

**Final report: enumeration methodology for  
estimating the number of migrant and seasonal  
farmworkers in counties in the United States**

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FINAL REPORT: ENUMERATION METHODOLOGY FOR ESTIMATING  
THE NUMBER OF MIGRANT AND SEASONAL FARMWORKERS  
IN COUNTIES IN THE UNITED STATES

Objective of Task

The designated task was to assist the Office of Migrant Health to update and improve the status of High Impact Areas designation through the development of an improved methodology for enumerating migrant and seasonal farmworkers [MSFWs].

Means by Which Task Was Accomplished

1. Review of methodologies suggested in A Guidebook to Gathering Data on Migrant and Seasonal Farmworkers, dissertation, Alice C. Larson, Ph.D.
2. Review of other relevant literature in the field.
3. Discussion with staff of the Office of Migrant Health.
4. Discussion with Gontran Lamberty, Maternal and Child Health, Public Health Service, Washington, D.C. (author of On Estimating the Number of Migrant Farmworkers for Health Programs, Health Services Studies Branch, Division of Monitoring and Analysis, Bureau of Community Health Services, 1974).
4. Consultation with Peter Bounpane, Ron Tucker, Thomas Scopp, Gregory Russell, Mark Littman and Dick Storm -- Bureau of the Census; and Leslie Whitener -- USDA (in discussion session, October 27, 1982, Washington, D.C.).

Results of Task

A. Background Material

Pages attached to this Final Report represent definitional and explanatory material prepared in consultation with staff of the Office of Migrant Health, for the discussion session held with Bureau of the Census and USDA officials. The material outlines enumeration system goals and objectives, parameters of the enumeration system, type of information desired from the system, and general methods by which data might be gathered.

B. Suggested Enumeration Methodology

Although information in regard to peak and year-around presence in each county is desired, current time and monetary limitations may require actual acquisition of less than this optimal level of data. To gather the desired information, it would be necessary to perform a direct survey of MSFWs at in-stream and home base sites. Devising a precise survey system would be extremely complex and would take time to identify factors present in each area of the country which would affect accurate enumeration of the population. In addition, it would require identification of a source to conduct such a survey, careful monitoring of field operations at each survey site, and computerized analysis of results. The precise survey system and mechanics of operation would most probably not be finalized before summer, 1983, too late to begin data collection in the agricultural season of that year. The survey would have to be conducted during the 1984 agricultural season (possibly beginning in 1983 in home base

areas), and the results not available until 1985.

Given that data are desired for 1984 and the major purpose in securing such data is to ascertain the number of High Impact Areas (HIAs) throughout the country to determine if they are currently being served by Migrant Health Clinics, it is suggested that concentrated effort, at this time, only be given to deciding if counties and rational service areas qualify as HIAs by containing over 4000 MSFWs at one time during a given year. This would mean data on exact number of peak and year-around presence of MSFWs would not be gathered but rather general information on whether areas contained over or under 4000 MSFWs. It is felt that such information would satisfy the overall objective of identifying HIAs, and would be obtainable in 1984. Other desired information -- exact numbers and even demographic composition of the population -- could be secured at a later date.

The following steps outline a strategy for gathering information on HIAs around the country. In general, the idea would be to divide every county in the United States into three subgroups: verified HIAs, verified non-HIAs and marginal or potential HIAs. Enumeration effort would then only need to be concentrated on the third subgroup to determine in which of the other two categories (HIA or non-HIA) these areas fall. In devising a system to enumerate potential HIA areas, a basic counting scheme should emerge which can later be adapted for use in an enumeration effort to obtain exact peak and year-around MSFW numbers, including, if found feasible, the training of Migrant Health Clinic staff to undertake such an effort. The strategy described below is divided into four phases.

Phase I: Identify Agricultural Counties in the United States Which Employ MSFWs.

1. Contact at least the following sources to identify counties in each state in which seasonal farm labor is employed: Bureau of the Census, Census of Agriculture; state employment offices, research and statistics division; state cooperative extension program central offices -- usually located at a land grant university/college in each state; and state central migrant education offices.
2. List and compare counties identified by each source noting similarities and dissimilarities.
3. Prepare one master list of counties identified by the majority of sources as employing seasonal farm labor.
4. Compare this list to a list of Migrant Health Clinic service areas and note overlap and discrepancies.
5. Prepare maps which graphically illustrate the above findings.

Phase II: Divide the Agricultural Counties Which Employ MSFWs into Subgroups and List Geographic Areas in Need of Further Investigation.

1. Using the sources noted in Phase I, attempt to divide the agricultural counties which employ MSFWs into three subgroups: verified HIAs (containing over 4000 MSFWs at some point during the year), verified non-HIAs (containing well under 4000 MSFWs at any one point in time), and marginal or potential HIAs (unclear whether the area contains over or under 4000 MSFWs during peak presence). The following suggests methods which might be employed. Several of these methods could be used simultaneously and the results compared.
  - Ask experts at each of the sources to divide the list of identified agricultural counties employing MSFWs in their state into the three subgroups.

- Use state department of employment data on each identified agricultural county to estimate MSFW numbers based on the method used in the Public Health Service 1978 Report: Mig<sup>o</sup>ANT Health Program Target Population Estimates.
  - With the assistance of the USDA and state cooperative extension personnel, determine a formula to provide a rough estimate of the number of MSFWs needed to harvest the major hand labor intensive crop in each agricultural county which employs MSFWs. Obtain data on the number of acres of the crop grown or average tons of the crop produced in the targeted counties. Combine this with an estimate of the number of seasonal labor work hours needed per acre or per ton of crop, translating number of hours into number of workers. Use multipliers supplied in the PHS 1978 Report to determine number of dependents per average worker and add a factor for average number of unemployed.
  - Use the experts participating in the delphi discussion session, noted below in Phase III, to devise a method to enumerate these areas.
2. Compare the resulting list of the three subgroups with Migrant Health Clinic service areas indicating where Mig<sup>o</sup>ANT Health Clinics are serving verified HIAs and verified non-HIAs. Note verified HIAs which are not served by Migrant Health Clinics.
  3. Examine Migrant Health Clinic service areas in light of verified non-HIA counties which might be combined to form HIAs within rational Clinic service areas or verified non-HIA counties whose close proximity within a service area to an HIA county makes them an HIA.
  4. By comparing county subgroups and Migrant Health Clinic service areas, determine if there are more counties which should be added to the marginal or potential HIA subgroup: i.e., when verified non-HIA counties are combined

in a rational service area, the counties in question move into the marginal or potential HIA category.

5. Prepare a list of grey areas needing further investigation -- either counties which fall in the marginal or potential HIA subgroup or counties which when combined in a service area change from verified non-HIAs to potential HIAs.

Phase III: Collect Data on Grey Areas to Determine if They are Verified HIAs or Verified Non-HIAs.

1. Using the assistance of Gontran Lamberty, Peter Bounpane and others, conduct a delphi discussion session (minimum one day) to devise a method to enumerate the grey areas to determine if they contain over or under 4000 MSFWs at peak presence.
  - Involve demographers, sociologists, academicians, government officials (e.g., from USDA, DOL, Bureau of Census, Migrant Education, etc.), and other experts from around the country who have dealt with the problem of counting MSFWs or are experts in demographic research.
  - Provide a structured discussion session in which the parameters of the information which is desired are specified -- including funds available with which to gather the information and required time line.
  - Allow participants to freely brainstorm methods to gather the desired data, using Office of Migrant Health personnel to record all discussion.
  - Designate a coordinator for the session who will be responsible for summarizing discussion, following up after the session to clarify points and outlining an enumeration method to be followed, based on conclusions reached in the session.
2. Determine who (what agency/organization/individual) will undertake the

enumeration using the strategy which has been devised, and secure their cooperation or initiate a contract.

3. Have the enumeration agent collect the data, but closely monitor field work to assure adherence to the devised system and uniformity in data collection efforts throughout the country (within each identified county).
4. After the data are collected on the grey areas, reassess these counties to determine if they are verified HIAs or verified non-HIAs, including HIAs which emerge when individual counties are combined in a rational service area.
5. Make a list of verified HIAs and compare this list to existing Migrant Health Center service areas to determine HIAs served by Migrant Health Clinics and HIAs in which no Migrant Health Clinic exists.

Phase IV: Develop and Implement a Plan for Local Review of HIA and Non-HIA Lists.

1. Allow Migrant RPCs, Migrant Health Clinic directors and possibly other state agents (e.g., state employment division and state cooperative extension personnel) to review the verified HIA and non-HIA lists to comment on the accuracy of the data. Specify which counties are clearly verified HIAs and which counties become HIAs when combined in a rational service area.
2. Inaccuracies pinpointed by these local sources should be established with facts: information as to why the placing of a county on one of the lists is wrong or information which indicates that the enumeration effort undertaken on a specific grey area was deficient.
3. Evaluate and weigh facts submitted by local agents on inaccuracies of county listings and determine if these justify revising the lists.

3. Possible sources to fund the delphi discussion session include: Research Office, Maternal and Child Health, PHS; National Science Foundation; major universities which have an interest in theoretical research; and private foundations.
4. Some sources might be asked to contribute to the delphi discussion session with other than direct financial assistance; e.g., Bureau of the Census might be asked to contribute meeting room space and equipment.
5. Establish an interagency agreement with USDA, DOL, Migrant Education and others interested in securing data on MSFWs to finance the delphi discussion session and/or the enumeration effort defined by the delphi session.
  - This would require use of a definition for data collection purposes other than that used by the Office of Migrant Health.
  - This would involve extensive time and effort to establish the agreement.
  - If an interagency agreement is reached, it should be specified in writing so that a change in government agency administrator will not mean loss of agreement and funding with which to carry out the enumeration effort.
6. Migrant Health Clinics throughout the country could be assessed a set amount, based on the size of their Migrant Health grant, with which to conduct the enumeration efforts.
7. Local state agents could be asked to contribute enumeration assistance -- particularly, use of students connected to cooperative extension departments of local universities.



MATERIAL PREPARED FOR THE DISCUSSION SESSION HELD WITH BUREAU OF THE CENSUS  
AND USDA OFFICIALS, OCTOBER 27, 1982

OBJECTIVE: To design and implement a method to "define" the Migrant Health Program target population in the United States.

GOALS:

1. Information gathered be better (more accurate) than 1973 and 1978 Reports -- devise a better system.
2. System be workable, not too complex, teachable -- if necessary -- not outrageously expensive.
3. System gather uniform data around the country -- uniformly good or bad.
  - considers regional factors which affect local data.
  - uniform data gathering effort and field work supervision (if relevant) in each region.

WHAT WE WANT:

1. Number of migrant and seasonal farmworkers and their dependents (MSFWs) in the United States -- by county.
  - a. Peak number -- maximum number present at any given time during one agricultural season.
  - b. Number of MSFWs present throughout one entire year.
  - c. Information broken into migrants and seasonals.
2. Use Migrant Health definition.
  - a. Migratory agricultural workers, seasonal agricultural workers and their family members.

- b. "Seasonal" means greater than or equal to one hour or less than twelve months.
  - c. Includes: agricultural field workers, food processors/cannery workers, tree planters, mushroom workers, crew leaders, field work supervisors.
  - d. Does not include: loggers, farm owners/operators or their family members, fishermen, sheepherders, agricultural produce transporters, dairy workers, cattle workers, poultry workers.
  - e. Documented status is not an issue.
4. System give consideration to regional review and rebuttal of final numbers by RPCs and MHCs -- supported by FACTS.
- a. Data gathered is wrong.
  - b. Data gathering effort in locality was deficient.

WOULDN'T IT BE NICE IF WE ALSO GOT:

- 1. Population composition: age, sex, family size, race-ethnicity, movement, etc. etc.
- 2. Updating system.

WHAT WE WANT FROM YOU:

- 1. How do we do it (help us devise the system -- brainstorm).
- 2. Help us estimate the cost of the system(s).
- 3. Other thoughts/ideas.

METHODS TO GATHER DATA:

- 1. Existent data.
  - a. State employment divisions.
  - b. Census.

- c. USDA.
  - d. Migrant Education.
  - e. Client/patient -- agency data.
2. Secondary.
- a. Delphi method.
  - b. Demand for labor.
3. Primary
- a. Census.
  - b. Statistical sample.
  - c. Non-Probablistic sample.
  - d. Capture-recapture.
4. Combinations.
- a. Composite estimates.
  - b. Triangulation.