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A magazine you can read with interest, with pleasure, and with profit.
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January 1975 Vol. XXXIV No. 1

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A record of all the exciting, worthwhile, and profitable material in 1974 TIC

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Tic, January 1975

Doctor, 1975 Will Be a New Ballgame

by Harold J. Ashe

Unless all usual signs are misconstrued, we are now in, and will continue to be in, a period which will test the management skills of dentists. The manner in which a dentist reacts to changing conditions may determine whether he continues to succeed. Follows behind in practically every profession, there has been a steady rise in the volume of patients. During this period of general prosperity, many dentists have overlooked the practicing of economics, which is the other circumstances under which one would have been deemed necessary. The dentist may have entered this period of steadily rising inflation accompanied by some recession with established habits of management that are unrealistic for 1975. Overhead costs could be inflated way beyond the cost of rapidly rising inflation. Luxury costs may have crept in, and habit, became necessary.

In the event receipts drop, even slightly, a dentist may be confronted with a high overhead which is difficult to pare. Or, if even if patient volume doesn’t decline, other factors can cause overhead to rise. Failing to reduce overhead, earnings will suffer. With the same margin between gross receipts and overhead, even a slight drop in the volume of patients may reduce net earnings by as much as 10 to 20 percent. Even when volume doesn’t drop, a rise in overhead may reduce net earnings. Property taxes generally continue to rise, both through higher tax rates and higher valuation. Taxing authorities at all levels are in a continuous search for new forms of taxation at the expense of the professions and business. At the same time, it may be difficult to increase fees as the cost of overhead goes up.

There is an element of uncertainty in the economy generally that can cause changes that may call for close attention. Shortages of certain basics are neither real nor unusual. So, management skills that may have been sufficient, or at least adequate, in the past years may be insufficient now.

That a practice has “run itself” in the past without close personal attention to management aspects, is no assurance that it will do so...

OUR COVER

The benefits of this interesting, relaxing activity may be just what you want, doctor. Turn to page 7 and decide if this will be your new interest in the New Year.
Be Selective

When a dentist examines his rising costs, he may at first feel that a drastic reduction is called for right down the line in every expense that is not fixed. He may be tempted to reduce some variable expenses when this will only increase his difficulties; if not now, certainly in the near future. Such a cure can be worse than neglect. Result-getting public relations and promotion budgets may be unwisely pared when they need to be increased.

Analyze Costs

It may be well worth your time, doctor, to go right down the line and put every expense, no matter how small, to a practical test: Does it help practice earnings or is it a parasite in nature?

For a good many dentists this management test may be long overdue, regardless of economic changes generally. Every item of expense can be objectively examined and justified on the basis of its productivity. Expenses that are not productive can be eliminated. Tolling them on the basis of their reduced cost because of "tax-savings" may now be too costly.

In analyzing overhead costs, even those items which represent only a fractional part of one percent of gross receipts should not be overlooked. The test is whether an expense is justified—not how large it is. An unnecessary expense representing only one-half of one percent of gross receipts, by its elimination, will increase net earnings by 5 percent, if net earnings are already 10 percent of gross.

In this category could be such possibilities as the following. Reduction of the use of electricity, gas, and oil. Inventory of supplies can be carefully examined with a view to reducing costs, especially business office supplies—right down to the price of such items as pencils and paper clips.

Some big items of expense may be necessary and justified on the basis of their productivity. These could be expenses for equipment that is modern and competitive, for office occupancy cost in a favorable location, and other expenses of a similar nature.

Payroll costs may call for closer scrutiny. One or more employees may have been unable to shake off indifferent attitudes toward their tasks and to patients. Such an employee must either acquire the necessary attitudes and skills or should be replaced with one less inflexible.

Many dentists may hire outside services which could be done by employees in their spare time. Even the elimination of one outside service can be helpful. One example could be cleaning of windows.

Some thoughtful attention to promotion, good will, and public relation activities may produce ideas that will help to increase the patient load. Funds for activities that are relatively unproductive may be transferred to programs that are more productive, for the budgets for such result-getting activities may need to be increased.

HAPPY NEW YEAR, Doc. Here are a few bills for all those big, back-breaking Christmas packages I logged for you last month.

"I LIKE TO WORK WITH DR. EIDERDOWN. HE ALWAYS HAS SUCH FUN OPERATIONS"

P.O. Box 7156
Riverside, California 92503

SPEECHMAKING TIPS

Many dentists are called upon to speak before civil or social organizations or to lecture to professional groups. Here are some tips to keep your audience alert and interested:

(1) If you are reading from a prepared manuscript be sure that the writing is for listening and not for reading. Avoid stiff, formal, convoluted sentences. Pepper your talk with illustrations and don't be afraid of violating grammatical rules. Sometimes incomplete sentences can be more forceful and lively.

(2) Know your subject and formulate your objective. In a few sentences you should be able to summarize the essence of what you want to have the audience remember. Repetition is important if it can be presented interestingly.

(3) If you are trying to teach a technique, present the talk in a logical sequence. Don't skip around or wander from the subject or you will lose your audience.

Timing is important in the presentation of illustrations or examples. Don't go into your talk until you feel that the audience is with you. Anticipate questions and answer them as you go but don't get sidetracked.

(4) If you use slides be sure they are clean, clear, and essential in your presentation.

(5) Don't exceed the time limit. Even a good speaker can outwear his welcome.

(6) Always remember, you are addressing an audience to express your point of view not to impress them.

MINI-BIOGRAPHY: PAUL REVERE (1734-1818)

Paul Revere's family was originally named Rivoire—Huguenot refugees who came to Boston when Paul was a child. . . . He took no part in the revolution until his famous ride. . . . Before the war he was engaged in dentistry and was a gold- and silver-smith. . . . Confident in his ability, he advertised that he could replace lost teeth "as well as any Surgeon Dentist who ever came from London." . . . He received instruction from John Baker, one of the first trained dentists in America, who also treated George Washington. . . . Revere identified a dead soldier at Bunker Hill from a small prosthesis he had made, which may be one of the first examples of forensic dentistry on record. . . . After the war he gave up dentistry and continued as a gold- and silver-smith. . . . He made engraving plates for money printed in Massachusetts; designed and cast cannons and built church bells; collaborated with Robert Fulton in the manufacture of copper boilers for the new steamships; and built a rolling mill for the manufacture of sheet copper—that founding the Revere Copper Company.

A CORRECTION

In The Dental Dollar article in November 1974 Tic explains material was omitted from the table of health care expenditures. Below is the complete table.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Health</th>
<th>Dental Care Expenditure</th>
<th>Services</th>
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</thead>
<tbody>
<tr>
<td>1950</td>
<td>$12,662,000,000</td>
<td>$ 961,000,000</td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>17,747,000,000</td>
<td>1,208,000,000</td>
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</tr>
<tr>
<td>1960</td>
<td>26,895,000,000</td>
<td>1,977,000,000</td>
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<td>1965</td>
<td>40,468,000,000</td>
<td>2,808,000,000</td>
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</tr>
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<td>1969</td>
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<td>1970</td>
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</tr>
<tr>
<td>1971</td>
<td>79,795,000,000</td>
<td>4,860,000,000</td>
<td></td>
</tr>
<tr>
<td>1972*</td>
<td>72,761,000,000</td>
<td>5,048,000,000</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>80,048,000,000</td>
<td>5,383,000,000</td>
<td></td>
</tr>
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</table>

*For Federal Fiscal Year Only (1 month 30th figures for previous years were compiled on a calendar year basis.)
DENTAL THESA AND DATA

In Germany the anti-smoking campaign has taken a new tack. Instead of harping on the harmful effects of smoking, they stress the things one can buy with the money saved if one is a non-smoker - like a trip around the world for two, in 30 years. The best advice we've read in: "If you want to stop smoking, stop - no ads, ifs, or buts."

At Tufts University School of Dental Medicine a student has introduced an improved denture technique for black patients. . . . Work is being done on providing "compatible harmoniously colored denture bases" that look natural in the patient's mouth. . . . Latest yearly average costs for a medical education is $12,650 and for dentistry it is $9,050 . . . For an interesting, free, 22-page illustrated journal on research in periodontology and orthodontia write to: Educational Office, Division of Research Development, University of Michigan, Ann Arbor, Michigan 48104 . . . Dentists are being cautioned about the use of electric pulp testers on patients with pacemakers if transient interferences endanger the patient's health. . . . In 1966 fewer than 10 percent of dental school graduates went into a specialty; however, some educators feel that this year more than one-third of the graduates will go into specialty training. . . . And if the population growth in those over 65 years of age continues as expected, they will comprise 16 percent of the population; thereby making geriodontics yet another specialty. . . . Old-You-Know-What? Dept: In the mid-1800's the deaths of over 600 infants in New York State was attributed to teething! . . . To further underscore the safety of dental x-rays, the A.D.A. reports that dentists themselves are constantly exposed to x-rays get cancer or leukemia. . . . Average cost to buy an established dental practice is about $23,000. . . . You wouldn't think that in this "free-and-open" society with streakers scaring about that some people would still suffer from gymnephobia, would you? No, it's not fear of exercise, but fear of nudity. . . . Despite all the warning about the cariogenic effect of carbonated beverages, Americans are still drinking an annual average of 24 gallons of soda per person. . . . Conversation Piece: Everyone has heard about Mrs. Whistler, the benign woman in the rocking chair, but what do you know about Whistler's father? Well, he designed and built the first American locomotive equipped with a steam whistle. And you guessed it, it was called Whistler's Whistle. . . . Even great men have their prejudices. Aristotle believed that men had more teeth than women. His disciple, Galen, disagreed and was the first to state that both sexes had the same number. Makes one wonder how bright they really were in those days - all they had to do was examine people's mouths to find out! . . . Most of the says about eyes can be changed to ayes, at least according to a prominent Australian ophthalmologist. He claims that there is no such thing as eye strain and that we cannot damage our eyes by excessive use or even under poor conditions such as inadequate lighting.

PROBLEMS IN ULTRASONIC PROPHYLAXIS

Last year the Journal of the Kentucky Dental Association printed an article on the hazards of ultrasonic instrumentation that bears repetition. The author, Dr. Louis L. Yong, while cognizant of the value
tests down under. . . . With the ocean covering 71 percent of the earth's surface and receiving most of the sun's radiation, many scientists believe that man's future source of power, food, and water will come from the sea. . . . Of some 600 dentists answering a questionnaire in Michigan, only 18 percent said that they read entire articles in dental journals yet 60 percent said that such journals provided the best source of dental information. . . . Average cost to buy an established dental practice is about $23,000. . . . You wouldn't think that in this "free-and-open" society with streakers scaring about that some people would still suffer from gymnephobia, would you? No, it's not fear of exercise, but fear of nudity. . . . Despite all the warning about the cariogenic effect of carbonated beverages, Americans are still drinking an annual average of 24 gallons of soda per person. . . . Conversation Piece: Everyone has heard about Mrs. Whistler, the benign woman in the rocking chair, but what do you know about Whistler's father? Well, he designed and built the first American locomotive equipped with a steam whistle. And you guessed it, it was called Whistler's Whistle. . . . Even great men have their prejudices. Aristotle believed that men had more teeth than women. His disciple, Galen, disagreed and was the first to state that both sexes had the same number. Makes one wonder how bright they really were in those days - all they had to do was examine people's mouths to find out! . . . Most of the says about eyes can be changed to ayes, at least according to a prominent Australian ophthalmologist. He claims that there is no such thing as eye strain and that we cannot damage our eyes by excessive use or even under poor conditions such as inadequate lighting.

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Community oral cancer screening by Tufts dental students is rapidly becoming a de facto part of the undergraduate curriculum. In more than three years of operation, 1,000 patients have been examined by Tufts students. Spearheaded by Dr. Stanley Schwartz, associate professor of Oral Health Service and head of the section of Diagnosis and Radiology in that department, the cancer screening program has received the enthusiastic support of students, faculty, and area health organizations committed to fighting cancer. Figuring most prominently in the latter group is the Massachusetts Division of the American Cancer Society.

To date, screening sessions have been conducted at:
- St. Vincent Hospital in Worcester
- three old age federally and state supported senior citizen apartment houses in Worcester
- Liberty Tree Mall in Danvers
- an apartment house for the aged in Arlington
- Arlington Town Hall
- a shopping center in Braintree/Quincy
- a Randolph library
- a Halifax library
- a Congregational church in Natick.

"The program," says Dr. Schwartz, "serves at least four purposes. First, it teaches students to observe, palpate the head and neck for enlarged nodes, to take a history, to make a diagnostic aimer, and to appreciate the value of taking a biopsy and diagnosis by biopsy. Naturally, biopsy-taking is limited to those facilities where the appropriate back-up facilities and personnel are available.

"Second, by moving the clinic into the community we take students from the educational environment of the school and introduce them to the community. Sometimes this is an apartment complex for the elderly, a nursing home, a shopping center, etc. This gives the student a little different perspective on community responsibility than he gets in the clinic setting, acts to reinforce his self-confidence, and introduces Tufts students to the community where rapport is easily established.

"Third, patients receive a thorough oral cancer screening. This examination for oral lesions is correlated with the patient's personal and family history. Very often it has been our experience that the patients in the program have literally not seen a dentist for years. The exam is an extensive one: the hair, neck and nodes, ears, forehead, and face are inspected and palpated. Then the lips are checked. Check and lip mucosa are examined, as is the floor of the mouth, mucobuccal folds from tuberosity to retromolar area. The hard and soft palate are scrutinized. The tongue is checked. Photographs of the oral region are taken. The faucets, teeth, and removable appliances are inspected not so much for dental needs as for complications of systemic disease involving the oral region.

"If the patient has questions about specific dental needs unrelated to the cancer screening program we refer him back to his own dentist. In those cases patients receive a thorough oral cancer screening.

The accompanying medal commemorates the contributions of Robert Arthur, the first recipient of the D.D.S. degree, who thus became a symbolic figure in the history of dental education. To the great credit of himself and of his profession, Arthur's career was marked by important contributions in the four governing areas of dentistry's progress: education, organization, literature and practice.

Robert Arthur was born in Calvertown, Maryland on July 22, 1819. After obtaining a good preliminary education, Robert was persuaded by Chapin A. Harris to study dentistry. He became a member of the first class of the Baltimore College of Dental Surgery that formally began its historic role on November 3, 1840. At the first commencement of the first dental college in the world on March 9, 1841, Arthur, by reason of alphabetical precedence, was awarded the college's first diploma.

Arthur began practice in Baltimore, but after a year moved to Chambersburg, Pennsylvania. Until 1857 he divided his residence time between Washington and Philadelphia. In 1852, he helped establish the Philadelphia College of Dental Surgery, serving as Professor of the Principles and Practice of Dental Surgery and, in his final year (1855-56), as Dean. He joined with his faculty associates in 1856 to found the Pennsylvania College of Dental Surgery, becoming its first dean and also retaining his former faculty title. In 1857 he resigned from this institution to practice in Baltimore. However, he continued to be actively concerned with the problems of dental education, and his writings reflect the worth of that interest.

Shortly after his graduation, Dr. Arthur became a member of the American Society of Dental Surgeons, the world's first national dental organization. Arthurizing — the method of prophylaxis known as "Arthurizing" — separating the teeth by removing a portion of the proximal enamel surfaces to prevent caries that occurred between teeth in contact but, unfortunately, such teeth would then shift.

Throughout his career Dr. Arthur was an important contributor to dental literature, especially in his writings on operative dentistry. He published five books: the translation of Blandin's Anatomy of the Dental System (1845); A Popular Treatise on the Diseases of the Teeth (1846); A Treatise on the Use of Adhesive Gold Foil (1857); Some Suggestions Concerning the Nature and Treatment of Decay of the Teeth (1867); and Prevention of Decay (1871). These works were supplemented by about forty articles published in several dental journals.

Robert Arthur returned permanently to Baltimore in 1857. On his death on June 22, 1880, many fine tributes of appreciation and respect were paid to the world's first graduate from a dental college who added to that claim to fame with forty years of dedicated and valuable services to his beloved profession. (These biographies, copyrighted by the Medical Heritage Society, are from the Medico-History of Dentistry, a limited series of commemorative medals sponsored by the Society. Subscription rolls for this series are closed. Waiting list information may be obtained from the Society at 20 North Wacker Drive, Chicago, Illinois 60606.)
of his services to the school, it conferred upon him the honorary degree of Doctor of Dental Surgery in 1842. After about 28 years of practicing dentistry in New York, Dr. Brown's eyesight began to fail. He sold his practice and tried a variety of fields, among them the manufacturing of denture teeth as well as the operation of a dental supply firm.

First to Use Plaster in Dentistry
Philip Pfaff (1716-1780)

Dentistry for the millions, a hope long dreamed about, came a step closer to reality with the outstanding contribution of Philip Pfaff, dentist to Frederick the Great of Prussia. It was he who pioneered the use of plaster of Paris for the construction of rigid casts upon which accurate denture bases could be constructed.

He was born in 1716 in Prussia, possibly in the town of Paffenberg, though some German books list the date as early as 1701. Originally a Prussian regimental surgeon, in time Pfaff rose to prominence when appointed royal dentist and Privy Counselor to Frederick II.

After years of warfare against rival states for the leadership of central Europe Frederick succeeded in asserting Prussia's power. Europe then enjoyed eleven years of peace, and agriculture and, more especially, the sciences. His establishment of the Royal Academy of Sciences was evidence of this interest. It was during this time that Pfaff made his great contributions. Dentistry in Europe had just begun to rise from mediocrity and charlatanry and significant advances such as those of Fauchard were being made. Pfaff authored the first comprehensive work on dental treatment to appear in the German language. Entitled 'Treatise of the Teeth of the Human Body and Their Diseases,' the book was issued in 1756 by Haude and Spence, Berlin publishers. The title page bears the notation that Pfaff was "... privileged surgeon and dentist to the Royal Prussian Court."

This book in 184 succinct and well-written pages, deals with the comprehensive treatment of the teeth as understood in Pfaff's day. He covered the treatment of difficult dentition, extraction and sequellae as well as the treatment of gingival abscesses and fistulas. The prosthetic methods described are, for the most part, identical with those of Fauchard and Pfaff cited the use of ivory, bone, hippopotamus tusk and human teeth for replacements.

However, the principal contribution of Philip Pfaff was the use of plaster for model making. Guerini cites this as "... one of the greatest progressive movements in dental prosthesis ... of which method one finds no trace whatever in the authors of antiquity, and which it would appear was not known even to Fauchard himself." Wax impressions of an entire jaw were taken by Pfaff in two pieces; these were then joined, thus avoiding errors which might have been introduced in attempting a full impression with the poor materials available. A cast of plaster was then poured into the impression. This obviated the need for constant checking of the scraped and fashioned denture base in the mouth, an accurate duplicate of the jaw now being available.

Another of Pfaff's innovations was the capping of a vital pulp prior to the filling of a carious tooth. For this purpose he used a piece of gold or lead "... in the shape of half a pea-pod, the lower surface having a concavity ..." so that the metal would not actually contact the pulpal tissue. Pfaff helped to lay the groundwork upon which succeeding generations of dentists could build through his comprehensive German treatise on dentistry. Philip Pfaff died in 1780 according to most historians, although some German sources cite the date as 1764.

Finally, at the age of 70, he retired from the field of dentistry and went to Dussel, New York, where he served as minister to the Swedishorganian Church. The last two years of his life were spent in retirement at the home of his son-in-law in Dodge Center, Minnesota, where he continued to write poetry and essays. He died on February 13, 1876 at the age of 86.

where the person does not have a family or personal dentist, the local dental society contacts Dr. Schwartz. In some cases, we refer them to their physician—this could happen, for example, in the case of a patient with a chronic cough, and sore throat, a history of cancer in the family, and lymphadenopathy. We use the standard protocol outlined in a four-part form devised by the Massachusetts Division of the American Cancer Society. One copy is retained by Tufts, one goes to the patient's dentist, another to his physician, and the fourth to the Cancer Society. All patients are followed through to insure that each patient obtains whatever care is needed.

"A fourth bonus of the program," Dr. Schwartz says, "is that it allows Tufts University—through its School of Dental Medicine—to get involved with the community and deliver a valuable service at no cost to the community." This is a synergistic program—everyone participates, the cost is minimal, the educational component is high, and the potential benefit can be lifesaving to some members in the community.

The program is tailored to the community served and the facilities used, but in every case, besides Dr. Schwartz, one area physician or dentist is on hand to coordinate the program, e.g.:

- In Halifax, Dr. John Driscoll, assistant professor of Oral Health Service at Tufts was present;
- Dr. Morton Olin, D'50, an oral surgeon affiliated with Boston University School of Graduate Dentistry was coordinator in Arlington;
- Dr. Edward Forzley, assistant professor of Oral Health Service at Tufts with extensive training in Oral pathology coordinated the Worcester program. He arranged a three hour presentation for the students, dental assistants, and nurses following the screening at St. Vincent Hospital in Worcester. In that program, Tufts students heard from Dr. Harold Jegher, Medical Director of the hospital and professor of Medicine at Tufts; the Hospital's chief of pathology, Dr. Gilbert H. Friedell, who is also professor of pathology at University of Massachusetts Medical School; and Dr. Wallace H. Falconer, general surgeon at St. Vincent's and assistant professor of Surgery at University of Massachusetts Medical School. This program has been done twice and a proposed seminar for Worcester dentists by Tufts teachers is being worked out with the Worcester Dental Society.

- In Nutick, Dr. Norman Nathanson, assistant professor of Oral Pathology at Tufts and a practicing oral surgeon participated. The nucleus of the Tufts students participating in the screening is a group of at least a dozen, sometimes as many as 15 senior students. They, with Dr. Schwartz, train underclassmen in the entire procedure, so it becomes a self-perpetuating program, not ending when a class graduates. Last year's student coordinator is Miss Debbie Sistare, '74. The examining group is often 30 or more, presenting quite a logistical problem in transportation for the coordinator.

The protocol involved in setting up a screening site is not fettered by red tape. The local representative of the Massachusetts Division of the American Cancer Society contacts Dr. Schwartz. They meet at the site and make certain that the physical facilities e.g. waiting areas, private booths, lighting, etc. are adequate. Patient-flow patterns are agreed upon, and spaces are set aside for the camera and smear teams. The ACS supplies headlamps, disposable examination gloves, tongue depressors, and other necessary diagnostic aids. More important, Dr. Schwartz points out, is the generosity of the ACS in making available a sufficient number of ACS volunteers to expedite the screenings.

On the day of the screening, patients are ushered into the examination areas after giving a registration provided by the ACS—the brief but necessary pre-examination information. Margie Burke, a volunteer from the Oral Health Service staff who administrates the program, sees that the patient is assigned to a screening area and that it allows Tufts University—through its School of Dental Medicine—to get involved with the community and deliver a valuable service at no cost to the community.

This is a synergistic program—everyone participates, the cost is minimal, the educational component is high, and the potential benefit can be lifesaving to some members in the community.

The program is tailored to the community served and the facilities used, but in every case, besides Dr. Schwartz, one area physician or dentist is on hand to coordinate the program, e.g.:

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manned booth. The student and an assisting underclassman do the checklisted procedures. The actual exam requires no longer than half an hour, and often can be finished in a third that time, if no questionable lesion is found. When a lesion is detected, the sequence of events is as follows: Dr. Schwartz is notified. He, and perhaps the coordinating dentist and the attending students, discuss the gross pathology of the lesion, correlate it with lymph node findings and history, take a smear, and then decide on whether or not a biopsy is warranted. Photographs are taken of the lesion, and provisions made for referral and follow-up. The patient is told that the condition warrants further study. Dr. Schwartz is quick to emphasize that not a single patient has ever balked at follow-up procedures.

To date, more than 1,005 patients have been screened, and in over 20% cases, further diagnostic treatment was indicated, reports Dr. Schwartz. (Copyright by Tufts Health Science Review. Reprinted by permission.)

Screening programs have been conducted at a hospital, a library, a shopping center, a mall, a church, and senior citizen apartment houses.

DENTISTRY'S
HALL OF FAME

Poet Laureate of Dentistry
Solyman Brown (1790-1876)

Although Solyman Brown took a leading part in the three great events that elevated American dentistry from a craft to a profession—the organization of the first dental college, the first dental journal, and the first dental society—he is not always remembered as one of the great figures in American dentistry.

Born in Litchfield, Connecticut, in 1790 of Puritan parents, Solyman first prepared himself for the ministry. Yale College conferred on him a Master of Arts degree and in 1813 he became a Licentiate Doctor of Divinity. For seven subsequent years he served as pastor of the Congregational Church of Litchfield. Later, in 1822, he moved to New York City to serve as a preacher there.

The first twenty-five years of his career were devoted to the ministry, but in 1832, he became acquainted with Dr. Eleazar Parmly, a prominent New York dentist. Although he was by now in his mid-forties, Brown became a preceptorial student of Parmly's and soon proved to be a proficient dental practitioner.

Solyman Brown, A.M., D.D., had a natural talent for poetry and soon authored many poems, the most famous of which was his Dentologia which he published in 1833. It was an epic work in five cantos that dealt with diseases of the teeth and their remedies. This quasi-classical poem, reprinted in 1840 in a 176-page book, was a literary accomplishment for its time. Dentologia was widely discussed and quoted in literary circles as well as having an influence in elevating dentistry as a profession. It was followed in 1838 by another poem in blank verse, Dental Hygiea, which dealt with preservation of the teeth. It, too, was widely acclaimed, largely because of the subject matter.

Brown's most important writing was "A Treatise on Mechanical Dentistry," which was serialized in the first dental periodical, the American Journal of Dental Science. Unfortunately, it called down upon Brown's head the wrath of some of his fellow dentists "for giving away the secrets of the profession!"

Brown felt strongly the need for the profession to organize and was one of the charter members of the American Society of Dental Surgeons. Its founding meeting, in fact, took place in his home on Park Place in New York City.

When the American Journal of Dental Science was launched, Solyman Brown was on its publishing committee. Besides being a frequent contributor to its pages, after the first year he became co-editor with Chapin Harris.

It was Brown who proposed to the Society that an independent dental college be started, and he saw his dream come to fruition with the establishment of the Baltimore College of Dental Surgery. In recognition
A simple ring made for Valentine's Day. It is formed of solid silver wire soldered to the heart-shaped channel work. The gem is rhodolite, pinkish rose in color.

making jewelry is a fascinating hobby and is made-to-order for the dentist. In many respects it is a "natural" for him.

With the rapid increase in leisure time that is sweeping the nation due to available spendable income, early retirement, change in attitude, and other factors, the dentist is in a particularly advantageous position.

My introduction came during a winter vacation in Arizona. A friend of mine, a permanent resident, urged me to join him in a two-day intensive course in making jewelry. I had nothing better to do and so I went along.

The course devoted itself entirely to channel work which is one of the many specialties of jewelry-making. Briefly, it consists of outlining a bird, or animal, or flower with a ribbon of silver, backing it with silver plate, and filling the open space (or channel) with many colored gems to form the body. The gems are ground very carefully to fit the space and then cemented.

The skill of grinding a stone to fit an outlined area so accurately that no cementing medium shows is a skill that every dentist has already mastered. Later, when I used dental articulating paper to find where the gem was binding on the silver outline, the instructor looked on in amazement. He had not seen that before. He does it by eye and guess.

The channel work fascinated me so much that I decided to explore other areas. Basically, good jewelry is formed of silver, gold or platinum with or without gems. The conventional end products are usually rings, earrings, bracelets, pendants, and brooches.

**Skills Required**

What are the special skills required in making jewelry? The dentist possesses almost every one of them. Take bending, for example. The formation of certain designs requires an ability to bend silver or gold wire.
And the pliers used are the ones that every general practitioner finds in his office.

Next to bending, the most important skill to acquire is soldering. Soldering, which is second nature (or should be) to most practitioners, is one of the biggest stumbling blocks for the jewelry-making novice. For some reason, most beginners are scared to solder. And when they finally try it, they make a mess of it. This, in turn, makes them more apprehensive.

Some students have had experience in soft soldering with a soldering iron. But this is a far cry from hard soldering with a torch, which is required for gold and silver.

Even for the dentist who sends everything to a laboratory, it should be a simple matter to re-acquire the soldering skill. I still remember the three cardinal requirements of soldering as they were taught in my freshman year at dental school: clean surfaces, good contact, and even heat for all parts. They still hold true.

In dentistry, in the soldering of a fixed bridge, for example, the joint must be strong to withstand the heavy stress of chewing. On some occasions, it is necessary to reinforce a pinpoint soldered joint with a broader contact and more solder, for strength. In jewelry, strength is not as important a requirement as it is in a fixed bridge. The strain on adornments is seldom as strong as the stress of mastication.

But what is vitally important in jewelry-making is the minimum use of solder. The beginner fumbles solder all over the place and then has to spend endless hours grinding it away. The professional will use the smallest amount required to hold the joint. No grinding of excess, only polishing. On some occasions the amount could be equal to the smallest head on a small pin.

When the skill is finally acquired, it is almost soul-satisfying. It produces a warm glow in the operator, similar to the feeling one enjoys when an inlay drops into place beautifully.

In addition to bending and soldering, cutting out shapes in a sheet of silver or gold is another technique used in jewelry-making. Here, again, the dentist has the required tools at his fingertips. First, the drill to pierce the metal. Then the barrel-shaped diamond or caturbondon stone in the air turbine to enlarge the opening into the desired shape.

But there is still another way to make jewelry—lost wax casting. Here, the dentist has an enormous advantage. When I bought a book on casting jewelry, I was amazed to find that everything in it was familiar. The same waxes, the same investment, the same casting machines. It could have been a text for a dental student.

Lost Wax Casting

Let us go back to the average class in jewelry-making. Such classes are sprouting up in every part of the country. Those students who are not dentists have trouble with soldering, as we have mentioned. But if soldering is difficult, lost wax casting is a catastrophe. To them, it is equivalent to graduate work leading to a Ph.D.

On many occasions I have spoken to veteran craftspeople displaying their jewelry at fairs, festivals or gems shows and asked them about lost wax casting. So often I have received this answer: "Oh, no, I haven't got to that yet!"

Cost of equipment may have something to do with it. Few hobbyists, at least in the early stages, are willing to buy a centrifugal casting machine, an electric oven for burning out the wax, rings, investment material, and other items necessary for casting.

Shaping and bending can form beautiful jewelry. But there are some limitations. With casting, however, the most intricate, complex designs can be tackled. Since casting is more time-consuming and expensive, it is a good rule not to cast any piece of jewelry that can be made by some other method.

Most hobbyists and many professionals use silver almost exclusively. It handles easily, soldered well, and takes a beautiful polish. Gold, of course, is the ultimate, and although it can be found in jewelry shops, it has been priced out of the market for most of the hobbyists. A large supplier, such as Allcraft of New York and California, will be out of stock on most of the 14 k. items in the catalogue.

A dentist starting the hobby would be well advised not to start with leftover pieces of inlay gold. They usually average between 21 k. and 22 k. and are too valuable to practice with. Better to save them for an important project.

Or Lapidary Work?

But if jewelry-making itself does not excite you there are other associated hobbies, each of which has its own enthusiastic followers. The entire field of gems is exciting. Some men work only with gems, cutting and shaping, and faceting. Faceting, by itself, is a full-blown specialty with the most sophisticated equipment.

Perhaps we should start at the other end, hunting and digging for raw minerals. These "rock hounds" as they are called, love the out-of-doors with mountain climbing and all the excitement of prospecting. Suddenly coming upon a real find quickens the pulse and is worth all the hours of fruitless search in the roughest country.

Some of the rock clubs plan regular prospecting trips. In Arizona, some of the copper mining companies let them search in restricted areas. It is too dangerous to let anyone wander aimlessly in an open pit mine which is so deep and so large that it astounds one at first view.

Some of the companies conduct tours in small buses, but only for a limited distance. The high light of the tour is the place at which the bus stops and the driver announces that he will wait 10 minutes for rock hunting. At that point, many of the passengers jump out with large brown-paper bags and start collecting furiously.

Knowing what to pick takes considerable experience and knowledge. A piece of turquoise in a ring bears little resemblance to the same stone in its original state. The average tourist will pick up anything if it has color or a pleasing shape. But the rock hound has to determine whether the piece in his hand contains any fragment of a true gem. And if it does, whether the retrievable piece is of sufficient size and...