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MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL

TO : William H. Foege, M.D.
Director, Center for Disease Control (CDC)
Through: Philip S. Brachman, M.D.
Director, Bureau of Epidemiology (BE) *PNS*

DATE: May 21, 1979

FROM : John E. Anderson, Ph.D.

SUBJECT: Foreign Trip Report (AID RSSA): Proposed Contraceptive Prevalence Survey -
Jamaica, April 16-21, 1979

SUMMARY

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SUMMARY

From April 16-21, 1979, John E. Anderson, Demographer, FPED, CDC, was in Jamaica at the request of AID/DS/POP/FPSD, AID/DS/POP/LA, and AID/Kingston to consult with and assist the Jamaican Group at the University of the West Indies regarding the Contraceptive Prevalence Survey to be conducted during 1979. During the week all phases of the survey were discussed. A questionnaire was drafted during my visit, and other aspects of the survey were discussed. The main problem remaining at the end of my visit was the sample, since the Jamaica Department of Statistics would not make its sampling frame available for the survey. If the UWI Group cannot obtain the use of a private sampling frame, they may need to develop their own sample, which will be a relatively costly and time consuming process and not likely to result in as good a sample. It is expected that FPED/CDC will be involved in the data processing and analysis stages of the survey and perhaps in the initial stages of data collection.

I. PLACES, DATES, AND PURPOSE OF TRAVEL

Kingston, Jamaica, April 16-21, 1979, at the request of AID/DS/POP/FPSD, AID/DS/POP/LA, and USAID/Kingston, to consult with and assist the Jamaican group responsible for conducting a contraceptive prevalence survey for the USAID Mission. Discussions were held with Mrs. Dorian Powell and others at the University of the West Indies, Kingston, and with Terry Tiffany, Population Officer, USAID/Kingston, regarding sampling, questionnaire design, data processing, and analysis aspects of the survey. My travel was in accordance with the Resource Support Services Agreement (RSSA) between the Office of Population/AID/Washington and CDC/BE/FPED.

II. PRINCIPAL CONTACTS

- A. AID/Kingston
 - 1. Linda Haverberg, Chief of Health, Nutrition, and Population
 - 2. Terry Tiffany, Population Officer
 - 3. Gary Cook, Nutrition Officer

- B. University of the West Indies
 - 1. Mrs. Dorian Powell, Department of Sociology
 - 2. Mrs. Hermione MacKenzie, Department of Sociology
 - 3. Mrs. Amy Lee, Research Assistant

- C. Jamaican Department of Statistics
 - 1. Mrs. Carmen MacFarlane, Director
 - 2. Mr. S. James
 - 3. Mrs. Valery Nam

- D. National Family Planning Board
 - 1. Mr. Sam Cheddar, Director

- E. Other
 - 1. Dr. James Heiby, AID/Washington, on TDY
 - 2. Maria-Elena Dubourt, U.S. Bureau of Census, on TDY
 - 3. Don Levy, Market Research Consultant, Kingston

III. BACKGROUND

The available evidence indicates that Jamaica has experienced a decline in crude birth rate to 29 per 1,000 in 1977, which might be termed a "moderate" level of fertility (Table 1). The level of natural increase is still relatively high (2.2%), but the effect on population growth has been lessened through out-migration. The latest survey estimates of contraceptive prevalence are from the 1972 and 1975 KAP Surveys. Estimates from these surveys show 29% and 40% of ever-in-union women currently using a method, respectively (Table 2). In 1976 the Jamaica Fertility Survey (JFS) was conducted

as part of the World Fertility Survey. The first report of this survey is nearing completion at the Jamaican Department of Statistics. Their deadline for completion is May 1, 1979, and no data will be released prior to completion of this report.

There is a real need for a contraceptive prevalence survey in Jamaica for a number of reasons. I obtained a copy of the JFS questionnaire and noted that there were no questions on source of contraception, demand for contraception, or the needed questions for estimating the number of women in need. These areas will be covered by the contraceptive prevalence survey. Also, data on the number of family planning program users are incomplete. The National Family Planning Board has a computerized data system, but many clinics are still using a manual system, and output from the 2 systems is not always comparable. Methods accepted by new acceptors in 1975 are shown in Table 3, indicating that orals, Depo-Provera, and condoms are the main methods of the clinic program. The program does not have good estimates of active users to complement acceptor data (see CDC Jamaica RSSA report dated December 4, 1978). There is also a subsidized commercial distribution of contraceptive programs, and the contraceptive prevalence survey is designed to get an estimate of the number of women served by this program, as well as by the private sector.

In addition to covering these areas, the contraceptive prevalence survey will provide another wave of information on fertility and contraceptive use 3 years later than the previous estimate, and 1979 results will be available during the first half of 1980.

IV. CONTRACEPTIVE PREVALENCE SURVEY

A. Proposed Survey

This travel was initiated by the request for assistance made by Terry Tiffany in a letter dated February 26, 1979 to Richard Cornelius, AID/POP/Washington.

At the time of my visit the agreement covering the survey between USAID/Kingston and the University of West Indies (UWI) had already been made. Mrs. Dorian Powell of the Department of Sociology, UWI, is the principal investigator with Mrs. Hermione MacKenzie of the Sociology Department serving as a consultant. My role, then, was to assist the UWI in proceeding with a survey that would be comparable to other recent contraceptive prevalence surveys. Since the agreement had already been made, it was important to assume that a quality survey be conducted rather than to make a judgment on the feasibility of such a study.

The agreement with USAID was actually for 2 studies, a continuation study based on clinic records referred to as the "Dropout Study" and a contraceptive prevalence study of 2,000 women of childbearing age and a small special sample of 200 males. The Dropout Study consisted of a review of records in a sample of clinics with interviews with clinic dropouts. The record review phase of this study was already in progress. I discussed continuation study questionnaires with the investigators and translated the Spanish questionnaires of the 1975 El Salvador continuation studies in which FPED was involved.

The contraceptive prevalence survey was still in the planning stages during my visit, and all phases of the survey were discussed.

B. Sampling Design

Obtaining an adequate sampling frame was the biggest problem in planning the contraceptive prevalence survey. This problem was only partially resolved at the end of my visit. It was hoped that the sampling frame of the Jamaican Department of Statistics (DOS) would be made available for the contraceptive prevalence survey. However, after meeting with the DOS, it was clear that the sampling frame would not be made available. The DOS is the government agency responsible for conducting the census, labor force surveys, and compiling other statistics. The DOS conducts a periodic Labor Force Survey called the Social and Demographic Survey every 6 months. They have a sampling frame consisting of 214 sampling regions (SR). These are aggregates of the approximately 5,000 census enumeration districts each of which contain 100 to 150 households. The SRs are designed to be of equal size, each consisting of about 2,000 households. The DOS has a sample of 2 enumeration districts (EDs) from each of these SRs. Each sample ED is listed, a procedure which not only includes listing the households, but also enumerating the inhabitants of each household according to certain characteristics.

While the 1976 Jamaica Fertility Survey and other special interest surveys had used the DOS sample frame, it was clearly stated that it would not be available for the contraceptive prevalence survey. A number of reasons were given: 1) The DOS could not release the information because it was bound by law to maintain confidentiality of respondents. I explained that names or other characteristics of the respondents would not be needed, since the household would be enumerated only as part of the first-page screening form of the contraceptive prevalence that it would not be possible to locate many households without knowing names and asking directions. 2) As in many Labor Force-type surveys (such as the U.S. Current Population Survey) the same household is contacted in a number of waves of the survey, in this case 3 waves. It was felt by the DOS that the respondents were becoming

"exhausted" of being survey subjects. 3) Many other agencies were interested in using the DOS sampling frame. At the time of our discussions, a survey of energy use for the government of Jamaica was in the field. This placed demands on both the DOS staff and on the respondents in the sampling frame. Thus, the DOS declined to make its sampling frame available to anyone, particularly a group with nothing to offer in return and with whom they were not working on a regular basis.

The meeting with the DOS took place on Thursday morning with my departure scheduled for Saturday. An alternative plan was devised for drawing a new sample directly using a 3-stage design. This called for a subsampling from the DOS's 214 sampling regions. Based on discussions of cost with Mr. S. James of the DOS, a sample of 90 EDs was decided upon. The design called for first sampling 45/214 of the SRs, then selecting 2 EDs per SR. This would result in 90 sample EDs. There are an average of 100 households per ED in rural areas and 150 in urban areas. All households in these EDs would then be listed with locations noted either by directions or maps by enumerators hired for the purpose. Thirty-five households per ED would be selected, resulting in a sample of 3,150 households with somewhat more than 2,000 eligible women expected. I consider this design to be somewhat less than optimum for 2 reasons. First, although statistically sound, selecting 35 households (out of 100 to 150) per ED is a larger cluster size than used in previous CPSs, the previous maximum being around 25 per cluster in rural areas. While I felt that unbiased estimates could be obtained with this design, variances associated with such a sample are likely to be higher than normally desired. Secondly, this approach amounts to creating a second-stage selection sampling frame for a one-time survey.

In the past, CPSs have been deemed feasible at relatively low costs only when a sampling frame has been available. In the Jamaican case, creating an original listing for the second-stage selection appeared to be the only alternative. Thus, I drew up a timetable in which 90 sample EDs would be selected with the help of Mr. James of the DOS, and Mrs. Powell would hire and supervise the enumerators to list the households in the selected EDs. Enumeration would take about 6 weeks, to be complete by mid-June, with interviewing beginning the first week in July.

Late Friday, it was discovered, in discussions with Mr. Don Levy, a private market research consultant, that 2 private sampling frames exist; one at a commercial firm, Market Research Jamaica, and the other belonging to a Mr. Carl Stone of the Political Science Department of UWI. Mr. Stone is engaged in conducting opinion surveys for the Daily Gleaner, the major Jamaican newspaper. Mr. Stone's sampling frame was recommended by Mr. Levy. On the basis of these

discussions, I strongly urged Mr. Tiffany and Mrs. Powell to contact Mr. Stone after my departure and use the sampling frame and expertise of Mr. Stone for the contraceptive prevalence survey, or, if that was not possible, to use Market Research Jamaica. These frames would be, by far, preferable to the alternative plan devised for listing households in sample EDs in terms of both cost and timeliness.

Once a sampling frame is in hand by whatever means, a sample of 3,000 plus households can be selected to yield 2,000 plus female interviews. Another subset of 300 to 350 households can be selected for the male sample and these households screened for eligible males using a procedure analogous to the standard household screening for eligible females.

The DOS considers the Kingston metropolitan area plus 7 other municipalities to be urban areas and the remainder rural. In the 1970 Census the urban population was about 42% of the total. Because this is close to a 50-50 split, I think a self-weighting sample would be acceptable, rather than selecting equal numbers in urban and rural areas.

C. Questionnaire

Draft questionnaires for the female and male samples were prepared based on previous contraceptive prevalence survey questionnaires. A copy of the draft female questionnaire is attached. The male questionnaire is somewhat shorter but similar in form. The attached questionnaire will insure comparability with previous CPSs in Latin America, but will also incorporate special features of interest to the Jamaicans. For example, in order to measure the impact of the subsidized commercial distribution of pills and condoms, those using pill or condom will be asked the brand used. Only 2 brands are used in the commercial sales program: "Perle" oral contraceptives and "Panther" condoms. Those who list pharmacy or other retail outlets as their source of contraception, and are using these brands, will be identified as receiving their supplies through the subsidized commercial program.

D. Field Procedures

I recommended that teams of 3 interviewers and 1 supervisor be used as in previous surveys. It is still planned, however, to use decentralized interviewers residing in different locations on the island and paying for interview. The reason given is that it is difficult to hire short-term, fulltime interviewers; travel is expensive, and only local people can locate sample households. Apparently, this is the standard Jamaican survey practice as the DOS also uses this system. However, it may be possible to use some of the same interviewers who work for DOS.

The Jamaicans were concerned about the severe paper shortage in Jamaica and suggested that the household screening form and main questionnaire be separate and only assembled in the field when an eligible respondent was present. I think that this would lead to problems of missing and non-matching forms and strongly recommended that complete questionnaires be assembled beforehand and used in all cases.

E. Data Processing

It was tentatively decided to code and punch the forms in Jamaica. I recommended punching directly on to computer tape. Computerized editing and correcting of the data and analysis would take place at CDC. Mrs. Powell would travel to Atlanta to help direct the analysis of the data as Angela Mendoza has done in the case of the 1978 El Salvador CPS. I pointed out the value of transporting the forms to CDC for the correction process, even though punching is to take place in Jamaica and recommended that this be done.

F. Timetable

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|--|----------------------|
| 1. Listing of Sample Enumeration Districts:
if necessary | May 1-June 15, 1979 |
| 2. Redraft Questionnaire, do limited
pretesting: | May 1-June 1, 1979 |
| 3. Print 5,000 copies of female questionnaire
and 500 copies of male questionnaire: | By June 15, 1979 |
| 4. Draw Sample (Second-Stage selection) from
Listed Households | By July 6, 1979 |
| 5. Training of Interviewers: | July 2-July 6, 1979 |
| 6. Field Work: | July 9-Sept. 7, 1979 |
| 7. Coding (Jamaica): | September 1979 |
| 8. Key punching to Tape (Jamaica): | October 1979 |
| 9. Editing/Correcting (CDC): | November 1979 |
| 10. Data Analysis: | Dec. 1979-Jan. 1980 |
| 11. Preliminary Report: | February 1980 |
| 12. Final Report: | April 1980 |

V. RECOMMENDATIONS

A. Sampling Frame

Mr. Stone or Market Research Jamaica (MRJ) should be contacted immediately to acquire the sampling frame. Either Mr. Stone or MRJ should be retained in order to draw the sample. If the alternative DOS plan must be employed, listing of the households in sample EDs must begin as soon as possible.

From the sampling frame to be used, about 3,200 households should be drawn for female interviews, and 300 to 350 for male interviews using a probability procedure. The UWI group and Mr. Tiffany should keep in touch with FPED on the progress of survey plans and implementation.

B. Questionnaire

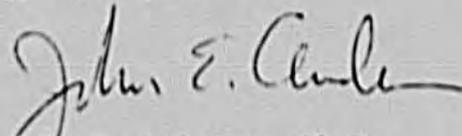
Forms based on those drafted during my visit should be used. Only completely assembled forms should be used in the field. The final version of the forms should be printed in Jamaica and have the coding "boxes" in the right-hand margin.

C. Field Procedures

Since centrally controlled teams with supervisors will not be used, it is important that good part-time interviewers, perhaps those used by the DOS, can be employed. The directors of the survey need to monitor the field work closely through frequent field visits. Since payment by complete interview has the potential to cause problems in the following of correct field procedures such as the substitution of non-sample households for selected households when the woman is not at home. It should be emphasized to the interviewers during training that we have a very good estimate of the percentage of both households without women between 14 and 44 years of age and expected not-at-homes after 3 visits. Any interviewer with more than 90% complete interviews would be suspect.

D. Date Processing

The coding and keypunching should take place in Jamaica. However, it is important that punching should be direct to tape. Due to lack of timely computer access, computerized editing and correcting should take place at CDC where the programs are available. The questionnaires should be sent to Atlanta to assist in the editing process. Data analysis will take place in Atlanta with Mrs. Powell traveling to CDC to assist in directing the analysis and preparing the report.



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TABLE 1
Rates of Population Movement
Jamaica, 1970-1977

	Rate Per 1,000 Population				
	Crude Birth Rate	Crude Death Rate	Crude Rate of Natural Increase	Net Emigration Rate	Percent of Population Increase
1970	34.4	7.7	26.7	14.3	1.4
1971	34.9	7.4	27.5	10.7	1.7
1972	34.3	7.2	27.1	21.8	1.6
1973	31.4	7.2	24.2	18.8	2.0
1974	30.6	7.2	23.4	17.8	1.7
1975	30.1	6.9	23.2	17.3	1.7
1976	29.3	7.1	22.2	11.5	1.2
1977	28.9	6.8	22.1	12.0	1.2

Source: Jamaica Department of Statistics, Demographic Statistics, 1977, Table VI

TABLE 2

Percent of Women Who Have Ever Been in a Marital Union
Who Are Currently Using a Contraceptive Method, by Age,
Jamaica, 1972 KAP Study

<u>Age Group</u>	<u>Percent Using</u>
15-17	22.7
18-22	23.9
23-27	33.3
28-32	31.9
33-37	26.6
38-42	30.0
43-44	26.0
15-44	29.0

Source: D. Powell, L. Hewitt and P. Wooming: "Contraceptive Use in Jamaica: The Social, Economic and Cultural Context," Working Paper #19, Institute for Social and Economic Research, University of the West Indies, 1978, Table 4, p. 42

TABLE 3
**Percent of New Female Acceptors at Family
 Planning Clinics, by Method
 Jamaica, 1975**

<u>Method</u>	<u>Percent</u>
Oral	48.0
Depo-Provera	26.0
Condom	15.6
IUD	4.3
Foam, Tablet, Jelly	3.0
Other	<u>3.1</u>
Total	100.0
Number of New Acceptors	23,811

Source: Jamaica Department of Statistics,
Demographic Statistics 1977,
 Table 65, p. 98