluoridation. This may be re-read as - if the facts were known, there would be a demand for fluoridation - and there is not.

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The second situation, in which there is an impending referendum, is much more difficult, because unless we have handled the basic situation, we have all of the problems of the first and less time to handle them. We also have excitement that goes ill with reason. Professional groups find their position as experts questioned and their efforts shifted from education to politics, neither of which contributes to their calm. This situation can be viewed as an intensification of the first, and it is very interesting to the social scientist because it makes apparent some things that are otherwise difficult to observe. Just as a crisis is a test of a personality, so it is of a society. The seams become sprung under the stress, and the bonds become tighter. A kind of crystallization occurs, but the structure follows lines and forces that were always there. It is for this reason that we cannot divorce the two situations completely, and why one sketch of the basic society will serve for both.

A third situation should be remembered, although for our purposes it may be much like the first, except for some in-fighting; this is the period after fluoridation has been established. If the effort has been successful on the narrow basis of convincing a few "important" people, it is always subject to reversal by reconsideration by the same or a wider group. Let the number of cities that have de-fluoridated serve as a warning that only a thorough job of conviction can be relied on. Let us also remember that this is as it should be; this is what we mean by democracy. I hope we cannot sneak much past our electorate...

Problems: Communication and Status

These rather too general remarks should be sharpened by specific statements of problems to be encountered. For easier handling and because I have some feeling of repeating myself after three other talks on highly related subjects, I will try to keep them short and number them, although they are interrelated and some are of formidable complexity.

1. Many people are still not familiar with the facts of fluoridation. In support of this may be repeated the previous argument that, if people did know, there is every reason to believe there would be a positive demand for fluoridation. The best evidence supports this also, and it is certainly reasonable from what we know about the trickle of like material through our society. A special problem is the difficulty of convincing professionals that everyone does not share their interests or have access to the same materials.

2. There is no great interest in oral hygiene. The utilization of dentists fluctuates greatly with aggregate income. It is eminently elastic, indicating a non-critical commodity. Many, many people do not go to dentists and of those who do many may be as interested in appearance and status as in health. Although dental caries constitutes a disease problem of some magnitude, there is no large voluntary organization supporting measures, such as fluoridation, to overcome the problem.

3. The facts on fluoridation are technical. The very elaborateness of the studies undertaken to estimate the effects of fluoridation makes for difficult reading. Not many people are concerned with or understand the nature of an experiment, particularly when it involves statistical analysis. It strikes me that the history of the discovery is more easy to comprehend, emphasizes the natural basis of this nutritional finding, and is more convincing concerning possible side effects. This is not, however, as widely used as the comparative studies, whose precision is greater, but this precision does have side effects. Having taught or attempted to teach statistics to college students, I have few illusions about the interest or understanding of the general public. It is also true that the exact nature of the process whereby adequate fluoride intake reduces dental caries in children cannot be explained.
4. There are special social blocks to communication. Of course, disinterest and technicality are social blocks in the sense of being associated with special strata in society. There seems also to be some difficulty associated with the position of the dentist in our society. That position appears too high for many people, the very great many in the lower strata, so that they do not conveniently meet and listen to dentists, but not so high that his transmitted word is accepted without question. This is complicated by arguments within the profession, too.

5. The opposition is overestimated. Partly perhaps to augment our own self-perceptions, but mainly perhaps through not appreciating the complexities of our society, we are prone to ascribe anti-intellectual and anti-scientific attitudes to those who block our actions. This reminds us that we are intellectuals and scientists, but it is not explanation, and overstates the case. Not everyone unwilling to give us a green light is an opponent. Many of them I believe are un-informed and unwilling to operate on ignorance. That we do not have their faith is not altogether a defect. The proportion that we find in attitude studies who have closed minds or anti-intellectual attitudes is actually quite small. This is one of the things that makes election predictions difficult and election campaigns important. Furthermore, in hearings and in referendum arguments we find the same people over and over again. The same names crop up here and there, within a city and even over the country. Their intensity and omnipresence makes them appear like a multitude. They seem, indeed, much more concerned than the proponents.

6. To achieve conviction is more difficult than to create doubt. This should not require much discussion, but it is an important and frequently forgotten phenomenon. Much information, all pointing in the same direction, is necessary to ensure belief, but a single contrary piece of evidence may shake it. Ordinarily we are content with a statement that is largely true, when there is not much at stake, but in the realm of health we want to be pretty sure, unless the proposal is a last hope for something we cannot live with.

7. In doubt, people vote against change. This is particularly true when the positive outcome is not considered crucial and the negative risks are supposed to be great. Why not wait until the arguments are settled? This is related to the fact that the proponents are not as vocal nor as alarming about nonacceptance.

8. A referendum creates doubt. The very fact that community leaders have asked the people to decide indicates that the leaders lack belief in the experts who propose fluoridation. It may be true that the leaders, who are politicians, may only be wary of tackling a vocal, active opposition if they can avoid it. Leading a fight may be noble and statesmanlike, but it is dangerous to someone who is already in office. It may be that politicians are not convinced that the proponents could successfully back them up if it came to a fight. Frequently they are right to be skeptical.

9. A referendum changes the situation from educational to political. I have already commented on the intensification of activities that this creates. One aspect of this is to cause people to depend more on established personal relations than on abstract discussion. All argument tends to become ad hominem, and testimonials attain many times their previous potency as compared to statistics.

10. Members of a profession are at a disadvantage in politics. By choice, by training, and by precept the members of a profession should not engage in what is politically necessary. There should be no blatant calling of attention to oneself, there should be no appeal to uninvolved motives, there should be no derogation of an opponent, there should be no formation of pressure groups, particularly in our own
support. I would not claim that all professionals always followed all of these principles. But the attempt to do so at least gets us out of practice. Many of us do not speak easily in and to the public, cheap appeals do not come quickly to mind, we are not good at mudslinging, and do not know how to organize a door-bell campaign.

This list may be lengthy, and the answers may not come easily, but I think this is what we face. I am, of course, singling out and thereby stressing the difficulties. Referenda have been won.

**Approaches to Solution**

I suppose it is apparent that I consider the best way to win a referendum is to have prepared for it by a thorough educational campaign. This is more than a public health preference for prevention. Political activity puts the proponents of fluoridation at a disadvantage. In trying to avoid a direct political fight, however, we should not avoid politics. We must get over our feeling that there is something unworthy about it. In a democracy politics is a duty, and in any society politics is a necessity. What I would like to suggest as politics is simple democratic, indeed human, attention to the other fellow.

First in importance as well as in presentation is to remember all of those who have a legitimate interest in the project. If fluoridation is under consideration, bring as many as possible into early planning. More than one fluoridation battle has been lost because it was forgotten that the city engineers are necessary to implement the procedure. Dentists simply cannot, either technically or socially, institute fluoridation by themselves.

A thorough educational campaign requires much help and a high degree of organization. I have already indicated the difficulties in reaching, which is still not convincing, all of the people. Some of this can be handled by special attention to bringing in to the planning those groups separated from us by some social distance. Remember the unions and the smaller church groups. It is particularly important to pay attention to those groups that have many members relatively uninterested in written words. Advertising men and public relations experts can help you with this. Material must be prepared for many audiences, for oral as well as written presentation in as many different kinds of places as possible. You have to try to reach everyone, particularly those not now in contact with dentistry; you have to overcome the technicality of the argument for fluoridation; and you may have to motivate many to consider important what you may take for granted as a goal - the reduction of dental caries. There must be a broad appreciation of oral health as a goal to have fluoridation accepted as a means. I suppose that the most effective widespread appeal in the United States is for the health of children.

In the writing, health educators have their proper place - in fact, their vocation. Dental hygienists are trained for education also, and having much experience with spoken (I almost used oral) presentation, they may be particularly suited to this. Since this is one of the new professions, it is an avenue for rising in status, and many dental hygienists can therefore be of particular help with groups otherwise hard to reach. That is, because dental hygienists represent a status between dentists and some other groups in the population, both technically and socially, they are well placed for communication. Remember also that you should not hesitate to ask for help. It is flattering, and by giving other people responsibility, you make them firm allies, whereas neglecting them when they feel they ought to be involved will antagonize them...

If public education has been well done, one need not fear a referendum. The group that helped in education could well aid in avoiding the necessity of a refer-
endum by assurance that most parts of the community were thoroughly in back of, indeed, asking for, fluoridation. Their number could make it easy to recognize the opposition for the small number they are. Certainly having this apparent is necessary to convince political figures that they can safely make a decision. I firmly believe, because of what a referendum implies concerning the openness of the argument, that a referendum should be avoided, except as a means of convincing timid officials that you actually had secured public support.

It is undoubtedly necessary to convince a legislative or executive body that the opposition is a minority. It may not be sufficient. In connection with the Boston polio outbreak of 1956 it was found that school authorities bowed to the activities of about four per cent of the community in delaying school opening, although no more than fifteen per cent of the parents might have kept their children home, and although the public health authorities felt the delay was needless. It should be said also, however, that the public health authorities had earlier refused to recognize the situation as an epidemic.

If a referendum is to be held, then much rapid action must occur. Time is on your side, but shortness of time helps the opposition, because they have the easier job, as I have said. Delay, indeed, stalling, even by legal maneuvers if necessary, is valuable. It gives you time and allows the early excitement, and the opposition, to run down. They depend on scare techniques, and these are difficult to sustain.

Every effort must be made to see to it that the wording of the referendum question is fair and clear. I mean fair. I doubt if you can win in the long run by tricks. I do not believe they can, either, but you do not want to lose at all, temporarily or permanently. It should not be difficult to arrange a fair referendum, unless you forget about it, which has happened.

You will have to do everything to prepare for a referendum that you would have to do anyway, but faster. Of course, to win a referendum you do not have to convince everyone, only over half of the voters, but to do this undoubtedly demands aiming at all. Certainly obvious neglect of any group could be ruinous.

You will need organization. A public committee for fluoridation is a must. It cannot be confined to, or probably even headed by, the experts who were not listened to by the body responsible for the referendum. Leadership should be in the hands of broad public figures whose position is pertinent to the issues. A prominent physician, a PTA leader, or a well-known engineer would be good. Movie stars and sports figures have their place, but this has been overdone, and their irrelevance is no longer overlooked. Industrialists and unionists are important, although I suspect someone connected with the aluminum industry would redouble the efforts of the opposition. For those who find this cryptic, I would suggest greater acquaintance with opposition arguments.

Certainly among your advisors you will want political scientists and politicians. I can hardly pretend to speak for them, and this kind of activity, which you may shy from, is their specialty. It may not be possible to have any practicing politicians risk their necks by open support, but advice you should be able to get. Their knowledge of the tricks of the trade and the specific groups to work with in your community will be invaluable. There are a few general principles that I know. The chief of these is the importance of personal contact. While ward and block organizations are difficult to develop, they are what turn the tide. It is true of many efforts that only by asking will you get. There are always leaders commanding blocks of votes, but you cannot always believe those who "speak for so and so many citizens." Politicians learn the hard way who can and who cannot deliver. It is particularly important when the subject of fluoridation first comes before the city
council or other government agency to find out who influences whom, but it will not lessen in value to know this if a referendum is decided on.

One of the reasons for speed in organizing and educating is to seize the initiative. It should not be left to the opposition to define the issues. You must try to get them to attempt to meet your arguments. If this can be done, you will have turned the situation to your advantage. But if you try to meet their arguments, you will be giving them tremendous odds. You will dignify their arguments by answering. You really cannot descend to some of their methods, because innuendo can never advance the cause of reason. However, some obvious issues cannot be avoided. It is true that fluorides in large quantities are poisonous, but this is hardly the whole truth, and has little to do with water fluoridation. This is one of the issues much easier to explain at leisure, rather than when someone is yelling "poison," but certainly the idea can be gotten across that the phenomenon is not unusual, being entirely like that of iodine. The goals, your goals, in terms of everyone's goals, ("save your children's teeth"), must constantly be hammered home, so that the opposition is no more than a backstage voice, even though it be a scream. The major theme must not be allowed to become poison plots, but be maintained as caries prevention.

It has intrigued me from time to time to consider what might be done for fluoridation in the manner of the opposition, using, of course, only the solid bases from which they take off. It would be worthwhile, I believe, to obtain testimonials from people who have brought up children in areas without and with fluoridated water. Testimonials have the personal touch, and appeal to those for whom data are a waste of time. You know, a motherly picture with a statement: "My first boy was born in____where they did not have the water fixed up with these fluorides. It seems like he was always at the dentist's. But our girl and little boy grew up here in______where they have fluoridation, and we have had hardly any trouble with them. I think fixing up the water is grand. Everybody should have it." By the way, doesn't it strike you that fluoridation just doesn't fit well in that context? It is a cumbersome, unusual term that must be a hazard in itself. "Fluoridation" has a better flow and odor. Maybe we need a contest and some market research.

It also occurs to me that it might be well to have dossiers, or case histories, if you will, on leading opponents. It would be psychologically interesting, and politically useful, to know what else they are against and what their interrelations are. Perhaps they are projecting when they say that they are fighting a conspiracy. I would really like to know, and it might well be revealing of more than sociopsychological generalization.

These are only a few specific suggestions that may and must be tried. I am painfully aware of their inadequacy and the sketchy nature of what I have to offer. I still think it an important beginning, even if it is far from sufficient. What I have said may in fact be summarized in three statements:

1. You do not have to and should not deal with the opponents of fluoridation themselves. They are a smaller group than we are, and their thoughts and methods are not ours.

2. You must and should deal with the large group who are only peripherally interested and partially informed. They need your information and can be interested.

3. To reach others we must involve them and become involved with them. This demands understanding, time, and good will.
I am under no illusions that what I suggest is an easy way, but I do not believe that there are any good gimmick solutions. If there were, our whole professional attitude would be wrong, and our society would become hopelessly subject to sway in one direction after another by groups commanding the gimmick. Slowness and difficulty do make for stability, and the ways open have allowed and do allow change.

In many ways participation in this kind of effort can be exciting and interesting. You will find out many things about how your city is actually run, and it may not tally with courses you have taken. Fights like these may not always accord with what we have been taught on Sundays either, but if we do not like what we see, only our continued participation will change it. And the goal is worth the effort. You are in this for the health of the next generation, and considering all of the other problems we are handing on to them, they will need it.
Motivation in Health Education

HOMER N. CALVER
New York City

MODERN science is not satisfied with the philosophical approach to the solution of its mysteries, including the mystery of human behavior. So tests and questionnaires and other devices have been evolved to try to find out really why people do things. As a base for our conclusions, we look for evidence which is aside from our own subjective analysis, as well as aside from the subject's own analysis of his own reasons.

Again and again it has proved to be unsatisfactory to ask people what their motives are. Answers to such inquiries are unreliable. Few people are capable of analyzing their own motives, and even when they understand them they may be unwilling to admit them. They deceive themselves as well as the examiner. These deceits are unconscious. If cornered they may say “I don’t know why I did such a thing.” Often, the subject who is being examined will base his reply on what he thinks will do him the most credit. For example, if you ask a selection of people why they read certain comics regularly, they would not admit (perhaps they do not even realize) that it is for the sheer excitement of crime, sex, violent murder and sudden death which such comics portray. They would tell you they read them because they give an insight into human nature, they’re educational, or they will offer some other reason that seems creditable.

Various disciplines have evolved different theories of motivation. The psychiatrist, for instance, points out that with respect to personal health there is a conscious ambivalence. It is not correct to assume that everybody wants to be well. People often cling to their disabilities, sometimes consciously, more often unconsciously. The psychiatrists point out that sin and illness are linked in thought, noting that the words for pain and penalty come from the same root. To be ill, therefore, eases the conscience. It gives a sense of having paid for wrongdoing. Kubie says, “It is an everyday experience in psychiatry that depressed patients tend to lose their depressions when they suffer physical pain, or break a leg or fall ill, only to lapse back into a guilt-laden depression when they recover from their physical ailment.”

Then, too, as children, we learned that there was satisfaction in being ill. We had our mother's sympathy. We got more attention than our brothers and sisters. We didn’t have to go to school. These early experiences, of course, tend to determine our attitudes thereafter, even though we may have forgotten all about them.

Our system of childhood rewards has had a great deal to do with motivations in health. We say “you can have ice cream if you eat your spinach,” but we never say “you can have your spinach if you eat your ice cream.” What better way could there be of prejudicing one against spinach? There is little emphasis on the possible enjoyment of the thing itself, no stressing that spinach tastes good, only that it is good for you. No wonder most of us don’t like spinach. We eat it reluctantly as a penalty for our sins.

To counteract these attitudes, health educators have tried to instill new attitudes which inflate the values of health. They have stressed the allure of getting big and strong, beautiful and successful. These arguments have had but a limited appeal. In attempting health education, we cannot proceed on the assumption that everybody wants to be big and strong. Indeed, the Bible teaches that “the meek shall inherit the earth.”

The anthropologist approaches the subject of motivation from another angle. He stresses the influence of culture in determining motivation. For example, Dr. Mead and others have pointed out that in the northeastern United States, our culture is based on Puritanism. This tradition accounts for the common attitude that if something tastes good or feels good it is probably bad for you, whereas if it is unpleasant it is good for you. The asafetida bag around the neck and the sulphur and molasses spring tonic owed their potency, no doubt, to this concept rather than to any controlled experiment. Dr. Mead further points out that in the Southeast where the culture derived not from the Puritans but from a cavalier stock, these views do not hold to the same extent. Any of you who have a tradition of upbringing that stems from New England will have heard many times that hot bread is not good for you. It is better when it is slightly stale (and, therefore, doesn’t taste so good). This view does not prevail in the South. There, hot breads are preferred. They taste better and are, therefore, better for you than stale bread. The Californian insists on enjoying health outdoors. In the East, until recently, sitting in the sun was thought sinful. People should be working.
In my own work, which has to do with the promotion and acceptance of paper cups for the drinking of beverages, we have an enormous problem in changing a culture pattern. Most of you will say that you do not like to drink out of a paper cup and will advance all sorts of reasons for your position. You will say that you don't like the taste when tested show that there is no more a paper taste than there is a glassy taste. You will say that they leak, ignoring the fact that sometimes glass and crockery are cracked and leak also. If pushed, you will perhaps accept the paper cup for the dentist chair but not the dining table. Now in this connection note the attitude of the Russians. They drink tea out of glasses, and it would be presumably beyond their imagination to drink tea out of a china cup. An Englishman would take the opposite view. Experiments by Kurt Lewin showed that children have a much more ready acceptance of paper service than do adults, pointing out that they had fewer years to become habituated to glass and crockery. His experiments also showed that continued use of paper service results in a more ready acceptance of it. From such experiments, the dentists may conclude that the more one visits the dentist, the more he will continue to visit the dentist.

The anthropologist emphasizes that people are motivated primarily by their concept of what is the thing to do. If it is part of the family and community culture to brush the teeth, teeth will be brushed, because no one likes to be odd or unusual. Where the culture is not for tooth brushing, all sorts of arguments can be advanced as to why brushing the teeth is probably bad for one. As an example of such attitudes, we found during the war when we were developing large health programs in South America that there was a tribe of Indians in the Andes which could not be convinced of the desirability of taking a bath occasionally. These Indians pointed out, with entire conviction on their part, that the body was like a tree which developed a sort of protective bark. If this bark were washed off the individual would die, just as a tree would die if the bark were peeled. If you doubt the power of culture in determining action, visit the campus of any midwestern college. You will find not one freshman co-ed in 10 who is not wearing white bobby sox and white shoes. The question of how customs and cultural habits arise is another subject.

The educator approaches the problem of motivation in another way. He insists that there must be a felt need. The person himself must see his problem for himself in his own light. It does no good to tell him he has a problem when he doesn't feel he has one. Furthermore, he is more likely to apply the remedy if he has evolved the idea of the remedy for himself. Everyone is reluctant to accept unfamiliar remedies for unrecognized conditions. This has nowhere been better illustrated than in the various community campaigns for fluoridation of water. Universally these campaigns have been attempts to impose an unfamiliar remedy on a populace which did not recognize there was any problem in the first place. No fluoridation campaign that I have ever heard of though there may have been some, has ever started with the idea that the community ought to take a look at its teeth. True, there have been community surveys of "dental defects." However, "dental defect" does not mean the same thing to a layman that it does to a dentist. I may have "bad teeth," have "lost some teeth," or have "a pain in a tooth." I don't have "defects." Only other people are defective. I have gotten along pretty well so far anyway with the kind of teeth I have and don't see why I should do anything about it until I am faced with the downright problem of continuing to suffer with pain. Then the obvious answer is to have all my teeth out and get a set of false teeth.

It is particularly difficult to get over the idea of prevention, especially in fields with which people are not familiar. The farmer may cover a haystack or wagon to keep it from getting wet in the rain, but there just is no carryover from this idea of prevention to the idea that he or his parents might have done something which would perhaps have prevented him from losing his teeth.

So even before fluoridation of the community water supply is mentioned, an effort should be made to establish two ideas: (1) Bad teeth are not good. (2) Bad teeth can be prevented.

But most campaigns start with the unfamiliar remedy of fluoridation for a condition which is not recognized or which no one had thought of preventing. In my opinion, there are only two ways in which fluoridation of most public water supplies can be accomplished:

1. There is a swift autocratic way of putting the fluorine in the water either with or without telling the people it has been done. In most communities that is the way chlorination of water supplies was accomplished. It is an indefensible procedure, from the democratic point of view, but wholly defensible on the basis of scientific evidence, and, furthermore, it is the way a great proportion of our public affairs is conducted.

2. The other way is slower but has the advantage of democratic approach with a bonus of health education. This way is to develop a campaign of interest in the problem of decaying teeth, gradually developing the idea that much of such decay might be prevented. When this has been thoroughly done, the people themselves may be ready to move in to an exploration of the various ways in which decay may be prevented. Such a campaign, skillfully handled, will lead them to conclude for themselves that fluoridation is the best answer.

Most fluoridation campaigns have begun and have been carried along in between these two extremes with a modicum of autocrat action. (The decision that fluoridation is the answer is, in itself, an autocratic decision) and a modicum of education regarding fluoridation and fluorides which tends to make everyone forget what the problem was in the first place.

Our religious leaders approach the problem
of motivation from still a different angle. Most religions with which we are familiar in this country, approach the idea of motivation from the simple concept that we are inherently "sinful," and only by prayer or penance may we atone for our sins. Whether we are deeply religious or not, the feeling is ingrained in most of us that our pains and failures are to some degree, at least, the result of transgressions of the rules laid down by the spiritual or incarnate founders of the religion we have been more or less taught to follow. Viewed from the standpoint of religion, one of the strongest motivations is the desire to escape from pain here and hereafter.

The salesman roams the field. He reaches out for whatever motivations he thinks can best be used to sell his products. He appeals to fear (as does the religious leader). He appeals to social acceptance (the anthropologist's viewpoint). He appeals to pride, self-indulgence, security. Furthermore, he uses these motives skillfully and successfully. Health educators could learn much from the methods of the salesman. For example, it is common practice now to drink orange juice, but this practice derived in small part from the teachings of the health educator that orange juice was good for you. Our habits in this respect, I believe, were in much greater degree determined by the energetic sales campaigns of the citrus fruit growers and the improvement in packaging their product.

A great many scientists endeavor to motivate people by the use of statistics. Much as they may appeal to the scientist in his field, experience has shown again and again that outside of one's field they have little appeal. In the first place they are often hard to understand: second, they are impersonal (they do not apply to me); and, in the third place, most people distrust them. Even dentists who may trust and be motivated by dental statistics, will fail to trust or be motivated by financial statistics or statistics of highway accidents when they buy a stock or drive a car.

So it is in each field. The lawyer stresses legal motivation—the doctor, physical—the banker, financial. Those trained or experienced in each area tend to assume that other people are motivated by the same knowledge and considerations which he has. Each one has confidence in his own analysis or motives, and, for his purposes, he may be right.

If there were time, one might attempt to correlate these different approaches to find a common denominator if there is one. Since there is no time, perhaps you will permit me to conclude with a few observations with respect to motivations in health education:

1. Merely imparting facts will not always motivate to action. Furthermore, the imparting of facts about a field generally will not result in some specific action. For example, there has recently been an extensive campaign to encourage people to buy stocks. The steady rise of the stock market has given this campaign a good deal of support. However, when it comes to buying stocks of a particular company, we run into all sorts of motivations. They are bought on hunches, tips, fragmentary information, but very seldom with a knowledge of the products, finances, and management of the company concerned. We can carry on general campaigns to persuade people to see their dentists at regular intervals, but these campaigns fall short unless we can tell people how to select a dentist. This is perhaps one of the gravest problems for the dental and medical professions. Some of the professional societies are trying to do something about it, but it is still generally true that the average person can select a pair of sport shoes with greater wisdom than he can select a surgeon to perform a vital operation.

2. It seems clear that the individual must recognize the problem for himself before he is motivated to do something about it, and here it is important to remember that he sees the problem differently from the way you do and may have a different solution for it. Also, it must be remembered that people are subject to many different motivations at the same time, and each individual will, for himself, decide his own values. For example, I remember some years ago seeing an intelligent looking young man on a street in downtown New York selling pretzels from a basket. He was motivated to sell pretzels presumably to earn money to support himself. Perhaps the pretzel business then was better than I thought it was, and he may have been doing very well. But I could not escape the feeling that if he had shaved off his beard, and changed his habit of dress, he might have put himself in the way of earning an even better living. However, it was not for me to tell him this thought of mine. In the environment in which he lived, it was, no doubt, more important for the satisfaction of his ego, his position in society, and perhaps for his future career, that he have a distinguished beard. For him it was a choice, perhaps an unconscious one, between beard and dollars. I know a young man who feels it is more important for him to have a foreign sports roadster than it is to get his teeth fixed. So in attempting to motivate people to better dental health, one must keep in mind the other person's point of view. Motivation of a worker in respect to dental hygiene may be quite different from the motivation of the employer. The motivations of both may be quite different from the motivations of the dentist.

3. It seems clear that in health education at least, people are more likely to be motivated when they participate in making a decision. Early in the war, a vigorous campaign was put on by the meat packers to encourage people to buy more liver and kidneys—which you may remember then sold at a very low price. The campaign was not going very well until under the direction of a psychologist and anthropologist groups of women were brought together to discuss the problem of food budgets and analyze for themselves how to get the most food for the least money. These women for themselves concluded that these cheaper meats were excellent, and over the years
you know now what has happened to the price of liver.

4. We may conclude that motivations are determined by many factors. Culture patterns, patterns of family living, community attitudes, social acceptance, religion, economic level, all affect motivations. Sex and age are important factors in motivation. Different sexes feel different needs, and different needs are felt at different ages. At one age conformity is important, and at another it is less important. Past experiences are important factors in motivation, especially our childhood experiences which we have forgotten. We forget the simple analysis of the dental problem couched in the statement “I went to the dentist once and he hurt me. I’m not going back again until I have to.” We are too much inclined to make assumptions relating to motivations based on our own experience rather than on the experience of others. Finally, we must not overlook the fact that our mood at the time, particular day, hour, week or month, may determine in a large degree, our motivations regardless of all other factors.

REPRINTED FROM INDUSTRIAL MEDICINE AND SURGERY, 25:6, 273-276, June, 1956
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HOW LOCAL INTEREST STARTS

The desire to adjust the fluorine concentration of a local water supply for the purpose of controlling the amount of tooth decay may originate with a single individual, a small number of individuals or some health minded organization. However it originates, it is sometimes a long time before this interest becomes an actuality.

Experience in this state and others shows that successful campaigns have gone through three stages:

1. The Planning Stage.
2. The Information Stage.
3. The Action Stage.

Failure often can be traced to insufficient attention to one of these stages. It is best that they are followed in consecutive order.

THE PLANNING STAGE

One of the very first things to do is to get the most reliable and up-to-date information available. Sources of such information are the Pennsylvania Health Department, Division of Dental Health, P. O. Box 90, Harrisburg; The American Dental Association 222 East Superior Street, Chicago 11, Illinois, and the U. S. Public Health Service, Washington 25, D.C.

Public desire can be expressed through a Citizens' Committee representing as wide a segment of the community as possible—labor groups, PTA's, Jr. Chambers of Commerce, church, civic and social groups, medical and dental groups, veterans' or-
ganizations, newspaper people, teachers, voluntary health agencies and business men.

SURVEY

A comprehensive survey should be made of all community organizations, together with the name of the leader and, if possible, the name of a member known personally to one of the group.

The interested group will want to know a great deal about the water system they are using. What are the benefits of fluoridation? How much does it cost? How is the equipment installed? Is the water supply municipally owned, a water authority or a privately owned water company? Does the community have exclusive use of the supply or does it serve other communities? What is the source of the water? How much water is used per day? Is it filtered? Is it chlorinated? All of this knowledge will be necessary later.

A visit to the water works and a talk with the official in charge of the water supply will provide this information, and may bring out the attitude of the water works people towards fluoridation.

Having gathered all the information you can get on fluoridation in general which pertains to your particular community, you are now ready to proceed with the organization of your Citizens' Committee.

ORGANIZATION

This calls for a meeting of some kind. We hope you or your group have had some experience along this line. If not, call on someone for help who has experience. A meeting place must be secured and a time set. The groups you want repre-
sented and the individuals you want present must be notified. It should be stressed, at this point, to get as wide a representation of your community as possible. Some of the past failures result from trying to keep all activity within one group. The selection of a chairman is important. The chairman should be a person who is well liked and respected — who will see the project through to completion. Don’t forget to invite the chief official of the water works.

It also is vital to the success of the organization meeting that a speaker with complete knowledge of fluoridation be secured. If such a speaker cannot be secured through the local dental or medical society, it is quite likely that the State Dental Society’s office, 217 State Street, Harrisburg, or the State Health Department will provide one for you.

Literature on fluoridation for distribution at the meeting should be available. Here, again, your State Health Department can be of service.

Having made all these preparations . . . and not until then . . . are you ready to enter the second phase.

INFORMATION STAGE

Basically, the objectives of the Citizens’ Committee are to rally and to represent wide public support. This may be accomplished through a public information program.

Methods for informing the public about fluoridation can be grouped under four major headings.

A. The Press
1. Editorials
2. Letters to the editor
3. News releases of committee activity — such as — committee meetings, speaking engagements, and endorsements.
4. News releases of state and na-
tional importance—such as—fluoridation programs in other municipalities and articles from scientific authorities. Much of this material may be secured from your local and state dental societies, local health departments, and the Pennsylvania Department of Health.

5. Printed questions and answers.

B. Radio and Television

1. Panel discussions
   (15 and 30 minutes)
2. Questions and answers
   (15 and 30 minutes)
3. Spots
   (30 second and 1 minute)
   between station breaks.
   Avoid using written scripts or prepared presentations. People tend to lose interest in them.

   Generally, local radio and television stations will provide air time without charge as a public service.

C. Community Meetings

One of the best ways of providing information is through community meetings.

Write every community group, club, or organization who are served by the public water supply — and offer the services of a speaker on the subject. The talks should be short with adequate time for questions and answers.

All speakers should be well acquainted with the subject and should have the answers to the questions most generally asked (cost, advantages, etc.)

D. Printed Materials

1. Direct Mail
2. Pamphlets which can be mailed with bills
3. General distribution of pamphlets and handbills.
4. Posters
5. Milk bottle collars
6. Bumper strips
E. Special Events

1. Exhibits and information booths in department stores, street corners and other areas where people congregate.

2. Movies — at community meetings; one minute trailers may be used at the local theaters.

F. Telephone squads.

At all times avoid controversy, defensive arguments or personal criticism of those who oppose fluoridation. The evidence of the benefits and safety of fluoridation far outweighs unsubstantiated arguments in opposition to it. The subject does not require argument, but does need discussion, explanation and correct interpretation.

Its safety, economy and proven benefit in reducing the incidence of dental decay already have been fully endorsed by every scientific and professional organization concerned with the public health.

There is no evidence of increased disease or death rates in communities that adjust the fluorine content of the public water supply when these are compared with communities that do not adjust the fluorine content of their public water supplies.

Just how much time will be needed for this information stage is impossible to predict. It takes time to get all of the facts before the people of any community. There must not be any suggestion of “railroading.” Fluoridation is one of the great public health measures of our time. Its benefits are worthwhile. Only after you are sure that all of the organizations and residents of your community are in possession of the facts are you ready to embark on . . .

the ACTION stage
THE ACTION STAGE

In every community there are certain officials who eventually make the decisions on all public questions. Who they are you will have determined long ago when you were in the planning stage and you will have included them when you were in the information stage.

The community officials (City Council or the group in charge of the water works) may provide for fluoridation . . . or they may ask for a community opinion.

Your committee may ask each group or organization they contact for a formal endorsement. This might well be in the form of a resolution. On page 11 you will find a suggested form for such a resolution. Your success now will be conditioned by how well the work was done during the information stage. Do not be in too much of a hurry to ask for these resolutions and endorsements. Be sure that your facts have been well presented and understood.

Then, and not until you are sure that the fluoridation plan has the endorsement of a majority of the citizens, are you prepared to formally request the responsible water authority for the adjustment of the fluorine content in the public water supply.

Pennsylvania Law

Since Pennsylvania law requires that any change in the water treatment process be approved by the Pennsylvania Department of Health, the requirements for the issuance of a permit to adjust the fluorine concentration are as follows:
1. An application for such a permit shall be submitted in duplicate to the Pennsylvania Department of Health on the Department's Public Water Supply Application Form by the responsible officials in charge of the public water works.

2. The application shall be accompanied by a detailed report and plans, in duplicate, of the proposed treatment program and the method of application. No filing fee is required.

The final duties, therefore, of the Citizens' Committee will be to see that such an application is filed, that equipment is purchased, installed and put into operation. If you need printed material, speakers, or other assistance in your local program, write to the Pennsylvania Department of Health.

SUGGESTED SEQUENCE OF STEPS in obtaining community acceptance

1. Organize a citizens' committee for fluoridation. Outline a definite plan of action and assign specific responsibilities.

2. Ask for assistance from the local and state departments of health, dental societies and medical groups.

3. Inform the key persons in the community who will be involved in effecting a fluoridation program and get their advice on the steps your committee plans to take (city councilmen, professional health groups, labor leaders, officials in charge of the public water supply, etc.)

4. Obtain all the facts including estimates of the cost of fluoridation, benefits, opinions on installation, etc.
5. Conduct an intensive public information program, including the establishment of a speaker's bureau. Counteract the psychology of fear and uncertainty promoted by the opponents of fluoridation.

6. Keep in contact with the officials who eventually will decide upon fluoridation.

7. Present the program to those in charge of the public water supply for information purposes only. As a rule, do not ask for a decision at this first meeting.

8. Obtain resolutions or requests from civic organizations favoring fluoridation, if this is the desire of the officials in charge of the public water supply.

9. Present the program to those in charge of the public water supply for consideration. Well-informed persons should present the subject and a large representation of citizen groups should be present to demonstrate community interest. Resolutions from community groups should be presented.

10. Follow-up to see that equipment is purchased, installed and put into operation.

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Harrisburg, Pennsylvania