

UNITED STATES GOVERNMENT

PUBLIC HEALTH SERVICE - DSS

Memorandum

TO : Surgeon General

FROM : Chief, Division of Radiological Health

SUBJECT: Utah-Nevada Population Study

DATE: OCT 11 1963

As requested, we present herewith a status report on the current project for conducting physical examination of the thyroid glands in 2200 Washington County, Utah, children. This is but one phase of a group of studies being conducted by the Public Health Service in Utah and Nevada in an effort to determine whether adverse health effects have occurred because of radiation exposures received by populations living near the Nevada Nuclear Test Site, resulting from atmospheric testing operations since 1951. The status report is preceded by a brief resume of the background for these studies. It is followed by an outline of liaison maintained with AEC, the White House Press Office, and the Office of Science and Technology with respect to these studies and press announcements relating to them. Copies of these releases, pertinent testimony reproduced from published Congressional hearings, and other documents are appended.

Background Information

Radiation monitoring in the area around the Test Site has been carried out by the Public Health Service under agreement with the Atomic Energy Commission since 1954. Although resources devoted to the monitoring effort and efficacy of the monitoring techniques have increased through the years, it has only been recently that reasonably reliable estimates of human exposure have been possible.

At the August 1963 hearings of the Joint Committee on Atomic Energy (JCAE), Congress of the United States, Representative Melvin Price, speaking for the Committee "urged that the appropriate studies be undertaken to determine if this exposure has or will cause an increase in the normal incidence of thyroid cancer or other diseases in the exposed groups," (see Appendix A). In response, the Surgeon General stated in a press release dated August 23, 1963, that the Public Health Service was intensifying human studies relevant to this question. At the June 1965 JCAE hearings, preliminary results of the studies were reported in response to direct questions from Chairman Holifield (see Appendix B).



Public Health Service field investigators began the collection of case histories on Utah and Nevada patients with thyroid disease who were hospitalized any time after 1948. They obtained information from records of thyroid surgery in individuals under 30 years of age. Categories of diseases studied were as follows: toxic goiter; non-toxic goiter; chronic thyroiditis; adenoma; carcinoma; and other conditions. Attempts are being made to determine whether any geographic patterns exist which might be related to fallout. Followup information is currently being collected on all cancer cases and matched controls for residents' histories, history of diagnostic and therapeutic irradiation, and diet.

From preliminary tabulations of these data, there is a suggestion of an increased thyroid cancer incidence in the Utah area from the period 1948-1952 to the period 1953-1962 in certain age groups. However, further time will be necessary before any conclusions can be drawn or clear trends determined. For comparison, similar information is being obtained from two Medical Centers in Washington, D. C., and the Connecticut State Health Department, in order to compare the disease patterns in different areas.

Another part of the study is an investigation of leukemia mortality in Washington and Iron Counties, Utah, from 1950-1964. Preliminary results from this investigation indicate a greater number of cases of leukemia in these counties than would be predicted on the basis of the nationwide incidence of leukemia. There were 28 cases found where 19 would have occurred on the basis of national rates. The significance, if any, of this finding cannot be evaluated at the present time. 11

The most recent phase of the population study is a comparison of thyroid abnormalities among school children in Washington County, Utah, and a similar group in Graham County, Arizona. This was announced in a Joint PHS-Utah State Health Department press release dated September 16, 1965, (Appendix C).

Thyroid Examination Project - Current Status

During the period September 17 - 30, 1965, teams of three physicians made independent thyroid examinations on each of approximately 2200 children in Washington County, Utah, and on a control group of approximately 1400 children in Graham County, Arizona. Positive findings in which at least two of the three examiners concurred are very briefly summarized below:

Washington Co., Utah Graham Co., Ari

Thyroid visible, palpable and nodular

40

8

After all of the initial observations were made, the 40 students in Utah were reassembled and reexamined by all six physicians for the purpose of reaching a consensus as to the findings. There was agreement that 18 of these students had nodular glands requiring further clinical evaluation. A similar consensus session is being carried out this week in Graham County, Arizona.

Of the 18 students on whom there was agreement of nodular thyroid, one is a 30 year old woman (a student also), recently arrived in Washington County. The remaining 17 are school children ranging in age from 10 to 18, of which 16 are life-time residents of either Washington County or other parts of Utah and one has lived in Washington County for seven years. Other information collected to evaluate possible etiological factors included familial goiter, diet, and clinical X-ray exposure.

It is the opinion of the examining group that for health reasons as well as completion of the study, the 13 Utah cases should receive early clinical followup in order to make a differential diagnosis from among the following possibilities: non-toxic nodular goiter, thyroiditis, and neoplastic disease, both benign and malignant. DRH plans to contract with the State Health Department to handle the clinical followup of the subjects. It should be emphasized that the nature of these thyroid diseases is such that adequate time can be taken to carry out careful followup on a non-emergency basis.

The team of examining physicians considers that the followup should include biopsy. However, the seriousness of the many individual health and national policy issues involved in this procedure being performed on so many children is such that the FHS has initiated another step. A team of nationally known thyroid experts is being formed to go to Washington County, Utah, and Graham County, Arizona, as soon as possible. They will reexamine the questionable cases detected by the original team and make recommendations as to further tests. In each instance the consultant group will discuss their findings with personal physicians, with appropriate personnel from the State Health Department, and the physician from the Medical Center who will have a major role in any subsequent clinical followup which may be determined.

The parents of the children involved in these further evaluations have been told only that their children require further tests. Although the parents have not been given any detail as to the nature of the followup which may be necessary, nor the clinical possibilities which exist, they are generally familiar with the purpose of the study.

Interagency Liaison

Since the mid-summer of 1962, in accordance with instructions from the White House, all proposed news releases from the Division of Radiological Health related to nuclear test fallout have been cleared with the White House through the HEW Office of Public Information. Additionally, copies of proposed releases have been submitted for advance information and comment to the Information Division of AEC by the Division of Radiological Health, FHS. This procedure was followed in the case of the two releases which announced the various population studies in Utah and Nevada. The dates of these releases were August 23, 1963, and September 16, 1965, (Appendix C).

With respect to the current thyroid study in Utah and the study of leukemia deaths in that State, staff contact has been maintained as to the nature of the studies and the preliminary results with the Atomic Energy Commission, Office of Science and Technology, and the Federal Radiation Council.

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Enclosures