

leadership and true national security. This indispensable work may be made impossible by the creation of an atmosphere in which no man feels safe against the public airing of unfounded rumors, gossip and vilification. Such an atmosphere is un-American. It is the climate of a totalitarian country in which scientists are expected to change their theories to match changes in the police state's propaganda line. . . .

We are only in the beginnings of the atomic age. The knowledge that we now have is but a fraction of the knowledge we must get, whether for peaceful uses or for national defense. We must depend on intensive research to acquire the further knowledge we need. We cannot drive scientists into our laboratories, but, if we tolerate reckless or unfair attacks, we can certainly drive them out.

These are truths that every scientist knows. They are truths that the American people need to understand.

A Statement on the Relationships of the Voluntary Health Agencies to the School Health Program

Several groups either legally or through common interest share in the school health program. The growth of the program and of the health knowledge upon which it is based is almost staggering. Only through the effective relationship of all groups with important contributions to make can the school health program approach its goal, the

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Science has no political affiliation. Concern for our national security is non-partisan. Sober recognition of scientific research as the basis of our future national security should certainly be non-partisan. All Americans have a solemn obligation to avoid those methods and procedures which are impeding scientific research—whether adopted mistakenly with good intent, or advocated in the name of security by men with other axes to grind. . . .

Now and in the years ahead, we need more than anything else the honest and uncompromising common-sense of science. Science means a method of thought. That method is characterized by open-mindedness, honesty, perseverance, and, above all, by an unflinching passion for knowledge and truth. When more of the peoples of the world have learned the ways of thought of the scientist, we shall have better reason to expect lasting peace and a fuller life for all.

best possible health for all children now and throughout their lives.

School authorities by law carry the ultimate responsibility of all programs conducted in the schools. This includes the school health program. Since the control of communicable disease is a part of every school program and is frequently by law the responsibility of the public health department, and since in some states departments of health are responsible by law for medical examinations and follow-up, the latter to the extent set by local statute shares the responsibility of the school health program.

There are many groups without legal

responsibility for the school health program which nevertheless have a vital interest in and contribution to make, in whole or in part, to the school health program. Important among these are the medical and dental professions which have through the years given impetus and sound advice toward the continued improvement of school health programs.

Another essential group is the voluntary agency composed of interested citizens, both lay and professional. These agencies are frequently concerned with some special aspect of health. This interest, if properly placed and properly handled, has a part in the total school health program. The aim of the voluntary health agency interested in the school age child is to help make possible for boys and girls lives of usefulness unhampered by illness or poor health. The effectiveness of the voluntary health agency's assistance to schools depends to a large degree upon the mutual understanding of the responsibilities, limitations, and contributions peculiar to each.

A. GUIDING PRINCIPLES

1. School authorities have the legal responsibility for all school programs. The unique function of the school is education.
2. Voluntary health agencies accept this. They also recognize that school age is an excellent learning age. Moreover, their money comes from the community with the trust that it be spent to the best advantage. For these three reasons they strive, logically, to have what they consider important learning material included in this age period. School administrators should recognize that voluntary health agencies have the responsibility and the right to offer and to urge the use of their services. Voluntary health agencies should recognize that the school authorities have the choice of accepting or refusing these services. A cooperative attitude on the part of both parties leads to the most effective use of the services offered.
3. It is very desirable that personnel working with the schools in any phase of education for health be acquainted with the problems of school administration and classroom instruction and should have an understanding of acceptable policies and practices in health education.
4. While voluntary health agencies may contribute to any part of the school health program their most valuable services are usually in the field of health instruction.
5. All efforts in the health instruction of children in school must be channeled through the regularly constituted educational authorities, in cooperation with any other agencies which may also be concerned. This should apply to any situation whether on the Federal, State, or local level.
6. The voluntary health agency should never attempt to superimpose a fixed plan on any individual school system, or part of the system, but should work with school personnel for the desired goal.
7. Health education materials offered by voluntary health agencies for the elementary grades must be in harmony with the mental and emotional stage of development of the children concerned. Only those public health problems which touch the child's daily health practices such as the use of quarantine in the control of communicable diseases in children come within his range of interest and understanding. Learning experiences which have direct bearing on his personal health are basically important for these grades. The child in these years is interested in health, not disease.
8. In the secondary schools education related to special diseases or special health problems should be integrated

into the health course and into such general courses as human biology and general science. It is not acceptable educational practice that programs dealing with specific health problems such as nutrition, cancer, tuberculosis, venereal disease, and first aid be set up as a separate or extra subject. So isolated, one aspect of health has little or no chance of assuming its proper place in the individual's total health learning.

9. The voluntary agency must have a clear understanding with the educational authorities as to suitability and distribution to school personnel of materials they provide. Sound educational policy involves mutual agreement that the provision of educational materials to schools by voluntary agencies be kept separate from their direct fund-raising campaigns.
 10. The voluntary health agency should be familiar with the extent and quality of the teachers' education in health.
- B. TYPES OF AID ACCEPTABLE**
1. Up to date, accurate information on the agency's special health interests. Such assistance should be not only welcomed but asked for by school personnel, who cannot expect to be able to keep up with all phases of the rapidly increasing health knowledge.
 2. Teaching tools, as pamphlets, posters, charts, graphs, films, film strips and slides, exhibits. Such material must be accurate, clear in concept, attractive, and effective, with its purpose solely educational.
 3. Suggested teaching units. It is recommended that in the preparation of teaching units the voluntary health agency make use of experienced teachers so that the material is adjusted properly to grade levels and needs.
 4. Consultation services.
 5. Personnel assigned to educational authorities to work under their jurisdiction.
 6. Assistance in the formation of school health councils and coordination of the school health councils with the community health council.
 7. Qualified personnel provided to demonstrate a health education program or part thereof, to experiment in new types of programs or to fill the temporary lack of adequate school personnel.
 8. Cooperation in the in-service course in health education either in the form of funds or personnel. Such courses should be developed cooperatively with school authorities, especially those having to do with teacher preparation and certification.
 9. Scholarships for education in health education.
 10. Financial assistance and/or leadership in special projects, such as workshops.
 11. Individual conferences with teachers possibly including demonstration teaching of selected health units by a qualified health educator.
 12. Guidance in helping teachers to understand classroom observations and/or measurements, non-diagnostic or medical in nature and to be alert to detect, and refer children with signs of impaired health.
 13. Guidance to teachers or parents in learning the use of non-medical, non-diagnostic screening tests, such as vision and hearing testing, and weighing and measuring.
 14. Educational presentations to classroom groups, supplementary or summarizing in nature. These are not to take the place of classroom teaching, which is not to be provided by the voluntary agency except for possible demonstration teaching of a health lesson.
 15. Parent health education.
 16. Leadership in parent or teacher study groups.
 17. Informing school administrators and teachers of general advances in health knowledge and practice.
 18. Securing the interest and cooperation

of other community groups to participate in the school health program, e.g., conferences and medical and/or educational presentations for teacher groups.

19. Interpreting school health program and unmet needs to the community and stimulating action if desirable.

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tion Council of the American Public Health Association, November, 1947.

IF YOU HAVE NOT renewed your membership, turn to page 201 and send the blank with the necessary remittance to the secretary-treasurer. Volume 11 starts with the January issue; this is the last number to be mailed to those who have not paid their dues for 1949.

The Radioautographic Method in Biology and Medicine

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For centuries the chemical elements have been objects of scientific investigation. In 1896 Henri Becquerel discovered that some of the heavier elements were naturally radioactive, emitting alpha, beta and gamma radiation. This emission was studied extensively during the subsequent years. One of the significant advances was the announcement of artificial radioactivity by Curie and Joliot in 1934. It was soon established that all of the known chemical elements possess varying numbers of isotopes, many of which are artificially radioactive, emitting alpha, beta and gamma particles and positrons. The disintegration process is unique, for only one type of emission is known for each radioactive isotope.

The radiations emitted by the isotopes may be detected with Geiger counters, spectrometers, ionization chambers or by photographic methods. In 1924 Lacasagne and Lattes reported a modification of the photographic method which has been widely used in biology and medicine. It is simply a method of contact photography for detecting and recording radiations from radioactive isotopes. The photographs obtained are

usually called radioautographs but some workers prefer autoradiographs or simply autographs.

In the usual applications of this method a solution containing a radioactive isotope is administered to the specimen (or patient) under examination. After a suitable period of time has elapsed portions of the specimens are removed and sectioned. The sections are placed in direct contact with a photographic plate and the combination bound together. Those portions of the specimen containing the radioactive element emit radiations which affect the photographic emulsion in the same manner as ordinary visible light or X-rays. After the development of the photographic plate that region of the emulsion which was adjacent to the radioactive portion of the sample will be darkened. The type and extent of darkening is a measure of the concentration of the radioactive material in that portion of the sample in contact with the plate. The radioautographic technique localizes the sources of radiation more closely than any other method of detection now available.