

PROJECT 1

U.S. NATIONAL CHERNOBYL REGISTRY COORDINATING CENTER

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SPECIFIC AIMS

Complementing international registry activities in Israel and Russia, this pilot study is a first phase in a longer term project to create a national coordinating center for a registry of Jewish immigrants to the United States from areas affected by the Chernobyl nuclear accident. The major purpose of the project is to (a) create a registry of all such Jewish immigrants in the State of Texas and (b) establish contacts in the other Jewish population centers around North America where Chernobyl victims have resettled.

The specific aims of this pilot project are to (a) identify the targeted immigrants around the State of Texas, (b) recruit them as subjects for Consortium research studies, and (c) collect baseline medical history data and clinical measures with a sample of Jewish immigrants in Houston, Texas, so as to establish a foundation for tracking the patients in the future. Having done so, the registry would then be able to serve as a source of subjects for the Consortium investigators. This would lay the logistical groundwork for the next phase of creating a national registry, should it be justified.

BACKGROUND AND SIGNIFICANCE:

Although a national registry of Chernobyl victims is the longterm goal of this project, there are considerable logistical problems to overcome prior to such an endeavor. Consequently, a preferable alternative is to "begin in a well-defined area where complete coverage at a reasonable cost is feasible." The essential steps are to (1) identify the potential subjects, (2) contact and recruit them to participate in the study, and (3) interview them to document historical medical and exposure history and collect clinical data.

In the context of Chernobyl research, there are two important reasons for focusing on Jewish immigrants from the affected areas:

1. Scientific Comparison. Jewish emigrants from the former USSR constitute three easily identified subpopulations which will allow comparison of both (a) long vs. short term radiation exposure and (b) psychosocial and medical experiences in three very different health care systems.
2. Sampling and Tracking. (a) In the former republics of the USSR there still remain 1,640,600 Jews, of whom 1,360,000 (83%) reside in Russia, Ukraine, and Byelorussia. The National Conference for Soviet Jewry has maintained ties with the Jewish communities in these regions, even during the considerable political changes since Chernobyl. (b) Israel has received over 400,000 Soviet Jews, of whom approximately 100,000 (25%) are from areas affected by Chernobyl. These immigrants participate in the Israeli national health care system, and physicians from Hadassah Medical Organization have already begun to treat them. (c) Since 1986, the U.S. has received over 157,000 former Soviet Jews as documented refugees. For the most part, they have settled in major population centers with existing Jewish population (e.g., New York, Boston, Chicago, Cleveland, St. Louis, Los Angeles, San Francisco, Houston, Dallas). In addition to these refugees, there are a yet to be determined number of Soviet Jewish immigrants who have also settled in the United States as a part of project "Exodus".

Assuming a similar proportion to that in Israel, this would mean about 40,000 from Chernobyl areas. The Hebrew Immigrant Aid Society (HIAS) has been instrumental in helping to resettle these refugees and

immigrants. In Houston and other Texas cities, the resettlement process is continued through the Jewish Family Service and local Jewish philanthropies. This often includes matching immigrant with American families, allowing an additional level of contact with the targeted population.

The present project is designed as a pilot/feasibility study both to collect baseline data and to address certain problems that must be overcome in order to establish a national registry in the future. In its inception, the proposed registry is in some ways more analogous to a census bureau than a registry in that we will not wait for patients to come in with illnesses in order to register them. This raises the difficulty of (a) identifying subjects, (b) locating them, and (c) convincing them to participate. In addition, given the political conditions and turmoil in the immigrants' republics of origin, it is not clear whether and to what degree they will want to be identified and tracked, albeit for scientific and medical rather than political purposes.

For these reasons, the project will utilize as liaisons existing local Jewish organizations with which the immigrants will have become familiar and which they trust, e.g., Jewish Family Service, HIAS, etc. Furthermore, by focusing on family clusters, we can use family contacts to reach other Jewish immigrants who may not have resettled through the Jewish aid organizations, who may have moved since resettlement, or who may have emigrated to other countries. Finally, we will utilize bilingual Russian immigrants to conduct the data gathering interviews rather than depend only on mailed questionnaires.

Pertinent Experiences

The staff of the Center for Cancer Control Research have extensive experience in patient tracking. From 1982-1987, the staff were involved in a Multiple Community Study family health education project which was funded by the National Heart, Lung, and Blood Institute. The project involved family history/health risk analysis for 5,000 families in three communities in Texas, complemented by a statewide effort in Utah. In 1988, the staff coordinated and provided computer support for a city-wide cholesterol screening effort by The Methodist Hospital and a consortium of other health care institutions in Houston. Almost 35,000 Houstonians were screened at over 80 locations, with follow-up for about 10,000 at-risk participants. The staff of the Center for Cancer Control Research also maintain ongoing tracking of 7,500 employees as part of The Methodist Hospital's employee cancer screening and education programs.

The Cancer Registry at The Methodist Hospital is approved by the Cancer Department of the American College of Surgeons and follows standard registry procedures. Since its inception in 1984, the registry has entered 19,280 cases as of August, 1992. The current case accrual is over 200 a month, with better than 94% follow-up of patients.

We also have extensive experience with recruitment, standardization of clinical examinations, and follow-up from the National DESAD study. At the end of the seven year DESAD study, 88% of the original cohort of 1,343 women in Houston remained in the study, which included regular yearly examinations. Later, the study continued with mail contact only and six years after termination of the chemical study (i.e., 13 years from the beginning) 82% of the original cohort still maintained contact with the study. Tracing and contact methods developed in the study led to this high continued participation.

Research Design and Methods

A. Targeted Population

The Soviet Jewish Resettlement office of the Jewish Family Service estimates that there are about 1,500 Soviet Jewish immigrants in Houston, Texas. Of these, at least 200 families have been resettled since 1989. Additionally, it is also estimated that there are approximately 1,000-1,500 former Soviet Jews in other localities around the State of Texas.

At this time, we anticipate conducting interviews and collecting clinical data only with the sample from Houston. In other cities, we will only register Soviet immigrants, unless the Houston data show clinically

interesting results that warrant follow-up. If so, a request will be made for additional funds from the Development Fund for the TMH/BCM research site to continue data collection around the state.

B. Methods of Recruitment:

The strategy of recruitment efforts will be to generally convey a sense of not only the importance of the research but also the health benefit to the immigrants of being followed for potential radiation related illness. Contact with the study subjects will be made through the Jewish Family Services, local Jewish Federations, fraternal organizations such as B'nai B'rith, Hadassah, HIAS, etc., in Houston and other Texas cities where Soviet Jews have resettled. This approach will facilitate consideration of the immigrants' viewpoints and concerns about being identified, used as research subjects, and tracked over the long term. Over and beyond the normal concerns for patients' confidentiality, these are issues about which we expect Soviet immigrants to be especially sensitive.

A bilingual letter will be sent through these organizations to individuals and families, explaining the planned study, including its justification and objectives. At sites with a larger concentration of immigrants, the letter will invite potential participants to meetings where pertinent questions about the study can be answered. Given both the long term nature of participation we will request and the importance of cross-cultural sensitivities, we will attempt to make the meetings both pleasant and sociable. Refreshments will be served, and we will try to build on the group solidarity which any immigrant group in a new land might be expected to have.

The purpose of the meetings will thus be not only to answer the immigrants' questions but also to facilitate recruitment by putting them at ease and reassuring them about issues of confidentiality. For instance, we will make clear to the immigrants that any data that could identify them personally will be (a) kept under lock and key, (b) kept separate from the research data per se, so that scientific analyses cannot be tied directly to individuals, (c) not shared with other researchers, i.e., only grouped scientific data will be shared or published. Outside of project staff, the only persons who will be given information on individual subjects would be, with the subjects' approval, their respective physicians.

All persons agreeing to participate in the study will be considered potential enrollees. If potential subjects do not respond to the invitation, they will be contacted through the above organizations a second time. Finally, project staff will request any information on nonrespondents pertinent to the study and available through the resettlement organizations, within the limits of confidentiality. Such information (for instance: place of origin, age, gender, etc.) will allow comparison of participants and nonparticipants for evaluation of the influence of enrollees' self-selection on the outcome of the study.

C. Enrollment:

1. Standardized Forms:

Using the questionnaire already developed in Israel (see the proposal by Hadassah Medical Organization) as a starting point, standard questionnaires will be developed for collection of information related to basic demographic data as well as family and personal history, e.g.:

- o residence in the USSR before, during, and after the Chernobyl accident;

- o known exposure to radiation;

- o health status in relation to the Chernobyl accident, with a detailed health and medical history for the periods before and after 1986;

- o data enabling long term contact, e.g.: telephone numbers, Social Security numbers, driver's license numbers, addresses of friends and relatives, etc.

This documentation will contain information comparable to data collected in studies in Israel and in the Russian Republic, anticipating coordination of all studies through the consortium. In addition to the above data, information will be obtained on residence of relatives or friends who are still residing in Russia, who have emigrated to Israel, or who have settled in other cities of Texas or other parts of the U.S.A. This will allow us not only to expand the subject pool as time goes on but also, eventually, to match family members here and abroad for future studies.

2. Informed Consent:

Informed consent for participating subjects will involve three elements, to which they may conceivably consent to any one, two, or all three. One is consent to be part of the registry, which will include periodic contact by project staff, at least once a year, to maintain and update registry files and patient medical histories. The second is consent to provide a blood sample, with the understanding that future samples will be requested. The third is consent to be contacted in the future about participation in other studies.

Subjects responding to the first recruitment contact through the resettlement organizations will be requested to sign the informed consent form. At the recruitment meetings, after the project has been explained and questions answered, project staff will request those who verbally agree to participate to go ahead and sign consent forms there and then. For those who want to think about participating or who want to discuss the project with others who did not attend, consent forms and business reply envelopes will be provided to take home. For those contacted only by mail, consent forms will be included for their signature and return.

Informed consent to participate at any level of the study will be considered granted only if a subject actually signs an informed consent form. Parents or guardians may not sign for minors, who must sign independently to give their informed assent to participate, with their parents co-signing the consent form.

The consent form itself will include sections on:

- o the scope of the project, including the understanding that all participation is completely voluntary
- o type of interviews to be conducted and/or questionnaires to be administered
- o measures that will be taken to preserve confidentiality of data.
- o consent to draw blood for a basic hematologic profile including thyroid function test
20cc (approximately 7 teaspoons) for teenagers and adults
10cc (approximately 3 teaspoons) for children aged 5-12 years
5cc (approximately 2 teaspoons) for children younger than 5 years
- o consent to be contacted for future studies as they are phased in

3. Interview/Data Collection

When possible, for the purpose of cost efficiency, project staff will invite small groups of participating families to come in to a centralized site for the purpose of recording all information on the standardized forms. Such a site might be the Jewish Family Service or the Jewish Community Center, which are familiar to the study population. Data collection will be scheduled for afternoon or early evening hours, or Sundays, when whole families would be available. Simultaneous with the interviews, blood specimens will be collected, as described above. The staff interviewers will be bilingual and will be properly trained for the interview process. Experienced nurses or phlebotomists will draw the blood.

Besides greater efficiency, it is hoped that focusing on small groups of families at a time will continue to build on the camaraderie which the earlier recruitment meetings attempted to engender. Alternatively, study enrollees

who cannot come in to a centralized site will be visited at home by one of the bilingual interviewers, who will record all information on the standardized form, and a phlebotomist for drawing blood.

Follow-up and preventing attrition are important to registry activities. We anticipate sending a short newsletter to all enrollees at least twice a year. At least once every twelve months, project staff will contact each participant for the purpose of maintaining and updating registry files. This will involve sending a follow-up questionnaire by mail. The questionnaire will include questions about complete medical and health history over the preceding year. Address and telephone number changes will be solicited, especially with regard to family members who may have moved, gotten married, gone to college, etc. If a follow-up questionnaire is not returned within two weeks, a bilingual interviewer will attempt to contact the subject by telephone and either mail another questionnaire, if the first has been lost, or interview the subject over the telephone.

4. Study Subjects:

a. A pilot study will be initiated in Houston, Texas, which will include 50 Soviet Jewish immigrants who have settled in Houston after 1986, preferably from areas directly or potentially affected by Chernobyl. The experience with the forms and any technical problems will be evaluated and necessary adjustments will then be made for continuation of the study.

b. Based on experience from the pilot study, the project will be extended to all Soviet immigrants in Houston, including those who may have arrived before 1986, as a comparison group.

c. Special efforts will be made to trace immigrants who arrived (a) after 1986, (b) from exposed areas, and (c) who may already have been measured for the amount of their radiation exposure (e.g., measured by Russian health authorities or by the World Health Organization). Attempts will be made to obtain all such information available from Russian resources on our subjects.

d. Enrollment will then continue in other Texas cities with large concentrations of Russian immigrants, following the same procedures developed in Houston.

e. The experience in Texas will be summarized and, if indicated after proper adjustments, registration activities will be initiated in other localities of the U.S.A. and Canada. It is anticipated that the organizational contacts and methods developed for Texas will then be used directly or modified appropriately for the expanded registry activities.

D. Handling and Evaluation:

1. Data entry and management will follow the guidelines set up by the Design and Analysis (D&A) Core, described more fully on Page _____. We will follow the protocol established by the D&A Core with regard to data entry. The D&A Core will assign a master ID number to each participant, after which personally identifying data (e.g., name, address, telephone, etc.) will be kept separate from scientific data. Only the subjects' unique identification numbers will be associated with the data in the computer master file. Forms and files will be available for authorized personnel only and will be kept in locked files when not in active use.

Internal accuracy checks, such as double entry of patient ID to minimize misassignment of data, will be followed. The D&A Core will use a 486 computer, and a Bernoulli box will be used for backup and security, with one backup copy of the data being kept in the Center for Cancer Control Research. All data entry will use IBM compatible computers and DBASE 4 software, or other software agreed upon by the TMH/BCM and other consortium researchers.

Eventually, specific subsets of data will be shared with the consortium Coordinating Center, based on final decisions of the consortium Steering Committee and the respective researchers. Only scientific data will be shared, i.e., personally identifying data will not be shared so that the subjects' confidentiality will be maintained.

2. Statistical methods used:

Standard parametric and nonparametric statistical analyses will be used to analyze data as they come in.

E. Time Frame of the Study:

The project will proceed in four phases over 24 months:

Phase 1 (months 1-4). Project staff will consult with representatives of the Israel and Russian registries to establish standardized or at least overlapping protocols with common questions touching on the demographic, medical history, therapy, and follow-up data for survivors in the respective locations. The National Bone Marrow Donor Program will also be consulted with regard to software and policies based on their experience. Records and questionnaires will be designed and translated into Russian. Bilingual interviewers will be recruited.

Phase 2 (month 5-8). Contact 50 Soviet immigrants through the different Jewish organizations in Houston, Texas, as specified in Section B. Pilot test and revise software and bilingual materials with this sample. Contacts will be made through Jewish Family Services, local Jewish Federations, fraternal organizations such as B'nai B'rith and Hadassah, HIAS, etc., in other Texas cities to establish where Soviet Jews have resettled elsewhere.

Phase 3 (months 9-16). Data collection targeting all Soviet Jews in Houston. It is anticipated that more than one visit will be required in order to interview all members of a family. Staff will coordinate and train volunteers in other Texas cities to register Soviet Jews in their communities.

Phase 4 (months 17-24). Registration activities elsewhere in the State of Texas. Contacts will be made with Hadassah Organization chapters, local Jewish Federations, HIAS chapters, etc., in other Jewish population centers where these immigrants have settled around the USA and Canada. This will lay the groundwork for expanding the registry to a national level.

F. Reporting Schedule:

A written report will be prepared at the end of each phase and submitted to the Site Director of the Methodist Hospital/Baylor College of Medicine Project.

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