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**STUDY OF BREAST MILK CONTAMINANTS
IN KAZAKHSTAN:
TRAINING OF LOCAL COLLABORATORS
IN SOFTWARE AND DATA ANALYSIS**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY ii

PURPOSE OF VISIT 1

 Background 1

 Purpose of the Training and Technical Assistance 1

ACTIVITIES 2

 Training Needs Assessment 2

 Introductory Computer Seminars 2

 EPI INFO Training Seminars 2

 Training in Analysis of Breast milk Contaminants Data 3

 Technical Assistance in Entry and Analysis of Breastfeeding Practices Data 3

 Collaboration With the OPTIONS II Project Health Services Delivery Research ... 4

METHODOLOGY AND APPROACHES 4

 Team Learning and Problem Solving Approach 4

 Distribution of Materials 5

RESULTS AND CONCLUSIONS 5

RECOMMENDATIONS FOR FURTHER TRAINING IN THE USE OF COMPUTERS, SOFTWARE, AND DATA ANALYSIS 6

 Lessons Learned 6

 Follow-up to this Activity 7

ANNEXES

- I. Expanded Computer Training Proposal**
- II. Outline for EPI INFO and Breast Milk Contaminants Data Analysis Training Seminars**
- III. Data Entry Program for Breastfeeding Practices Study**
- IV. List of Training Participants**
- V. List of Contacts**



EXECUTIVE SUMMARY

As part of Wellstart International's Expanded Promotion of Breastfeeding (EPB) Program's collaborative applied research program in Kazakhstan, training and technical assistance in data analysis were provided to local counterparts from May to August 1994. Local concerns of "insufficient milk" and breast milk contaminants have been identified as two major obstacles to breastfeeding promotion. The research program is designed to address these concerns through qualitative and quantitative research (the breast milk contaminants study). Professionals from the Ministry of Health of Kazakhstan and the Scientific Research Center on Regional Nutrition Problems (Nutrition Institute) were trained in EPI INFO database and statistical software, and basic analysis of the infant feeding practices data from the breast milk contaminants study.

The training program was designed and implemented after completion of a training needs assessment in order to meet the specific needs of local professionals from both collaborating institutions. Based on this needs assessment, the training program included an introductory computer course, an expanded course on EPI INFO software, and a segment within the EPI INFO training on analysis of the infant feeding practices data from the breast milk contaminants study.

The specific training and technical assistance activities that were completed are listed as follows:

- 15 professionals from the Nutrition Institute were trained in the basic use of personal computers;
- 21 professionals from the Nutrition Institute and the Maternal and Child Health Division of the Ministry of Health were trained in the use of EPI INFO software;
- 9 professionals from the Nutrition Institute and the Maternal and Child Health Division of the Ministry of Health were trained in analysis of the infant feeding data from Wellstart EPB's study of breast milk contamination;
- A data entry program was developed for questionnaires from a breastfeeding practices study conducted by the Nutrition Institute;
- 3 professionals from the breastfeeding research group of the Nutrition Institute were trained and supervised in the entry and analysis of their breastfeeding practices data.

This training and technical assistance revealed important lessons for future Wellstart International training and research activities in the region. Computer experience varies widely among the researchers at both the Ministry of Health and the Nutrition Institute, and is minimal among professionals at the policy and program management level in both institutions. The creation of a core group of professionals proficient in data management and analysis, however, was begun with this technical assistance. The team learning and problem-solving approach was very successful for this activity because of the wide variation in skills and experience of the participants, and is recommended for future training of this nature. The team approach reduced anxiety for participants who had not previously used computers and allowed more experienced participants to begin acting as a resource for technical support and information for their colleagues.

This activity served to introduce a group of health and nutrition professionals in Kazakhstan to the use of personal computers in research. Future USAID-supported health and nutrition research activities in



the region can contribute to the development and strengthening of their skills by including these newly trained local professionals in all aspects of data collection, entry, coding and analysis whenever possible. Computer skills, particularly related to health and nutrition research and program management, are in high demand and can be transferred to local counterparts very cost-effectively.

Dr. Paltusheva commented that with this software she felt for the first time that computers could make her work simpler and more efficient. Previously, at the Ministry computer work was confined to generating aggregate national statistics and was completely separate from the operational programs. Dr. Paltusheva viewed computers as creating more work for her and her staff rather than assisting her. With this training seminar, Wellstart EPB was able to make a very important contribution to improving how personal computers are viewed at high levels of the Ministry of Health, and has increased the likelihood that their use will be incorporated into operational and programmatic functions.



STUDY OF BREAST MILK CONTAMINANTS IN KAZAKHSTAN: TRAINING OF LOCAL COLLABORATORS IN SOFTWARE AND DATA ANALYSIS

PURPOSE OF VISIT

Background

Funded by USAID R&D Health, Wellstart International's Expanded Promotion of Breastfeeding (EPB) Program initiated an applied quantitative and qualitative research program to address concerns about breast milk contamination and insufficient milk as obstacles to the promotion of optimal breastfeeding practices in Kazakhstan. In February and March 1994, Dr. Chessa Lutter, Wellstart EPB's Applied Research Advisor, and consultant Dr. Nicholas Hooper, Senior Scientist, Hazardous Materials Laboratory, California worked in collaboration with the Ministry of Health of Kazakhstan and the Scientific Research Center on Regional Nutrition Problems (Nutrition Institute) in Almaty to collect data for a study of breast milk contamination in Kazakhstan. As part of this study, breast milk samples were collected and risk assessment questionnaires completed for 98 women from health clinics in Kazakhstan. In addition, data were collected on infant feeding practices for 84 women¹.

Purpose of the Training and Technical Assistance

In order to ensure that the local collaborators from the Ministry of Health of Kazakhstan and the Nutrition Institute are able to use the breast milk contaminants data for their policy and program purposes, Wellstart's EPB provided training in the use of EPI INFO software and analysis of the infant feeding data during May - August 1994.

Specifically, the objectives of this activity were the following:

- Provide computer training with research data to counterparts in Kazakhstan;
- Provide technical assistance for computer data entry during field work;
- Assist with report writing and follow-up activities as needed.

¹ "Breastfeeding Practices in Kazakhstan: Preliminary Results," Wellstart International, June 13, 1994.



ACTIVITIES

Training Needs Assessment

After initial meetings with counterparts from both the Ministry of Health and the Nutrition Institute, it became clear that computer skills and experience were insufficient in both institutions to begin training directly in data analysis. As part of the training needs assessment, interviews were conducted with Dr. Shamil Tazhibayev, Director of the Research Division at the Nutrition Institute, and Drs. Tamara Chuvakova and Tamara Paltusheva from the Ministry of Health. From these interviews and site visits, an assessment was made of the computer resources available at the respective institutions, computer training needs requisite for training in data analysis were identified, and the time available and interest in more in-depth computer training was ascertained. Upon completion of this training needs assessment, a proposal for an expanded training program was submitted to and approved by EPB on June 10, 1994 (Appendix I).

Introductory Computer Seminars

Two half-day training seminars were organized to introduce professionals in the Research Division of the Nutrition Institute to personal computers. These sessions were presented on June 16 and 17, 1994 in Russian by local computer expert Eugene Kozhevnikov. A total of fifteen people attended these seminars. Topics covered included: components of an IBM-compatible personal computer, introduction to the operating systems DOS and Norton Commander (creating, saving, deleting, copying, locating files), and running software applications. Due to the large size of the groups and the limited availability of computers, this seminar was presented in a lecture and demonstration format. Time was provided at the conclusion of each session, however, for practice on the computer for a limited number of participants.

EPI INFO Training Seminars

A total of four 2-day seminars were conducted to train professionals from the Ministry of Health and the Nutrition Institute in the use of EPI INFO database and statistical analysis software for health and nutrition research. These seminars were divided into eight segments, with the final three segments dedicated to training in the analysis of infant feeding data from the breast milk contaminants study. Topics covered during the general EPI INFO training included: questionnaire design in EPI INFO's text editor EPED, data entry in EPI INFO's data base ENTER, and data analysis and graphics in EPI INFO's statistical analysis program ANALYSIS (See Appendix II for a more detailed outline of the course).

The seminars were conducted in a participatory lecture and demonstration format in English with a Russian interpreter. Each participant was seated at a computer with two other colleagues during the entire seminar. Significant time was spent on practical exercises completed in groups and customized to meet the needs of each different group. The Russian language version of EPI INFO was used by the participants for all of the seminars (See Appendix II).

The first two seminars were conducted at the Nutrition Institute in two groups (morning and afternoon) of four half-day classes on June 20 - 23, 1994. A total of 18 people attended these seminars. The practical exercises for this group were constructed around data collected by the Institute on breastfeeding practices in Almaty in late 1993 and early 1994 that had not yet been computerized. This approach not only provided examples with which the participants were already familiar, but also served to train a group at the Nutrition Institute that would later be responsible for entering and analyzing that data set.



The participants completed informal evaluations of the training seminar, which indicated that overall the participants were pleased with the software and the level, pace and presentation of the training. In the evaluations many participants suggested more time should have been allotted for practice. Although there was significant time built into the seminar for practice, as with any training, it is expected that skills will be reinforced and strengthened when they are put to use at the conclusion of the training. Unfortunately, this is likely to be the case for only a fraction of the participants in this group because of limitations in computer availability at the Nutrition Institute. It will be important for any further Wellstart EPB research activities in the region to make use of the newly acquired computer skills to the extent possible to consolidate and strengthen the training that was provided.

The third seminar was conducted for Dr. Chuvakova at the Ministry of Health's Maternity Center #3 on July 18 - 20, 1994 with the assistance of Dr. Gulnara Semenova from the Nutrition Institute. Dr. Semenova presented some of the material under supervision, which strengthened her own skills in the use of the software. Inviting Dr. Semenova to participate in the next training seminar also contributed to the goal of creating a core group of professionals that can serve as a resource for others after technical assistance is no longer available. The practical exercises designed for Dr. Chuvakova involved creating a database of patient records so she could envision uses of the software in her daily professional activities beyond research.

The fourth seminar was presented for Dr. Paltusheva and her assistant on July 16 and 23, 1994. Dr. Paltusheva was extremely impressed by the simplicity and power of EPI INFO, and immediately requested an additional seminar for professionals from the oblast level of the Ministry and from other reproductive health institutions. This additional seminar was already planned under the Future's Group OPTIONS II project, and I conducted that seminar in August with Future's Group funding (please see "Collaboration with the OPTIONS II Project Health Services Delivery Research" below).

Training in Analysis of Breast Milk Contaminants Data

As noted above, the final three sessions of the general EPI INFO training seminars were devoted exclusively to training in the analysis of the infant feeding data of EPB's breast milk contaminants data. Because computer skills among the Nutrition Institute and Ministry of Health collaborators were insufficient at the start of this activity to begin training directly in data analysis, the scope of the training in the analysis of the infant feeding practices data from the breast milk contaminants study was limited.

As an introduction to this section of the training, the questionnaires and code book were reviewed. In addition, some basic steps in data analysis were discussed such as the development of an analysis plan, definition and calculation of indicators, and the development of dummy output tables prior to embarking on data analysis. The participants were requested to develop a list of indicators and steps for creating those indicators from the variables available in the infant feeding data. With some assistance, the participants developed analysis programs to generate the indicators they specified in their analysis plans. Finally, the program used by Wellstart EPB to develop the primary infant feeding categories was discussed, and each participant ran the program and interpreted the output.

Technical Assistance in Entry and Analysis of Breastfeeding Practices Data

When I initially approached Dr. Shamil Tazhibayev of the Nutrition Institute about my availability to provide EPB funded computer training, he was very pleased about the timing of the assistance. His division of the Institute had recently completed data collection from nearly 1,500 women in the Almaty area to determine breastfeeding practices and the timing of introduction of common foods and liquids.



The questionnaires were collected, but the data had not yet been entered. Previously, the division had sent data off-site to a computer contractor for entry and analysis, and the researchers had very little control over the format of the output. Often statistics were reported in such a way that the researchers were required to spend a great deal of time completing new computations by hand. Dr. Tazhibayev was pleased at the prospect of having greater control over data entry and analysis.

I worked closely with Dr. Gulnara Semenova, under whose direction the breastfeeding practices study was completed, to develop an appropriate data entry and verification program in the Russian language version of EPI INFO (please see Appendix III for the English translation of the data entry program). As noted above, that data entry program was used during the EPI INFO training seminar at the Nutrition Institute. I trained Dr. Semenova's research assistant, Orynkul Mukasheva, in the data entry and verification program. She then assisted in the training of Dr. Semenova's second research assistant, Nazygul Toleuva. Under my supervision, approximately 150 questionnaires were entered. Dr. Semenova's team exhibited excellent skills and understanding of the data entry program, and I am confident that they will be able to complete entry of the full data set with minimal additional guidance and assistance.

I met with Dr. Semenova to discuss a plan for data analysis and to begin developing dummy output tables and data analysis programs in EPI INFO. Though some progress was made, our work was interrupted by Dr. Semenova's unexpected trip to the U.S. in mid-August.

Collaboration With the OPTIONS II Project Health Services Delivery Research

At the time of this technical assistance, Dr. Susan Welsby was under contract in Almaty with The Future's Group OPTIONS II project. One of Dr. Welsby's activities was to participate in the design of a small study of reproductive health service delivery in Kazakhstan, as well as in several other Central Asian republics. The Future's Group planned to enter and analyze the data in EPI INFO, and thus also planned to train local counterparts in the use of EPI INFO. I was contracted by The Future's Group to conduct EPI INFO training for the Ministry of Health in Kazakhstan and Kyrgyzstan. The OPTIONS II MOH training in Kazakhstan also included two professionals from the Ministry of Health, and one representative each from the Marriage and Family Center, the Maternal and Child Health Institute, and the Almaty City Oblast Hospital. The Future's Group funded training served to reinforce training that I completed under the Wellstart EPB consultancy for Dr. Paltusheva's staff, and reached additional professionals working in maternal and child health in Kazakhstan.

The Future's Group research will provide important information for all groups working in maternal and child health in Kazakhstan. In addition to clinic and client level information on reproductive health services, information will also be provided about abortions and maternal mortality related to abortions, as well as problems with and reasons for discontinuation of various modern contraceptive methods (oral contraceptives, IUDs, and injectable hormonal contraceptives).

METHODOLOGY AND APPROACHES

Team Learning and Problem Solving Approach

The methodologies and approaches used during this training and technical assistance emphasized a team learning and problem solving approach, and to the extent possible utilized recently trained individuals to assist in subsequent training. Both approaches were particularly suited to the situation of health and



nutrition professionals in Kazakhstan due to their high level of skills and training but limited experience and skills with computers, as well as the lack of resources for computer equipment and training.

In both the EPI INFO training and technical assistance in data coding and entry, participants worked in groups of three. The most successful groups were characterized by a varying level of computer skill and included at least one person with some computer experience. During practical exercises, the groups were encouraged to ask for outside assistance only after they felt they exhausted all efforts at solving the problem collectively. This approach built confidence not only in the participants themselves, but also in their colleagues as sources of information and technical support.

Distribution of Materials

In order to facilitate further exploration of both EPI INFO and the infant feeding data from the breast milk contaminants study, the following items were left with the counterparts in Kazakhstan:

- (1) Copies of the Russian language EPI INFO software and manual. EPI INFO was installed on Dr. Paltusheva's computer at the Ministry of Health and Dr. Tazhibayev's computer at the Nutrition Institute. Dr. Chuvakova did not have access to an IBM compatible computer at the time of the training, though she was expecting one to be delivered from the City Health Department in the near future.
- (2) Notebooks containing copies of the original questionnaires from Phase I of the breast milk contaminants study. Because Drs. Paltusheva and Chuvakova were traveling at the time of my last meetings with local counterparts, the notebooks were left with Dr. Tazhibayev only. Drs. Paltusheva and Chuvakova were notified that the questionnaires were available from Dr. Tazhibayev.
- (3) Copies of the EPI INFO program to create basic infant feeding variables from the infant feeding data were left on the computers of Drs. Paltusheva and Tazhibayev.

RESULTS AND CONCLUSIONS

The computer training at the Nutrition Institute and the Ministry of Health made a positive contribution not only to increasing the specific skills among the professionals in these institutions, but also to increasing the awareness of the power and accessibility of personal computers for anyone regardless of previous training in computers.

In terms of specific skills for analyzing the infant feeding data, the participants in the training should be able to run straightforward summary statistics, create very basic indicators from the variables available in the data set, and run the program to create the infant feeding categories. It should be emphasized that the computer skills of the participants prior to the training were quite rudimentary, and data analysis skills were virtually nonexistent. It is important to maintain very realistic expectations about the level of data analysis skills that can be acquired in the time available. That being said, it was very rewarding to see the enthusiasm of the participants and to observe the comprehension and progress that occurred over the course of the seminars. Participants who had previously never used a computer were able to write and run simple data analysis programs by the end of the seminar. In addition, it was extremely valuable for Dr. Semenova's team to have the opportunity to work with EPI INFO on a project immediately following the training seminar, and to have technical assistance and supervision during that time. As discussed



above, it would be extremely useful for Wellstart EPB to work with these newly trained local professionals during any subsequent research activities and allow them to participate in data entry and cleaning under Wellstart EPB supervision.

RECOMMENDATIONS FOR FURTHER TRAINING IN THE USE OF COMPUTERS, SOFTWARE, AND DATA ANALYSIS

Lessons Learned

During this activity, several observations were made and lessons learned that may be useful for planning and implementing further computer training for health and nutrition professionals in Kazakhstan.

There is an enormous need for training in data analysis among health and nutrition professionals in both research and policy and program management in Kazakhstan. It has historically been the case that data analysis takes place by groups outside of the institution or department, limiting control over the data by researchers and program managers. Though all health and nutrition professionals who participated in this training expressed a desire to have greater control over the data they use or collect, there is a severe shortage of computer equipment, software and training for this group. As donor funded activities increase, computer hardware is becoming available. The new computers, however, often sit idle due to lack of training and technical support, or because they have been provided to more senior professionals who have little time to use them.

The local collaborators in Kazakhstan demonstrated extraordinary interest in and the capacity to quickly learn a simple, comprehensive program such as EPI INFO, even with little or no previous computer training. Computer experience, particularly related to health and nutrition research, is a skill in high demand that can be transferred to local counterparts very cost-effectively.

In order to continue fostering the development of skills in data analysis and the general use of computers for health and nutrition research and program management, the following steps should be considered:

- (1) Continue to provide training in computers, particularly simple, comprehensive software such as EPI INFO, as part of donor funded activities. It is important to include junior level researchers and program assistants in this training, as they are most likely to have the responsibility for computer-related work. It is also crucial, however, to include senior professionals, even if it is a scaled down version of the training, to enlist their support and interest.
- (2) The team approach to computer training was particularly successful for health and nutrition professionals in Kazakhstan. By assigning three people of varying levels of experience to work together as a team during training, an environment was created in which participants became comfortable sharing knowledge and solving problems as a team. The participants with less experience gained confidence, and the participants with more experience had the opportunity to reinforce their own knowledge and skills by acting as a teacher within the group. This approach also addresses the problem of shortage of computer hardware which is often encountered in Kazakhstan and other former Soviet republics.
- (3) Whenever possible, recently trained individuals should act as trainers in subsequent training exercises. This approach was used minimally during this training due to the time constraint for the activity, but results were evident nonetheless. It is extremely important to identify early on



participants with some experience or a particular aptitude or interest, and cultivate their skills as trainers and providers of technical support after the outside technical assistance concludes.

- (4) Adequate documentation in the local language should be supplied for all computer training and left with the participants at the conclusion of the activity. Computer documentation of any sort, particularly in Russian language, is extremely scarce in Kazakhstan. In addition, it is important to ensure that all software and hardware are compatible and in working order before technical assistance concludes. Minimal computer support will be accessible locally if problems arise after the technical assistance is completed.
- (5) In order to consolidate and strengthen newly acquired skills, local counterparts should be included in computer work related to donor funded activities, such as data entry, cleaning, and analysis, whenever possible. The additional training and supervision that would be required are minimal relative to the benefits in terms of skills transferred and sustainability of the activities.

Follow-up to this Activity

- (1) It may be useful to obtain an informal progress report from Nutrition Institute on the coding, entering and analysis of the Nutrition Institutes' breastfeeding practices data. Minimal assistance from Wellstart EPB to review what they have done and provide sample analysis programs may ensure the completion of the work that was started and facilitate access to the important information in this large data set.
- (2) Follow-up contact with Dr. Paltusheva at the Ministry of Health may be useful to answer any questions or problems that may be preventing her team from using EPI INFO effectively.
- (3) Encourage the participation of newly trained local professionals in the collection, entering and cleaning of data from Phase II of the breast milk contaminants study. Minimal refresher training and supervision will be needed, but important skills will be reinforced.



Annex I
Expanded Computer Training Proposal

EXPANDED TRAINING PROPOSAL FOR THE BREASTMILK CONTAMINATION STUDY

1, 2 or 1 day introductory workshop on the use of personal computers

Tentative Date: 6/11/94 # participants: 10

Resources Needed: 3 days of CW's time; 2 days of local computer specialist's time (@ \$30/day; to act as interpreter and assist with local hardware/software that is unfamiliar to me); translation (20 pages @ \$3/page); photocopies (200 pages @ \$0.10/page)

Total Cost (without overhead and fees): \$515.60

3 day training seminar on all aspects of the use of EPI INFO (questionnaire design, data entry, and data analysis, with one full day on the contaminants data)

Tentative Dates: 6/20 - 6/24 (5 mornings 9:00 - 1:00) # participants: 10

Resources Needed: 8 days of CW's time; 3 days of local computer specialist/interpreter; translation of training materials (50 pages @ \$3/page); photocopies (500 @ \$0.10/page)

Total Cost (without overhead and fees): \$1,291.6

Note: For this training seminar, I plan to use the questionnaire from the Nutrition Institute's breastfeeding practices survey, in addition to the contaminants data, to demonstrate the design of data entry, verification and analysis. The Institute has not yet computerized the breastfeeding practices data, and Dr. Tazhibayev thinks, and I agree, that they would benefit greatly from this exercise. Typically data is sent off-site to a computer contractor for entry and analysis, and there is interest within the Institute in having greater control over this process.

Additional Technical Assistance and Supervision to Nutrition Institute

To ensure that the capacity to use EPI INFO to analyze the contaminants data and for other research is established in the Institute, I propose to work individually with analysts at the Institute during analysis of the contaminants data, and to supervise the initial phases of data entry, verification and analysis of the breastfeeding practices survey.

Tentative Dates: late June and early July

Resources Needed: 10 days of CW's time; interpreter (4 days @ \$30/day); translation of key parts of EPI INFO manual (200 pages @ \$3/page); photocopies (800 pages @ \$0.10/page)

Total Cost (without overhead and fees): \$2,052

Diagnostic of Dr. Semenova's computer

Resources Needed: 1 day of local computer specialist (1 @ \$30/day)

Total Cost (without overhead and fees): \$30

Individual Training and Technical Assistance to MOH

Tentative Dates: as convenient for participants

Resources Needed: 5 days of CW's time; interpreter (5 days @ \$30/day); photocopies of translated EPI INFO manual (400 @ \$0.10)

Total Cost (without overhead and fees): \$816

TOTAL COST: \$4,705.20

Drs. Shamil Tazhibayev and Gulnara Semenova, Nutrition Institute; Drs. Chuvakova and Paltusheva, MOH (without budget figures)

BEST AVAILABLE DOCUMENT



Annex II
Outline for EPI INFO and Breast Milk Contaminants Data Analysis Training Seminars



**INTRODUCTION TO EPI INFO:
TRAINING COURSE OUTLINE**

**Scientific Research Center on Regional Nutrition Problems
Almaty, Kazakhstan
June 20 - 24, 1994**

Presented by Cheryl Wickham, WELLSTART INTERNATIONAL Consultant

DAY I

Session 1 (1 hour 45 minutes):

- I. Overview
 - A. What is EPI INFO?
 - B. What can EPI INFO do?
 - * Questionnaire Design
 - * Data Entry
 - * Data Analysis
 - * Charts and Graphs
- II. Getting Started
 - A. Review of basic computer terms
 - B. Installing EPI INFO
 - C. Running EPI INFO
- III. Creating Questionnaires Using EPED Word Processor
 - A. Basic word processing commands
 - B. Field Types in EPI INFO
 - * Text and upper-case fields
 - * Numeric fields
 - * Yes/No fields
 - * Date fields
 - * Identification number fields
 - C. Variable names
 - D. Saving and printing the questionnaire file
 - * Saving the file in EPED
 - * Saving the file in other word processing programs
 - E. Examples and practice: questionnaire design

****Break (15 minutes)****

Session 2 (1 hour 30 minutes):

- IV. Entering data in ENTER
 - A. Creating a new data file
 - B. Entering data
 - * Important commands
 - * Making a new record
 - * Searching for records
 - * Editing, deleting and undeleting records
 - C. Editing an existing data file



- D. Revising the structure of an existing data set
- E. Printing the data
- F. Examples and practice: data entry

DAY II

Session 3 (1 hour 45 minutes):

- V. Programming Data Entry Using CHECK
 - A. Basic commands
 - B. Renaming variables in CHECK
 - C. Minimum/Maximum values
 - D. Programming jumps during data entry
 - E. Programming automatic calculations during data entry
 - F. Editing CHECK programs
 - G. Examples and practice: programming data entry

****Break (15 minutes)****

Session 4 (1 hour 30 minutes).

- VI. Data Analysis I: Running EPI INFO ANALYSIS Interactively
 - A. Basic commands
 - * Reading a data file
 - * Routing ANALYSIS output
 - * Viewing data and variables
 - * Sorting data and selecting records
 - B. Recoding and creating new variables
 - C. Producing and interpreting basic output
 - * Data lists
 - * Frequencies, means, cross tabulations
 - * Stratified analysis
 - * Charts and graphs
 - D. Saving and printing output
 - E. Examples and practice: interactive data analysis

DAY III

Session 5 (1 hour 45 minutes):

- VII. Data Analysis II: Writing Programs for EPI INFO ANALYSIS
 - A. What does an analysis program look like?
 - B. Writing, saving and editing programs in EPED
 - C. Writing, saving and editing programs in ANALYSIS
 - D. Examples and practice: writing programs for data analysis

****Break (15 minutes)****



Session 6 (1 hour 30 minutes):

- VIII. Overview of Breast milk Contaminants Data
 - A. Data collection
 - B. Variables in data set
 - C. Presentation and discussion of code book

- IX. Planning Data Analysis
 - A. Defining indicators
 - B. Constructing indicators
 - C. Preparing dummy output tables
 - D. Examples and practice: planning data analysis

DAY IV

Session 7 (1 hour 45 minutes):

- X. Working Data Analysis Session

****Break (15 minutes)****

Session 8 (1 hour 30 minutes):

- XI. Program to Create Infant Feeding Categories

- XII. Working Data Analysis Session

- XIII. Concluding Remarks, Questions, Evaluations

Знакомство с EPI INFO: ВВОДНЫЙ курс

Научно-исследовательский Центр Региональных Проблем Питания
Алматы, Казахстан
12-15 Июля 1994

Представлено Шерэл Викам, компания WELLSTART

День первый: Вторник, 12 июля

Урок 1 (1 час 45 мин)

- I. Введение
 - а. Что такое EPI INFO?
 - б. Что может EPI INFO?
 - * Разработка вопросника
 - * Ввод данных
 - * Анализ данных
 - * Графики и диаграммы
 - в. Запуск EPI INFO

- II. Создание вопросников с помощью текстового редактора EPED
 - а. Основные команды редактора
 - б. Поля для записей в EPI INFO
 - * Текстовые поля
 - * Числовые поля
 - * Поля ДА/НЕТ
 - * Поля данных
 - * Идентификационные числовые поля

Перерыв (15 мин)

Урок 2 (1 час 30 мин)

- в. Имена переменных
- г. Сохранение и печать файла вопросника
 - * Сохранение файла в EPED
 - * Сохранение файла в других текстовых редакторах
- д. Примеры

- III. Ввод данных в EPI INFO
 - а. Создание нового файла данных
 - б. Ввод данных
 - * Основные команды
 - * Поиск записей
 - * Редактирование, удаление и восстановление записей

День второй: Среда, 13 июля

Урок 1 (1 час 45 мин)

- IV. Ввод данных в EPI INFO (продолжение)
 - в. Редактированного существующего файла данных
 - г. Изменение структуру существующих данных
 - д. Печать данных
 - е. Программирование ввода данных с использованием CHECK
 - * Клавиатурные команды
 - * Создание имен переменных
 - ж. Примеры

Перерыв (15 мин)

Урок 2 (1 час 30 мин)

- V. Анализ данных I: запуск программы EPI INFO ANALYSIS
 - а. Основные команды
 - * Чтение файла данных
 - * Просмотр данных и переменных
 - * Задание пути выходного файла программы ANALYSIS
 - * Сортировка данных, выборка записей
 - б. Запись и создание новых переменных
 - в. Вывод основных результатов
 - * Лист данных
 - * Частоты, перекрестная табуляция, значения
 - * Анализ
 - * Графики и диаграммы
 - г. Сохранение и вывод на печать
 - д. Примеры с использованием материалов исследований Института Проблем Питания грудного вскармливания

День третий: Четверг, 14 июля

Урок 1 (1 час 45 мин)

- VI. Анализ данных II: написание программ для EPI INFO ANALYSIS
 - а. Как выглядит программа анализа данных
 - б. Написание, соранение и запуск программы в EPED
 - в. Написание, сохранение и запуск программ в EPI INFO ANALYSIS
 - г. Примеры

Перерыв (15 мин)

Урок 2 (1 час 30 мин)

- VII. Обзор исследований по проблеммам загрязнения грудного молока
- VIII. Обсуждение структуры базы данных
 - a. Переменные
 - б. Кодовая таблица
- IX. Обсуждение Плана Анализа
 - a. Понятие показателей и таблиц Dummy Output
 - б. Создание показателей с использованием программы EPI INFO ANALYSIS
 - в. Практика по созданию листа показателей

День четвертый: Пятница, 15 июля

Урок 1 (1 час 45 мин)

- IX. Обсуждение листа показателей, созданного на предыдущем занятии
- X. Практика по Анализу данных

Перерыв (15 мин)

- X. Практика по Анализу данных (продолжение)



Функциональные клавиши EPED

Для доступа к меню, для сохранения файла и для выхода из редактора нажмите соответствующую функциональную клавишу. В самом меню команды могут быть выбраны с использованием стрелок и нажатием клавиши "Enter" (ввод), или просто путем нажатием соответствующей выделенной буквы в команде, которую вы хотите выбрать. Вы можете получить информацию по каждой команде нажатием F1 (помощь) в момент, когда соответствующая команда высвечена. Для выхода из меню нажмите "Esc".

F1 Помощь

F2 Файл

Открыть файл в данном окне
Добавить файл в другое окно
Сменить окно
Закреть файл (*закрывать не выхода из EPED*)
Сохранить файл в... (*сохранить файл под другим именем*)
Список файлов (*показать все файлы в текущем каталоге*)
Использовать DOS (*задавать команды DOS или выход в DOS*)
Установка директории по умолчанию
Информация по файлу и системе

F3 EPIAID

EPIAID это диалоговый учебник для изучения работы с текстовым редактором и составления вопросников. EPIAID не будет рассматриваться в данной сессии и предназначен для самостоятельного изучения.

F4 Текст

Вопросы (*вставка полей переменных*) Control-Q, Q
Форматировать параграф (*для доп. информации - F1*)
Установить границы (*для доп. информации - F1*)
Убрать границы (*для доп. информации - F1*)
Выбор шрифта (*для доп. информации - F1*)
Использование Макросов (*для доп. информации - F1*)
Центрирование текущей строки (*данная команда используется после ввода текста*)
Установить метку (*для доп. информации - F1*)
Отменить Изменения строки (*Отмена всех изменений, сделанных в строке до тех пор, пока вы не ушли со строки*)
Восстановление (*восстанавливает последний удаленный символ или блок*) Control-K, U

F5 Печать

Просмотр установок принтера и их изменение (при необходимости), затем выделите "Печатать файл" и нажмите на ввод. Изменения установок производятся в зависимости от типа принтера и компьютера, (*для доп. информации - F1*)

- F6 Установки**
 Перенос, форматирование и т.д. (для доп. информации - F1)
 Границы
 Табуляторы
 Загрузить параметры файла (для доп. информация - F1)
 Показать параметры
 Цвета
 Сохранить установки
- F7 Найти**
 Найти (поиск в документе комбинации букв и/или служебных символов)
 Поиск и Замена (поиск в документе комбинации букв и/или служебных символов и замена их на новые)
 Повтор последнего Поиска/Замены
 Использование Макросов (для доп. информации - F1)
 Перейти к странице №
 Перейти к строке №
 Перейти к столбцу №
 Перейти к началу файла
 Перейти к метке № (для доп. информации - F1)
 Перейти к началу блока
 Перейти к концу блока
- F8 Блок**
 Начать блок (отметить начало блока для выделения) **Control-K, B**
 Закончить блок (отметить конец блока для выделения) **Control-K, K**
 Отмена выделения **Control-K, H**
 Скопировать блок сюда (вставить копию выделенного текста) **Control-K, V**
 Удалить блок (удалить выделенный текст, удаленный текст можно восстановить нажав F4, восстановить) **Control-K, Y**
 Записать блок в файл (создает новый файл, содержащий только выделенный текст, без изменения исходного файла)
 Импортировать файл как блок (для доп. информации - F1)
 Форматировать текущий блок (для доп. информации - F1)
- F9 Сохранить изменения под текущим именем**
- F10 Выход из EPED**

Типы полей вопросников в EPI INFO

for v-er v-1 ty.

Текст		(кол-во подчеркиваний соответствует кол-ву символов которые будут восприняты)
Все буквы прописные		(кол-во пробелов между < >, соответствует кол-ву символов которые будут восприняты)
Числовое	# или ##.##	(кол-во # до и после запятой соответствует кол-ву чисел которые будут восприняты)
Да/Нет	<Y>	(воспринимает только Y или N)
Даты	<мм/дд/гг>	(американский стандарт)
	<мм/дд>	
	<дд/мм/гг>	(европейский стандарт)
	<дд/мм>	
Номер телефона	<phonenum> <long distance>	(только для номеров США !!!)
Дата последних изменений	<today> <today/yy> <today/yyyy>	(автоматически будет проставлена дата из компьютера)
Идентификационный номер	<Idnum>	(автоматически присваивает идентификационный номер каждому вопроснику при вводе данных; кол-во пробелов между < >, соответствует кол-ву символов которые будут восприняты)



Annex III
Data Entry Program for Breastfeeding Practices Study

SAMPLE QUESTIONNAIRE/DATA ENTRY PROGRAM

Scientific Research Center on Regional Nutrition Prob
 Study of Breastfeeding Practices in Kazakhstan
 June 1994

- {Quest}ionnaire {Num}ber #####
 Poly{clinic Num}ber ### {Location} Number ###
 {Phys}ician {Name}: _____
 {Phys}ician {addr}ess: _____
 {Phys}ician {phone}: #####
 Date of interview: <dd/mm/yy>
 {Respondent}: #
 [0 = mother 9=other] {Other Resp}ondent: _____
1. Name of the mother: _____
 Name of the child: _____
2. Child's date of birth: <dd/mm/yy>
 Child's age: ### days
3. Age of mother: ##
4. Address of mother: _____
 Telephone number of mother: #####
5. Nationality of child: #
 [1 = Kazakh 2 = Russian 3 = Ukrainian
 4 = Tatar 5 = Ujgur 6 = Korean
 7 = European 8 = Turkish/ 9 = Other]
 Azerbaidjanian
6. Number of living children in family: ##
7. Weight of child at birth: ##### g
 Length of child at birth: ### cm
8. Weight of child at observation: ##### g
 Length of child at observation: ### cm
9. Sex of child: #
 [1 = female 2= male]
10. Was the infant full-term or premature? #
 [1 = full-term 2 = premature]
11. Type of delivery: #
 [1 = normal delivery 2 = caesarian]

20. Why did the mother stop breastfeeding the child?

Code: #

[1 = insufficient milk 2 = advice of health professional
3 = advice of relative 4 = illness of mother
5 = illness of baby 6 = mother's work
7 = baby rejected 8 = other
breast

21. Why did the mother introduce the first weaning foods?

Code: ##

[1 = appropriate time 2 = insufficient milk
3 = advice of relative 4 = advice of health professional
5 = illness of mother 6 = illness of baby
7 = mother's work 8 = baby's growth faltered
9 = baby cried frequently 10 = other]

22. Was the baby breastfed during the past 24 hours? <Y> [Y = yes N = no]
If yes, was breastmilk the primary source <Y> [Y = yes N = no]
of nutrients?

23. Has the baby been given a bottle or any other <Y> [Y = yes N = no]
artificial nipple (including with expressed breastmilk)?

24. Anthropometric measurements of the child from medical records:

Weight at 3 mos ##### g	Length at 3 mos ### cm
Weight at 6 mos ##### g	Length at 6 mos ### cm
Weight at 9 mos ##### g	Length at 9 mos ### cm
Weight at 12 mos ##### g	Length at 12 mos ### cm
Weight at 15 mos ##### g	Length at 15 mos ### cm
Weight at 18 mos ##### g	Length at 18 mos ### cm
Weight at 21 mos ##### g	Length at 21 mos ### cm
Weight at 24 mos ##### g	Length at 24 mos ### cm

25. Has the baby received any of the following liquids or foods during the past 24 hours?

Vitamin/mineral supplements or drugs?	<Y> [Y = yes N = no]
Plain water?	<Y> [Y = yes N = no]
Sugar water?	<Y> [Y = yes N = no]
Fruit juice?	<Y> [Y = yes N = no]
Tea or other liquids?	<Y> [Y = yes N = no]
Donor breastmilk?	<Y> [Y = yes N = no]
Canned, dried or fresh milk?	<Y> [Y = yes N = no]
Solid or mushy foods? (porridge, mashed vegetables or fruits, soup, meat, curds, eggs, or other)	<Y> [Y = yes N = no]
Oral rehydration solutions?	<Y> [Y = yes N = no]
Other food or liquid?	<Y> [Y = yes N = no]

Specify other food or liquids: _____
 Infant formula? <Y> [Y = yes N = no]
 Specify brand of formula: _____
 Code of Formula: #
 [1 = adapted imported 2 = adapted USSR
 3 = milk kitchen 4 = not adapted]
 Was the formula prescribed by a physician? <Y> [Y = yes N = no]
 Is the formula mixture diluted with water? <Y> [Y = yes N = no]
 Is the formula mixture diluted with milk? <Y> [Y = yes N = no]

26. {Morbidity} of the baby according to medical records:

Morbidity 1 Code: # Morbidity 2 Code: #
 Morbidity 3 Code: # Morbidity 4 Code: #
 [0 = None 1 = Diarrhea 2 = ARI 3 = Pneumonia
 4 = Otitis 5 = Other Infection 6 = Other]

27. How much weight did the mother gain during pregnancy? ## kg
28. Maternal pre-pregnancy weight: ## kg
 Maternal pre-pregnancy height: ### cm
29. Maternal weight at observation: ## kg
 Maternal height at observation: ### cm
30. Does the mother know the advantages of breastfeeding? <Y> [Y = yes N = no]
31. Has the mother received information that breastmilk is the best food for the infant during the first 4-6 months? <Y> [Y = yes N = no]
- Has the mother received information about the disadvantages of breastmilk substitutes? <Y> [Y = yes N = no]
32. How long does the mother plan to breastfeed? ## months
 [0 = not breastfeeding 99 = until child rejects the breast]
 Other _____
33. Date of previous delivery: <dd/mm/yy>
34. For how many months did the mother breastfeed the previous child? ## months
 [0 = did not breastfeed 99 = still breastfeeding]

13. Совместное пребывание матери и ребенка в палате? <Y> [Y = Да N = Нет]
14. Режим грудного вскармливания:
 [1 = по часам 2 = по требованию
 3 = не кормит грудью
- Кормит грудью каждые: # час.
 Ночное кормление? <Y> [Y = да N = нет]
 Спит ребенок с матерью? <Y> [Y = да N = нет]
15. Продолжительность одного обычного грудного #
 кормления?
 [1 = 5 минут 2 = 10-15 минут
 3 = 20-30 минут 4 = 40-60 минут
 5 = без ограничений)
16. Мать кормит ребенка в одно кормление
 из одной или из обеих грудей?
 [1 = одна грудь 2 = обе груди]
17. Сколько раз в день за предыдущие 24 часа ##
 ребенок был приложен к груди?
18. С какого возраста ребенок начал получать следующее:
 Вода ## мес Соки ## мес
 Каши ## мес Фруктовое пюре ## мес
 Овощи ## мес Яйца ## мес
 Творог ## мес Мясо ## мес
 Тесто ## мес Искусственная смесь ## мес
 Название смеси: _____
 Код смесей: #
 [1 = адаптированная импортная 2 = адаптированная советская
 3 = из молочной кухни 4 = не адаптированная]
 Масло ## мес Сахар ## мес
19. Во сколько месяцев полностью прекратили кормить ## месяцев
 грудью ребенка?
 [0 = никогда не кормили 99 = продолжает кормить грудью]
20. Почему мать прекратила кормить грудью своего ребенка?

 код: #
 [1 = недостаточно молока 2 = совет медицинского работника
 3 = совет родственников 4 = болезнь матери
 5 = болезнь ребенка 6 = мать работает
 7 = ребенок сам отказался от груди 8 =
 9 = другое
21. Почему мать решила ввести первый прикорм ребенку?

 код: ##
 [1 = подходящий возраст 2 = недостаточность молока
 3 = совет родственников 4 = совет медицинского работника
 5 = болезнь матери 6 = болезни ребенка
 7 = мать работает 8 = ребенок плохо набирал вес
 9 = ребенок часто плакал 10 = другое]
22. За предыдущие 24 часа получал ли ребенок <Y> [Y = да N = нет]
 кормление грудью?
 Если да, то было ли это для ребенка основным <Y> [Y = да N = нет]
 питанием?

23. За предыдущие 24 часа получал ли ребенок что-либо <Y> [Y = да N = нет] через бутылочку с соской (даже сцеженное грудное молоко)?

24. Антропометрические измерения ребенка из историй развития:

вес в 3 мес	##### г	рост в 3 мес	### см
вес в 6 мес	##### г	рост в 6 мес	### см
вес в 9 мес	##### г	рост в 9 мес	### см
вес в 12 мес	##### г	рост в 12 мес	### см
вес в 15 мес	##### г	рост в 15 мес	### см
вес в 18 мес	##### г	рост в 18 мес	### см
вес в 21 мес	##### г	рост в 21 мес	### см
вес в 24 мес	##### г	рост в 24 мес	### см

25. Получал ли ребенок что-либо из перечисленного в течение последних 24 часов?

Витамины/минеральные добавки, лекарства?	<Y>	[Y = да N = нет]
простая вода?	<Y>	[Y = да N = нет]
подслащенная вода?	<Y>	[Y = да N = нет]
фруктовый сок?	<Y>	[Y = да N = нет]
Чай или другое питье?	<Y>	[Y = да N = нет]
донорское молоко?	<Y>	[Y = да N = нет]
косервированное, сухое или свежее молоко?	<Y>	[Y = да N = нет]
каша?	<Y>	[Y = да N = нет]
овощное или фруктовое пюре?	<Y>	[Y = да N = нет]
суп?	<Y>	[Y = да N = нет]
мясо?	<Y>	[Y = да N = нет]
творог?	<Y>	[Y = да N = нет]
яйца?	<Y>	[Y = да N = нет]
Оральные регидратационные растворы?	<Y>	[Y = да N = нет]
Другая пища или питье?	<Y>	[Y = да N = нет]
Уточнить другую пищу или питье _____		
Детская искусственная смесь?	<Y>	[Y = да N = нет]
Уточнить название смеси _____		
Код смесей: #		
1 = адаптированная импортная	2 = адаптированная советская	
3 = из молочной кухни	4 = не адаптированная]	
Смесь приобретена по рецепту врача?	<Y>	[Y = да N = нет]
Смесь разводится водой?	<Y>	[Y = да N = нет]
Смесь разводится молоком?	<Y>	[Y = да N = нет]

26. {заболеваемость } ребенка по истории развития:

заболевание 1 : код #	заболевание 2 : код #	
заболевание 3 : код #	заболевание 4: код #	
[0 = нет	1 = диарея	2 = ОРЗ
	3 = пневмония	4 = отит
	5 = другие инфекции	6 = Другие заболевания]

27. Сколько кг мать прибавила за период беременности? ## кг

28. Вес матери до беременности: ## кг
Рость матери до беременности: ### см

29. Вес матери на момент интервью: ## кг
Рост матери на момент интервью: ### см

30. Знает ли мать о пользе грудного вскармливания? <Y> [Y = да N = нет]

31. Проводилась ли с матерью беседа о том, что грудное молоко лучший вид питания для ребенка в первые 4-6 месяцев жизни? <Y> [Y = да N = нет]
- Проводилась ли с ней беседа о вреде искусственного вскармливания? <Y> [Y = да N = нет]
32. Как долго мать планирует кормить ребенка грудью? ## месяцев
 [0 = не кормит грудью 99 = пока ребенок не бросит сосать сам]
 Другое: _____
33. Дата предыдущих родов: <дд/мм/гг>
34. Сколько месяцев мать кормила грудью предыдущего ребенка? ## месяцев
 [0 = не кормила грудью 99 = еще кормит грудью]
35. заболеваемость матери в период беременности и лактации:
-
- | | |
|--|-----------------------|
| заболевание 1 : код # | заболевание 2 : код # |
| заболевание 3 : код # | заболевание 4: код # |
| [0 = нет 1 = мастит/другие заболевания ассоциируемые с ГВ
2 = анемия 3 = Токсикозы
4 = гипертензия 5 = болезни сердца 6 = Другие | |
36. Первый половой контакт матери после родов? ##.# месяцев
 [99 = еще не было после родов]
37. Через сколько месяцев после родов у матери возобновился менструальный цикл? ##.# месяцев
 [99 = месячных после родов еще не было]
38. Использование матерью контрацептивов <Y> [Y = да N = нет]
 Если да, уточнить способ #
 [01 = спираль 05 = спринцевание
 02 = таблетки 06 = био-ритм
 03 = мази 07 = прерванный ПА
 04 = свечи 08 = другое
39. Сколько всего беременностей было у матери ##
40. Сколько всего родов было у матери? ##
41. Новая беременность за период лактации? <Y> [Y = да N = нет]
42. Сколько всего абортов было у матери? ##
43. Сколько абортов было у матери за период лактации? ##
44. Количество человек в семье: ##
 Брак матери зарегистрирован? <Y> [Y = да N = нет]
45. Профессия матери? _____
 Коды профессии матери
46. Общий доход семьи? ##### тенге/мес.

ПРИМЕРЫ ПРОГРАММЫ СHECK
 Научный Центр Региональных проблем питания НАН РК
 Изучение практики грудного вскармливания в Казахстане
 Июнь 1994

BEFORE	1
*END	2
*END	END
END	
RESPONDENT	FIRSTBF
Repeated	IF firstbf <= 2
Legal	THEN
0	GOTO ROOMINGIN
9	ENDIF
END	END
Jumps	
0 MATNAME	WHYFIRSTBF
END	IF whyfirstbf =
END	THEN
	ENDIF
	END
MATNAME	
NoEnter	
END	CODFIRSTBF
	Legal
NAMECHILD	1
NoEnter	2
END	3
	4
AGECHILD	5
LET AGECHILD = (dateinterv - dobchild)	END
END	
	FREQBF
CHILDNAT	Legal
Legal	1
1	2
2	3
3	END
4	Jumps
5	2 NIGHTBF
6	3 AGEWATER
7	END
8	IF freqbf = 3
9	THEN
END	LET AGESTOPBF = 0
END	ENDIF
	IF freqbf = 3
	THEN
SEXCHILD	LET PLANBF = 0
Legal	ENDIF
1	END
2	
END	
	LENGTHBF
FULLTERM	Legal
Legal	1
1	2
2	3
END	4
	5
	END
TYPEDELIV	END
Legal	

ОСНОВНЫЕ КОМАНДЫ ANALYSIS

- READ** Делает .REC файл активной базой данных; READ - первая команда, которая должна быть задана в analysis. Ни одна функция ANALYSIS не будет работать, пока файл .REC не будет активным.
- ROUTE** Указывает EPI INFO куда выводить выходные данные, полученные в ANALYSIS. Эта команда должна быть использована *перед* запуском команд ANALYSIS.
- ROUTE SCREEN - данные выводятся на экран (по умолчанию)
 - ROUTE PRINTER - данные выводятся на принтер
 - ROUTE filename.txt - данные выводятся в файл .TXT, который можно редактировать или распечатать в EPED
- BROWSE** Показывает все данные в базе данных.
- LIST** Создает список всех переменных для всех записей.
- SELECT** Позволяет задавать команды ANALYSIS только для записей, в содержащих величины по которым производится выборка.
- SELECT SEX=FEMALE указывает, что все последующие команды ANALYSIS выполняются только для записей, в которых пол - женский.
- SORT** Сортирует данные по указанной переменной в порядке убывания
- DEFINE** Позволяет создавать новые переменные в ANALYSIS, говорит EPI INFO какой тип переменной создать.
- FREQ/MEANS** Создает таблицу, показывающую сколько записей имеет каждая величина по заданным переменным и область значений для каждой переменной.
- BAR** Создает столбцовый график по величинам заданных переменных
- PIE** Создает долевого график по величинам заданных переменных
- HISTOGRAM** Создает гистограмму по величинам заданных переменных
- SCATTER** Создает график разброса по величинам заданных переменных
- RUN** Запускает программу команд ANALYSIS, написанную в EPED.

ПРИМЕРЫ ПРОГРАММЫ ANALYSIS

Wellstart International, Научно-Исследовательский Центр
Региональных Проблем Питания
Министерство Здравоохранения Республики Казахстан
Исследования загрязнения грудного молока в Казахстане
Февраль-Июль, 1994

FILE NAME: BMILK2.PGM
EPI INFO PROGRAM TO CREATE INFANT FEEDING CATEGORIES

```
READ BMILKSTU  
ROUTE BMILK2.TXT
```

```
SELECT BFSCHEDULE <>
```

```
DEFINE EXCLBF _  
IF (INFWATER = "Y") THEN EXCLBF = "N" ELSE EXCLBF = "Y"  
IF (INFBOILH2O = "Y") THEN EXCLBF = "N"  
IF (INFSUGAR = "Y") THEN EXCLBF = "N"  
IF (INFTEA = "Y") THEN EXCLBF = "N"  
IF (INFJUICE = "Y") THEN EXCLBF = "N"  
IF (INFFORMULA = "Y") THEN EXCLBF = "N"  
IF (INFFRSMILK = "Y") THEN EXCLBF = "N"  
IF (INFKEFIR = "Y") THEN EXCLBF = "N"  
IF (INF TINMILK = "Y") THEN EXCLBF = "N"  
IF (INFOTH LIQ = "Y") THEN EXCLBF = "N"  
IF (INFMUSHY = "Y") THEN EXCLBF = "N"  
TITLE 1 \CINFANT FEEDING CATEGORIES  
TITLE 2 \CEXCLUSIVE BREASTFEEDING  
FREQ EXCLBF
```

```
DEFINE FULLBF _  
IF EXCLBF = "Y" THEN FULLBF = "N" ELSE FULLBF = "Y"  
IF (INFSUGAR = "Y") THEN FULLBF = "N"  
IF (INFTEA = "Y") THEN FULLBF = "N"  
IF (INFJUICE = "Y") THEN FULLBF = "N"  
IF (INFFORMULA = "Y") THEN FULLBF = "N"  
IF (INFFRSMILK = "Y") THEN FULLBF = "N"  
IF (INFKEFIR = "Y") THEN FULLBF = "N"  
IF (INF TINMILK = "Y") THEN FULLBF = "N"  
IF (INFOTH LIQ = "Y") THEN FULLBF = "N"  
IF (INFMUSHY = "Y") THEN FULLBF = "N"  
TITLE 1 \CINFANT FEEDING CATEGORIES  
TITLE 2 \CFULL BREASTFEEDING (Breastmilk and Plain Water Only)  
FREQ FULLBF
```

```
DEFINE BFWTEA _  
IF EXCLBF = "Y" THEN BFWTEA = "N" ELSE BFWTEA = "Y"  
IF (INFJUICE = "Y") THEN BFWTEA = "N"  
IF (INFFORMULA = "Y") THEN BFWTEA = "N"  
IF (INFFRSMILK = "Y") THEN BFWTEA = "N"  
IF (INFKEFIR = "Y") THEN BFWTEA = "N"  
IF (INF TINMILK = "Y") THEN BFWTEA = "N"  
IF (INFOTH LIQ = "Y") THEN BFWTEA = "N"
```

```
IF (INFMUSHY = "Y") THEN BFWTEA = "N"
TITLE 1 \CINFANT FEEDING CATEGORIES
TITLE 2 \CBREASTFEEDING WITH WATER, TEA
TITLE 3 \C(Breastmilk and Water, Sugar Water, or Tea Only)
FREQ BFWTEA
```

```
DEFINE BFWTJ _
IF EXCLBF = "Y" THEN BFWTJ = "N" ELSE BFWTJ = "Y"
IF (INFFORMULA = "Y") THEN BFWTJ = "N"
IF (INFFRSMILK = "Y") THEN BFWTJ = "N"
IF (INFKEFIR = "Y") THEN BFWTJ = "N"
IF (INFTINMILK = "Y") THEN BFWTJ = "N"
IF (INFOTHLIQ = "Y") THEN BFWTJ = "N"
IF (INFMUSHY = "Y") THEN BFWTJ = "N"
TITLE 1 \CINFANT FEEDING CATEGORIES
TITLE 2 \CBREASTFEEDING WITH WATER, TEA, JUICE
TITLE 3 \C(Breastmilk and Water, Sugar Water, Tea or Juice Only)
FREQ BFWTJ
```

```
DEFINE BFNOMLK _
IF (BFWTJ = "Y") THEN BFNOMLK = "Y"
IF (INFFORMULA = "Y") THEN BFNOMLK = "N"
IF (INFFRSMILK = "Y") THEN BFNOMLK = "N"
IF (INFKEFIR = "Y") THEN BFNOMLK = "N"
IF (INFTINMILK = "Y") THEN BFNOMLK = "N"
TITLE 1 \CINFANT FEEDING CATEGORIES
TITLE 2 \CBREASTFEEDING WITH NO OTHER MILK
FREQ BFNOMLK
```

```
DEFINE BFSOLIDS _
IF INFMUSHY = "Y" THEN BFSOLIDS = "Y" ELSE BFSOLIDS = "N"
TITLE 1 \CINFANT FEEDING CATEGORIES
TITLE 2 \CBREASTFEEDING WITH SOLIDS
FREQ BFSOLIDS
```

КОДОВАЯ КНИГА ДАННЫХ

Wellstart International, Научно-Исследовательский Центр
Региональных Проблем Питания
Министерство Здравоохранения Республики Казахстан
Исследования загрязнения грудного молока в Казахстане
Февраль-Июль, 1994



Annex IV
List of Training Participants



Participants in EPI INFO Training Course:

(Note: ¹ also completed breast milk contaminants data training; ² also completed introductory computer course)

Tamara Paltusheva (¹), Head of Maternal and Child Health Division, Ministry of Health

Tamara Chuvakova (¹), Ministry of Health

Gulnara Kazbekova, Ministry of Health

Shamil Tazhibayev (¹), Deputy Directory for Research, Nutrition Institute

Gulnara Semenova (^{1,2}), Scientific Specialist, Breastfeeding Laboratory, Nutrition Institute

Ayan Ergalieva (^{1,2}), Scientific Specialist, Breastfeeding Laboratory, Nutrition Institute

Elena Nikitina (^{1,2}), Scientific Specialist, Breastfeeding Laboratory, Nutrition Institute

Tatiana Balfanbaeva (^{1,2}), Programmer, Breastfeeding Laboratory, Nutrition Institute

Orynkul Mukasheva (^{1,2}), Junior Scientific Specialist, Breastfeeding Laboratory, Nutrition Institute

Nazygul Toleuva, (^{1,2}), Junior Scientific Specialist, Breastfeeding Laboratory, Nutrition Institute

Satbek Musabevov (²), Laboratory Manager, Dietary Intake and Nutritional Status Laboratory, Nutrition Institute

Saken Sagatbekov (²), Senior Scientific Specialist, Dietary Intake and Nutritional Status Laboratory, Nutrition Institute

Temirkhan Bekboynov (²), Senior Scientific Specialist, Dietary Intake and Nutritional Status Laboratory, Nutrition Institute

Elena Ismagilova (²), Scientific Specialist, Immunology Laboratory, Nutrition Institute

Munira Bulegenova (²), Scientific Specialist, Immunology Laboratory, Nutrition Institute

Valentina Son (²), Scientific Specialist, Immunology Laboratory, Nutrition Institute

Elena Safonova (²), Senior Laboratory Technician, Immunology Laboratory, Nutrition Institute

Bidel Sarbaev (²), Scientific Specialist, Metabolism Laboratory, Nutrition Institute

S. Abilaev, Scientific Specialist, Food Allergy Laboratory, Nutrition Institute

Stanislav Piotrovski, Senior Scientific Specialist, Pesticide Laboratory, Nutrition Institute

Camila Tazhibayev (²), Student



Annex V
List of Persons Contacted



List of Persons Contacted

Tamara Chuvakova, MOH Kazakhstan

Paula Feeney, USAID/Almaty

Eugene Kozhevnikov, Bilingual Computer Expert

Nina Kayupova, Republican Institute of Maternal and Child Health

Tamara Paltusheva, MOH Kazakhstan

Gulnara Kazbekova, MOH Kazakhstan

Gulnara Semenova, Nutrition Institute

Orynkul Mukasheva, Nutrition Institute

Marilynn Schmidt, USAID/Almaty

Almaz Sharmanov, Nutrition Institute

Shamil Tazhibayev, Nutrition Institute

Nazygul Toleuva, Nutrition Institute

Susan Welsby, Consultant

WELLSTART INTERNATIONAL

Wellstart International is a private, nonprofit organization dedicated to the promotion of healthy families through the global promotion of breastfeeding. With a tradition of building on existing resources, Wellstart works cooperatively with individuals, institutions, and governments to expand and support the expertise necessary for establishing and sustaining optimal infant feeding practices worldwide.

Wellstart has been involved in numerous global breastfeeding initiatives including the Innocenti Declaration, the World Summit for Children, and the Baby Friendly Hospital Initiative. Programs are carried out both internationally and within the United States.

International Programs

Wellstart's *Lactation Management Education (LME) Program*, funded through USAID/Office of Nutrition, provides comprehensive education, with ongoing material and field support services, to multidisciplinary teams of leading health professionals. With Wellstart's assistance, an extensive network of Associates from more than 40 countries is in turn providing training and support within their own institutions and regions, as well as developing appropriate in-country model teaching, service, and resource centers.

Wellstart's *Expanded Promotion of Breastfeeding (EPB) Program*, funded through USAID/Office of Health, broadens the scope of global breastfeeding promotion by working to overcome barriers to breastfeeding at all levels (policy, institutional, community, and individual). Efforts include assistance with national assessments, policy development, social marketing including the development and testing of communication strategies and materials, and community outreach including primary care training and support group development. Additionally, program-supported research expands biomedical, social, and programmatic knowledge about breastfeeding.

National Programs

Nineteen multidisciplinary teams from across the U.S. have participated in Wellstart's lactation management education programs designed specifically for the needs of domestic participants. In collaboration with universities across the country, Wellstart has developed and field-tested a comprehensive guide for the integration of lactation management education into schools of medicine, nursing and nutrition. With funding through the MCH Bureau of the U.S. Department of Health and Human Services, the NIH, and other agencies, Wellstart also provides workshops, conferences and consultation on programmatic, policy and clinical issues for healthcare professionals from a variety of settings, e.g. Public Health, WIC, Native American. At the San Diego facility, activities also include clinical and educational services for local families.

Wellstart International is a designated World Health Organization Collaborating Center on Breastfeeding Promotion and Protection, with Particular Emphasis on Lactation Management Education.

For information on corporate matters, the LME or National Programs, contact:

Wellstart International Corporate Headquarters
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For information about the EPB Program contact:

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