

**Workshop on Using Cost-Effectiveness Analysis to Identify a Package of
Priority Health Interventions
Egypt
July 3-7, 1994
Ministry of Health
Harvard School of Public Health
U.S.A.I.D**

**Data for Decision Making Project
Julia Walsh
Hassan Salah
Kristen Purdy**

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Executive Summary

The Data for Decision Making Project (DDM) is a collaborative effort of the Ministry of Health (MOH), Harvard School of Public Health and USAID to strengthen the planning capacity of the Directorate of Planning (DOP) in the Ministry of Health .

In order to increase the capacity for priority setting/cost-effectiveness analysis a workshop was organized for July 3 to 7, 1994 in Egypt. The purpose of the workshop was to introduce the methodology of cost-effectiveness analysis and its use in health planning to health officials at the central and governorate levels.

The Directorate of Planning invited senior officials from five governorates and central Ministry of Health personnel interested in cost-effectiveness analysis and its application for health planning.

The agenda was changed from the initial proposed agenda for two reasons:

- The participants were senior staff and decision makers at the governorate and central level and were unfamiliar with some of the technical methods of cost-effectiveness analysis; the agenda was therefore modified to provide more concrete practical examples of the methodology and the use of cost-effectiveness analysis in health planning.
- Many of the participants were more comfortable in Arabic than in English, so many of the sessions were translated into Arabic following the English presentation.

Summary of topics covered during the workshop:

Day 1, Sunday 3 July, 1994

- Health Care Planning, present trends and future needs.
- Overview of the study and methodology.
- Setting priorities in health: Examples from Mexico, Colombia, and Oregon.
- Summary of DDM activities in Egypt.
- Cost-effectiveness concept.
- Presentation of results of the pilot study in immunization.
- Presentation of results of pilot study on renal dialysis.

Day 2, Monday, 4 July, 1994

- Discussion of participants' questions.
- Discussion of major health problems in Egypt and interventions available.
- Current life table and comparison with ideal life tables.
- Measuring mortality and morbidity.
- Cost-effectiveness of interventions.

- Introduction to spreadsheet software.

Day 3, Tuesday 5 July, 1994

- The participants worked in five groups, with 5 computers, as an introduction to measuring healthy years of life lost in individual and population levels.
- Basics of cost-effectiveness, sources of information.

Day 4, Wednesday 6 July, 1994

- Arabic summary for steps in health system reform.
- Costing methods.
- Budget tracking system.
- Importance of data for planning.
- Costing health programs and facilities.
- Using spreadsheets for calculation of cost.
- Practical training on computers.

Day 5, Thursday 7 July, 1994

- Discussion of cost methods homework.
- Summary of calculation of cost-effectiveness.
- Presentation of reports by four working groups.
- Discussion of next steps.
- Closing session.

In the discussion following the next steps presentation, representatives from each of the governorates stated his great interest, enthusiasm and commitment to learning more about cost-effectiveness analysis and applying the results for health planning. The Directors of Curative Care, Preventive Care and Cost Recovery for Health stated the importance of using this method for health planning.

The participants were asked to complete an evaluation form at the end of the workshop to rate the quality of the program. The questionnaire was designed to collect feedback for the speakers and organizers of the workshop as well as for the funding agency.

Generally, the participants agreed that the workshop was excellent and 90% felt that it would help them greatly in their current work.

The next steps put forth by Dr. Moushira of working in three governorates simultaneously expands greatly the initial scope of work for undertaking these analyses in only one governorate. In order to successfully build the technical capacity in three governorates and study 50 interventions in the next year, the DOP and DDM will require expanded efforts and resources. These requirements will be discussed in more detail with DOP and AID next week in Cairo.

Workshop on Using Cost-Effectiveness Analysis to Identify a Package of Priority Health Interventions

Ismailia, Egypt

July 3-7, 1994

Ministry of Health/Department of Planning

Data for Decision Making/Harvard School of Public Health

U.S.A.I.D.

Introduction

The Data for Decision Making Project (DDM) is a collaborative effort of the Ministry of Health (MOH), Harvard School of Public Health and USAID to strengthen the planning capacity of the Directorate of Planning (DOP) in the Ministry of Health.

Goal

The overall goal of the Data for Decision Making Project in Egypt is to strengthen capacity for using data in health planning in Egypt. The Directorate of Planning, with DDM, developed the following specific activities for health planning:

- Development and implementation of a computerized Budget Tracking System for the DOP/MOH to better monitor the allocation of health expenditures, especially at the governorate level. Considerable work has already been done in Bani Suef, Alexandria and Suez governorates.

- Estimation of National Health Accounts which includes sources of finances, flows, and uses of funds in the non-governmental, public, and private sectors.

- Priority setting, including analysis of the cost-effectiveness of selected health interventions. DDM started this analysis with DOP and the Clinical Epidemiology Unit of Suez Canal University in preparation for the July 1994 workshop.

- Understanding the role of different interest groups in the health sector reform process through Mapping of the Decision Making Process. This exercise has been done on the School Health Insurance Program at Health Insurance Organization (HIO). DDM plans to continue this activity in 1994 by mapping drug policy.

- Strengthening data on public and private health care provision and financing through household and provider surveys. This information will show health care utilization and expenditures at the household level, and patterns of service provision in Egypt.

- Strengthening the human resource capacity of the DOP and MOH staff in the project governorates through short and long-term training in health planning, economics, policy and management.

Cost-effectiveness analysis

Resources for the delivery of health services are limited, therefore the Egyptian government needs to make choices as to which health services should be financed. Resource allocation decisions mean making tradeoffs between funding one type of health program or another. For example, choosing to construct a hospital may take funding, personnel, and materials away from other health services. In order to evaluate which tradeoffs are "worth" the cost, health planners can use Cost-Effectiveness Analysis (CEA). In measuring health effects in common units across interventions, decision makers can compare cost-effectiveness ratios. In CEA, the economic cost of a health intervention is divided by an estimate of the health effects; the interventions with the smallest ratios are considered to be the most cost-effective. With this approach, health interventions can be ranked according to their cost-effectiveness ratios, and the most cost-effective programs selected as health priorities for funding by governments. Health effects can be measured by a number of methods that combine both deaths averted and disease averted by the interventions, these include: Healthy Years of Life Lost, Quality Adjusted Life Years, or Disability Adjusted Life Years.

Role of cost-effectiveness analysis in resource allocation for health

- CEA is a tool for identifying which health interventions achieve the greatest level of impact per unit of investment, and the results can be used to evaluate on-going health interventions or to plan for future health programs. In addition, CEA can assist program managers to identify ways to improve efficiency and effectiveness of service delivery.

- While the use of CEA for program management is important, the primary emphasis of the methodology is on planning and evaluating interventions so that resources can be allocated in a more cost-effective manner at a national or regional level.

- One of the most important uses of cost-effectiveness analysis is to evaluate alternative delivery strategies.

- CEA can also inform decision makers about choices for new interventions.

- Finally, CEA can assist in identifying benefit packages of priority health interventions.

Day 1: Sunday, 3 July, 1994

Official Opening

- Ali Swelam introduced **Dr. El Shafei**, Undersecretary of Family Planning and Director of Department of Planning, who welcomed the workshop participants on behalf of the Department of Planning. El Shafei noted the importance of using existing data optimally to make better decisions. El Shafei said that the workshop should help participants use data properly to meet the major challenges facing the health sector.

- **Dr. El Gayar**, Acting Project Officer of Cost Recovery Project, USAID, welcomed the participants on behalf of USAID, and mentioned that training workshops for the decision makers are one of USAID's priorities.

- **Dr. Walsh**, Director of Research DDM, urged the participants to gain the maximum benefit from the workshop.

- **Dr. Fathi**, Dean of Suez Canal Medical School, and **Dr. Abd El Fatah**, Vice-President of Suez Canal University, welcomed the participants on behalf of the University and stressed the important role that the University can play in data management to help the decision making process.

- **Dr. Khater**, First Undersecretary, stressed that data for measuring the magnitude of different diseases in Egypt should be available to help decision-makers select and purchase specific high technology equipment for health services.

- **Dr. Moshira El Shafei**, Undersecretary of Family Planning, and Director of the Department of Planning, spoke about Health Care Planning, present trends and future needs.

El Shafei gave a brief history of the Planning department, and pointed out a variety of issues. A summary of the topics follows:

- Three major reasons the Planning Department decided to use data as a base for future planning :

- . To improve community health.
- . To achieve better primary health care.
- . To reform health polices and management.

- Health education has an important role in prevention and control of many health problems e.g., breast feeding and family planning.

- The importance of project sustainability after exhaustion of financial support from foreign aid. Upon completion of a project, the resultant data is usually neglected due to the absence of long-

term goals. This leads to a lack in both the personnel and follow-up needed to make the project sustainable.

- The role of the private sector is significant, as it controls at least 50% of the health sector activities. The MOH must therefore consider the important role of the private sector in any future strategy.

- How far does the MOH need to go in using high technology? Decision makers need data that give indications about the size of any problem so that they can select appropriate technology to deal with the problem.

- The MOH has an extensive amount of data, but the problem lies in the analysis of this data to make a useful database that can be used for indicators. For example, when we say that there is a hospital equipped with 200 beds, do we know if these 200 beds are a small or a large number relative to the magnitude of the diseases. Would it then be cost-efficient to supply such a hospital with an extremely expensive MRI device to serve its patients? This is an example of how we should use data to reach an accurate decision.

- Egypt needs to assess the burden of various diseases before they can be dealt with. For example, the MOH should determine which disease is more of a burden, hepatitis or bilharzia. Therefore, the MOH needs to use Disability Adjusted Life Years (DALYS) to measure the real burden for each disease according to how many days are lost.

- In most cases, the MOH starts to study a disease only after the start of an intervention. But in order to determine an appropriate intervention, the MOH needs data to study the disease.

- Most MOH decisions are a result of political decisions, community pressure, or senior undersecretary decisions but rarely a result of scientific studies. El Shafei mentioned the governorate's policies regarding vaccination and renal dialysis as examples.

- Curative care is a major part of the MOH budget, while preventive care is the smallest part. Salaries also take a big part of the budget.

- In recent years, many public hospitals were built in Egypt but only 40% of beds in these hospitals are currently occupied. Because of this, the MOH requires data before erecting more public hospitals.

Dr. Julia Walsh, Director of Research, Data for Decision Making, Harvard School of Public Health,
Overview of the study and methodology.

Walsh introduced the concept of cost-effectiveness, procedures to estimate cost-effectiveness, and its limitations.

Dr. Jose Luis Bobadilla, World Bank, Setting priorities in health: Examples from Mexico, Colombia and Oregon.

Bobadilla stated that there is usually a conflict between the Ministry of Health with its heavy programmatic requirements and the Ministry of Finance with its limited financial resources. But the MOH can justify programmatic and financial needs cost-effectiveness techniques.

He also referred to the World Development Report (WDR) for 1993 which has addressed similar health issues and focused on the relevance of setting priorities, and discussed the background of cost-effectiveness analysis. He also mentioned Mexico and Colombia as examples of countries that have used cost-effectiveness analysis to set national health priorities.

Bobadilla discussed a variety of important points:

- Why do governments need to set priorities in health?
- The classification of interventions.
- Uses of cost-effectiveness information.
- Criteria used to set priorities.

Bobadilla mentioned tuberculosis as a practical example of the ratio between the cost of a patient's treatment and number of years that would be gained when the patient recovered.

Dr. Ali Swelam, Coordinator of DDM, DOP, Summary of DDM activities in Egypt.

He gave an explanation in Arabic, of cost-effectiveness and an abstract on the different goals of DDM and their relevance to the workshop.

Dr. Youssef Waheeb, Clinical Epidemiology Unit, Suez Canal University, The concept of cost-effectiveness .

Waheeb summarized the goal and objectives of the workshop. He measured the different stages of disability and the meaning of DALYS using measles as an example.

He mentioned some of the problems facing the team during their work in collecting data, e.g., calculating the cost of cars and the depreciation factor, TV advertising which is free but whose cost must be added to the total cost, staff working with different percentages of participation and how to calculate this percentage.

Dr. Said Oan, Director of Curative Care, MOH, Presentation of results of the pilot study in immunization.

Oan gave a summary about the calculation for the cost of immunization as an example.

He discussed the following major points:

- He presented the data collected from Suez governorate.
- He gave an explanation of how he calculated the percentage of cars used in the immunization program.
- The average cost of immunization per child is 45.3 L.E.
- Question, How did you estimate the life expectancy for cars?
Answer by Dr. Waheeb, there are special tables to estimate life expectancy for cars, buildings and equipment.

Dr. Adly Said, Director of Preventive Care, MOH, **Presentation of results of pilot study of renal dialysis.**

Adly gave another example of the calculation of cost for renal dialysis.

According to his study, the annual cost per patient is L.E 18,545 that includes capital cost, operation and maintenance cost, personnel, supplies for dialysis sessions, pharmaceutical and lab investigations, with the assumption that the patient receives dialysis twice a week.

Waheeb mentioned that as a result of the short time period of the study, it did not include the supervision cost and the effect of the disease on the family.

Day 2: Monday, 4 July, 1994

The first session started by answering the participants' questions about cost-effectiveness :

- How can health education prevent health problems completely?

Dr. El Shafei answered the question: health education prevents only part of the problem and not all of it.

- Question, How can we calculate cost of the cars per year?

Dr. Waheeb answered the question: actually the cost is not equal in each year due to inflation, so the cars are more valuable in the 1st year than in the 2nd year.

- Question, How can we calculate cost for each patient if he/she receives his/her treatment from different hospitals, including private, public and military services?

Dr. El Shafei answered the question: as the program is a national program, it will cover different types of hospitals on the national level.

- Question, How do you say cost-effectiveness in Arabic?

Dr. Ezzat answered the question: it is called "Mardod el enfak".

Dr. Helmy El Bermawy, MOH, Discussion of major health problems in Egypt and interventions available.

El Bermawy gave a long discussion about health problems in Egypt. The main points for his session are as follows.

- Egypt is facing five major problems which are overpopulation, different types of pollution, quality of medical education, lack of medical legislation and medical malpractice.

- Dr. Helmy gave examples of some of the major diseases in Egypt: typhoid and paratyphoid, hepatitis, tetanus, measles, hypertension, glucosuria.

- Diarrhea is still the main cause for infant mortality .

- The polio vaccine covers only 80% of children in the 3rd dose.

- Smoking is considered one of the major problems in Egypt. The last study showed that 5.7 million people smoke in Egypt, with an average of 16 cigarettes per day.

Dr. Samir Gerguis, MOH, Current life table and comparison with ideal life tables.

The following are the major points in his session.

- Because the last study was conducted in 1960 and 1966, the MOH does not have official life tables, therefore depends on mere estimations.

- 42% of the population is less than 15 years old.

- According to the Egyptian life expectancy table, the average life expectancy is 62.863 years for males while it is 66.388 years for females.

- Question, Why is there an under-estimation of the death rate?

Answer, Because death registration is not accurate.

- Question, Why is the difference between the expectancy and the real status in age of zero and one year old?

Answer, because of the high mortality rate.

- Question, Why is there an under-estimation of the child mortality rate?

Answer, This resulted from under-reporting infant mortality, and I expect the actual rate to be around 12% .

Dr. Bobadilla, World Bank, Measuring mortality and morbidity.

Bobadilla introduced the participants to the concepts of Disability Adjusted Life Years, the discounting principle, and the following points during his session:

- Indicators of cost-effectiveness.

- Potential loss of life, with age weightings.

- Potential loss of life with age weights and discounting future loss at the time of death or disease.

- Rates of DALYS lost by causes.

Bobadilla gave examples of the main causes of disease burden in children and adults in Mexico, and percent of under-registration of deaths by age and area of residence.

Following were questions asked during the session:

- Question, Should the MOH calculate DALYS on the individual level?

Answer, this is what is currently being done, but later on you will work on the population level.

- Question, How can we use percentage of disability for Egypt, which is different from the USA?

Answer, There are special tables for different degrees of disability and you can use estimations of experts.

- Question, are there any measures other than age, that I have to use?

Answer, Age is the only measure used.

- How can we consider equal productivity for workers in Egypt, to workers in Japan?

Answer, there is no need to compare productivity on the international level, as the productivity is calculated on the national level. For example, workers in Rwanda are equal to workers in Japan.

Dr. Bobadilla, Cost-effectiveness of intervention.

Bobadilla continued his previous session with more details, he mentioned practical examples during his discussion for following topics:

- Efficacy and effectiveness in health care.
- Sources of effectiveness information.
- Changing the national history of disease.
- How to estimate cost-effectiveness.

Following were questioned asked during his presentation.

- Question, For estimation of disability can I use numbers of disabilities from the record and at the same time use degrees of disability from the tables?

Answer, Yes, usually we do so.

- According to what level, national or governorate level, can I use DALYS?

Answer, At any level you can use DALYS.

- Question, Is there any reliable data about disability for some diseases?

Answer, Yes, the USA and the former Soviet Union have a good records of disability. For example, the USA has good data on some cardiovascular diseases.

- Question, Can we use data from special institutes that deal with specific diseases, e.g., the ophthalmology institute or the cancer institute?

Answer, Yes, in some cases.

- Question, Is there is an equation that gives me the disability, like the equation for fatality rate?

Answer, It depends on the disease and the quality of data.

- Question, Can I use data from other countries with conditions similar to Egypt?
Answer, This depends on the local expert's decision.

- Question, What is the type of survey being used to collect data for the CEA studies, Examination or Interview survey?

Answer, Examination survey.

- Question, Why do not we use cost benefit analysis?

Answer, because in cost benefit analysis both costs and benefits of health programs are evaluated using a single monetary measure, while cost-efficiency deals with dollar versus activity, and cost-effectiveness analysis deals with dollar versus DALYS or healthy life years lost.

Dr. Salah, DDM, Introduction to spreadsheet software.

This session gave the participants a brief introduction to the computer, using a spreadsheet as a tool to calculate cost-effectiveness.

Day 3: Tuesday, 5 July, 1994

The participants worked in five groups, each group with a computer. The aim of this exercise was to introduce the participants to using the computer to measure healthy years of life lost in individual and population levels, and the steps, items, equations and methods used to estimate healthy years life lost.

The data used during the practice session was obtained from the World Bank's activity in Mexico. The participants used the estimations from their governorates (five governorates), and used the incidence rate and case fatality rate to get the total healthy life years lost for hypertensive cardiomyopathy, diabetes mellitus, tuberculosis, bladder cancer, breast cancer, nephritis and nephrosis, hepatitis and ascariis.

Participants learned how to get values from Present Worth of Annuity Factor table by using 3% as a discounting rate.

Bobadilla, Walsh, Salah

Using the spreadsheet for measuring healthy years of life lost on an individual level.

Bobadilla, Walsh, Salah

Using the spreadsheet for measuring healthy years of life lost on an population level.

Following were participants' questions during the computer practice

- Why use degree of disability?
- What is the difference between incidence rate and case fatality rate?
- What do you mean by average age of onset, average duration?
- Questions about equations.
- Other technical questions related to the spreadsheet.

Bobadilla, Basics of cost-effectiveness, sources of information.

Bobadilla started his discussion by reviewing the basic requirements for a cost-effectiveness study. He then introduced the participants to the information required for an actual cost-effectiveness study. He discussed the role of epidemiologists and demographers in estimating the items required for studding the burden of diseases. For example they can give use information on the average age of onset of disease and quantify the number of disability-adjusted life years lost due to disease. Other sources of information are literatures, records and surveys. Bobadilla discussed efficacy and where to find sources of information to estimate it.

Day 4: Wednesday, 6 July, 1994

The session started with an Arabic summary of steps for using cost-effectiveness analysis in health system planning, and a summary of the first three days of the workshop. The English sessions on days 4 and 5 were translated into Arabic following the English.

- Nandakumar, DDM, Costing methods.

The session covered the basic concepts of costing methods including classification of costs and practical experience of analyzing costs of health programs. At the end of the session there was an exercise using cost calculations for polio prevention as an example.

The participants asked the following questions during the session:

- What is the meaning of marginal cost in Arabic, and what are some examples of such a cost?
- How can you calculate the cost of an out-patient clinic, if it used partially for immunization?
- What is the relation between the inflation rate and discount rate?
- Why do we use Present Worth of Annuity Factor (PWAF) ?

Swelam, Latif, MOH, Budget Tracking System.

Swelam and Latif gave a summary of DDM objectives for the budget tracking system, and presented data from work done in Bani Suef governorate.

Tables and graphs showed the health expenditures by budget category and functions in Bani Suef governorate as percentages of the budget.

The participants asked the following questions during the session:

- Did you use fixed standards during your survey, e.g., fixed hours of work for doctors and nurses?
- What is the difference between primary health care and basic health care?
- How did you estimate the percentage of participation of each physician in each job, e.g., family planning?
- Is there a conflict between budget tracking and the governorate chapters system?

- Dr. Ahmed Gowely, Governor of Ismailia, Importance of data for planning.

Gowely started his discussion by apologizing for not having attended the workshop from the very beginning due to a minor health problem.

Gowely stressed the importance of data for planning, and he mentioned the case of the Demiatta Hospital; He has rented part of it to a Curative Organization to cover the high maintenance cost.

Swelam followed Gowely with a summary of DDM activities in Egypt, and Walsh gave a summary of the goals of cost-effectiveness and the workshop.

- Walsh, Costing health programs and facilities.

Walsh summarized the data needs and methods for costing health facilities. She then presented a video tape showing an example from Colombia about the advantages of ambulatory care centers in reducing the total cost of hospitals. After this presentation, there was a discussion and comments from the participants:

- Ismail, Egypt has such a system but these centers are working as part of hospitals so that in cases of emergency, the patient can be transferred.

- Adly, We have to keep in mind that such centers must be well-equipped so that they can deal with emergency cases.

- Gerguis, having ambulatory care centers is an excellent idea, because the occupation rate in hospitals is less than 50%.

- Walsh, Salah, Using spreadsheets for calculation of cost.

Participants worked in five groups, each group with a computer, Walsh and Salah introduced the participants to the use of computers in calculating the total cost of treatment of patients. Broken into 5 groups, the participants selected and determined total cost of different diseases in various health facilities such as hospitals, outpatient clinics or immunization centers.

- Salah, Practical training on computers.

Upon completion of the software session, Salah arranged for a special evening class to help the participants with their homework and explore more of the software and spreadsheet utilities.

Day 5: Thursday, 7 July, 1994

Kumar, Discussion of cost methods homework.

Kumar discussed the results of the homework for each group, and answered participants' questions.

- Why add cost of the lost amount of vaccine as a part of total cost, as long as it is not used?
- Why us 10% for vaccine lost and not 15% since it may be more in Egypt?

- Walsh, Summary of calculation of cost-effectiveness.

Walsh gave a brief step-by-step summary for calculation of cost-effectiveness, a review of the workshop, and gave examples of total healthy years of life lost before and after the interventions. The session was accompanied by Arabic translation.

- Presentation of reports by four working groups.

Each group presented its comments on the workshop.

The first group, presented by Gerguis, had the following comments:

- We do not know the incidence rate for the diseases used as an example during the practical training, so our results are only an estimation until we get the correct rate.
- We need more training on how to calculate different types of costs.
- Why use the incidence rate and not the prevalence rate?

The second group, presented by Gabra, had the following comments:

- The workshop gave us an overview of cost-effectiveness, but we need intense technical support especially during the implementation.
- We need to know the methodology on calculating incidence and fatality rate on the national level.

The third group, presented by Ismail, had the following comments:

- How can we depend on the case fatality rate, as it is well-known that mortality registration is not accurate in Egypt, especially in rural areas?
- How can we use the average age of onset of a disease, which may differ from one governorate to other?

- The language is one of the major difficulties in the workshop, for example it still not clear to us the meaning of discount rate. We suggest the translation of the cost-effectiveness manual into Arabic.

The fourth group, presented by Khaled, had the following comments:

- We need more training on the computer for measuring cost-effectiveness on a national level.
- We will need continuous follow-up during implementation.
- If we can't measure the exact incidence rate, should we use our own estimation?

- El Shafei, Discussion of next steps.

At the end of the workshop, Dr. El Shafei led a discussion about the next steps for the near future. Her comment are as follows::

- The implementation phase of the cost-effectiveness study will start within two weeks.
- The first stage of the study will cover three governorates: Suez, Bani Suef, and Alexandria.
- The studies may start with diabetes, hypertension, tuberculosis, and there will be list of the diseases under studding for each governorate.
- Once the participants become familiar with cost-effectiveness, they will work as trainers in other governorates.
- There will be monthly meetings for the heads of each governorate team, as well as workshops to evaluate the results.
- The schedule for the study will be send to each governorate within a month.
- Because the concept is still new, the first results may not be 100% accurate. But with continuous training, and more accurate results, cost-effectiveness will become the basis for health planning in the future.

In the discussion following her presentation, representatives from each of the governorates expressed their great interest, enthusiasm and commitment to learning more about cost-effectiveness analysis and applying the results for health planning. Both the Directorates of Curative Care, Preventive Care and Cost Recovery for Health stated the importance of using this method for health planning.

El Shafei, Walsh, El Kalla, Waheeb, Gerguis, Closing session.

El Shafei reiterated the hope that the workshop participants will start to use data in future to make their decisions.

Walsh thanked Dr. El Shafei and the participants for their excellent participation and expressed hope that they have gained maximum benefit from the workshop.

El Kalla mentioned the different components of the Cost Recovery project and how data is very important for such a project.

Workshop Evaluation Questionnaire

The participants were asked to complete an evaluation form at the end of the workshop to rate the quality of the program. The questionnaire was designed to collect feedback for the speakers and organizers of the workshop as well as for the funding agency.

Generally, the participants agreed that the workshop was excellent and 90% felt that it would help them greatly in their current work.

The following are the participants' average answers to the questionnaire:

(1) Thinking about the entire workshop, how would you rate the following dimensions (use a scale of 1 through 7, with 1= Poor and 7= Superior):

- a. The workshop overall (6.0).
- b. Its usefulness to you for your job (6.2).
- c. The quality of the presentation (5.2).
- d. The quality of the class discussions (5.6).
- e. The clarity with which goals were stated (5.4).
- f. The degree to which goals were achieved (5.2).

(2) Taking into account your understanding of the workshop goals, how would you rate the following (1 = Too little, 7 = Too much):

- a. Depth to which material was covered (5.3).
- b. Coordination between classroom work and computer work (5.3)
- c. Amount of work required (6.1)
- d. Emphasis on quantitative skills (5.3).
- e. Opportunity for discussion in class (5.4).
- f. Opportunity for discussion outside of class (5.4).

(3) Consider the workshop materials, How would you rate the following (1 = Poor, 7 = Superior):

- a. Notes prepared by instructors (6.4).
- b. Xeroxed articles (6.1).
- c. Books (4.2).
- d. Computer exercises and handouts (5.6).

(4) Consider the housing and other arrangements, How would you rate the following (1 = Poor, 7 = Superior):

- a. The quality of accommodations (6.5).
- b. The availability and quality of meals (5.5).

- c. The social activities (4.1).
- d. Helpfulness of staff (6.2).

Suggestions for the next workshop:

1. Organize other workshops on the quality of health data.
2. Concentrate on health planning & administration.
3. Prepare documents and manuals in Arabic.
4. Further training for the MOH physicians, researchers, and data-production & collection employees.
5. Field visits by DDM and MOH staff to different governorates in Egypt to discuss the on-site problems and suggest solutions.
6. Provide more detailed and comprehensive computer training as some participants were lacking the computer skills necessary to take part and utilize it properly.

Comments on the workshop:

1. This workshop was very useful and we need more workshops in future..
2. The materials, speakers and goals were clear, adequate and very good.
3. The knowledge I gained from this workshop will definitely assist me in my work with different ministries in Egypt.
4. We mainly enjoyed the discussions in the workshop as it helped clarify the goals and the required steps of CEA.

Problems and Lessons Learned

(1) The agenda was changed from the initial proposed agenda for two reasons:

- The participants were senior staff and decision makers at the governorate and central level and were unfamiliar with some of the technical methods of cost-effectiveness analysis. The agenda was modified to provide more concrete, practical examples of the methodology and the use of cost-effectiveness analysis in health planning.

- As many of the participants were more comfortable in Arabic than in English, many of the sessions were translated into Arabic following English presentation.

(2) Some materials (cost-effectiveness manuals) were delayed at the airport.

(3) At least 7 participants suffered from gastric troubles during the second and third days.

(4) The lack of Arabic books/materials resulted in comprehension problems and the need to provide oral translation into Arabic.

Conclusion

The workshop engendered an enormous amount of enthusiasm and recognition for the importance of cost-effectiveness analysis for planning. All five governorates represented at the workshop requested immediate assistance in beginning such an analysis. However, because of resource constraints, follow-up work will begin in only three governorates: Bani Suef, Alexandria and Suez. In the further expansion to other governorates is planned. Dr. El Shafei affirmed her commitment to using cost-effectiveness analysis as the yardstick for decisions on new investments and activities.

However, because of the language difficulty and because the workshop participants had somewhat less technical expertise than expected, less progress on teaching technical methods was achieved. More workshops by the DOP and Suez Canal University faculty will be needed at the governorate level to ensure technical skills in costing and estimating effectiveness.

Dr. El Shafei would like to expand the CEA work from one governorate to three. In order to successfully build the technical capacity in three governorates and study 50 interventions in the next year as initially proposed, DOP and DDM will require expanded efforts and resources. These requirements will be discussed in more detail with DOP and AID next week in Cairo.

During the workshop, a number of sessions discussed how to use results for planning and implementation. This is a topic which will require follow up.

Appendix I: Timetable

Sunday, July 3

9:00 - 10:30 am	Official opening, El Shafei, El Gayar, Walsh, Fathi, Abd El Fatah and Khater, welcome to workshop participants.
10:30 - 10:45	Tea break
10:45 - 1:00 pm	National health policy, health programs priorities. El Shafei
1:00 - 2:00	Lunch
2:00 - 2:30	Cost-effectiveness, its benefits and limitations. Walsh
2:30 - 3:30	Cost-effectiveness interventions. Bobadilla
3:30 - 3:45	Tea break
3:45 - 4:00	DDM activities in Egypt. Swelam
4:00 - 4:30	Cost-effectiveness interventions, Arabic summary. Waheeb
4:30 - 5:00	Cost-effectiveness of extended program of immunization, Suez, 1993. Oan
5:00 - 5:30	Cost-effectiveness of hemodialysis, Suez General Hospital. Adly

Monday, July 4

9:00 - 9:30 am	Discussion of participants' questions about cost-effectiveness.
9:30 - 10:30	Discussion of major health problems in Egypt and interventions available. El Bermawy
10:30 - 11:15	Current life tables and comparison with ideal life tables.

Gerguis

- 11:15 - 11:30 Tea break
- 11:30 - 1:15 pm Measuring mortality and morbidity.
Bobadilla
- 1:15 - 2:30 Lunch
- 2:30 - 4:30 Cost-effectiveness of interventions.
Bobadilla
- 8:00 - 9:30 Introduction to spreadsheet software.
Salah

Tuesday, July 5

- 9:00 - 10:45 Using of spreadsheet to measure healthy years of life lost on an individual level.
Bobadilla, Walsh, Salah
- 10:45 - 11:00 Tea break
- 11:00 - 1:00 pm Using spreadsheet to measure healthy years of life lost on a population level.
Bobadilla, Walsh, Salah
- 1:00 - 2:30 Lunch
- 2:30 - 4:30 Basics of cost-effectiveness, sources of information.
Bobadilla

Wednesday, July 6

- 9:00 - 9:30 Arabic summary for steps in health system reform.
Swelam, Salah
- 9:30 - 10:45 Costing methods.
Kumar
- 10:45 - 11:00 Tea break
- 11:00 - 1:00 pm Lessons from the budget tracking system.
Swelam, Latif

1:00 - 1:30 Importance of data for planning.
Gowely

1:30 - 2:15 Lunch

2:15 - 3:00 Costing health programs and facilities.
Video tape, ambulatory care centers.
Walsh

3:00 - 4:30 Using spreadsheets for calculation of cost.
Walsh, Salah

7:30 - 9:00 Computer practice.
Salah

Thursday, July 7

9:00 - 9:30 Discussion of costing methods homework.
Kumar

9:30 - 10:15 Calculation of cost-effectiveness.
Walsh

10:15 - 10:45 Presentation of reports by four working groups.
Groups

10:45 - 11:30 Discussion of next steps.
El Shafei

11:30 - 11:45 Summary for Cost Recovery Project activities.
El Kalla

11:45 - 12:30 pm Closing session.
El Shafei, Walsh

Appendix II: List of participants

The DOP invited participants representing governorates and central MOH who were interested in cost-effectiveness analysis and applying it to health planning.

- Dr. Abd El Ghafar, Mohamed

Current Position: National Health Accounts Officer.

Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.

Tel. (h) 2412892 Cairo

- Dr. Abd El Hallem, Amany

Current Position: Assistant Lecturer, Clinical Epidemiology Unit, Suez Canal University.

Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

Tel. (h) 1333929 Ismailia

Tel. (w) 221789 Ismailia

- Dr. Abd El Latif, Mohamed

Current Position: Budget Tracking Officer.

Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.

Tel. (w) 354-1883 Cairo

- Dr. Abd El Rehem, Akef

Current Position: Director of Bani-Suef Health Directorate.

Address: Bani Suef Health Directorate, Bani Suef.

- Mr. Ainsworth, Richard

Current Position: Project Officer.

Address: 106 Kasr El Eini St., Cairo, USAID

- Dr. Ali, Mahdia

Current Position: Director of Planning, Alexandria Health Directorate.

Address: Alexandria Health Directorate, 97 El Horia Road, Alexandria.

Tel. (h) 847205 Alexandria

- Dr. Bobadilla, Jose

Current Position: Population Health and Nutrition.

Address: 1818 H St. , NW, Room #T7075, Washington DC

Tel. (w) 473-2174 Washington DC

- Dr. Edries, Hussein

Current Position: Quarantine Officer, Statistics Department, Suez Health Directorate.

Address: Suez Health Directorate, Suez.

Tel. (h) 570667 Suez

Tel. (w) 221512 Suez

- Dr. Edreis, Mohamed

Current Position: Assistant Director.

Address: 1053 Kornesh El Nile, Cairo, Egypt.

Tel. (h) 273-3190 Cairo

Tel. (w) 984-794 Cairo

- Dr. Eid, Mohamed

Current Position: Director of Planning, Bani Suef Health Directorate.

Address: Bani Suef Health Directorate, Bani Suef.

Tel. (h) 327393 Bani Suef

- Dr. El Bermawy, Helmy

Current Position: Retired Undersecretary of Family Planning and Planning, MOH.

Address: Ministry of Health, Maglis El Shaab St., Cairo, Egypt.

- Dr. El Gayar, Sameh

Current Position: Acting Project Officer of Cost Recovery Project.

Address: 106 Kasr El Eini St., Cairo, USAID

Tel (w) 357-3949 Cairo

- Dr. El Kalla, Hassan

Current Position: Executive Director.

Address: 1053 Kornesh El Nile, Cairo, Egypt.

Tel. (w) 984-794 Cairo

- Dr. El Masry, Badr

Current position: Director of Suez Health Directorate

Address: Suez Health Directorate, Suez

Tel. (w) 223530 Suez

- Mr. El Sayed, Yehia

Current Position: Director of Plan.

Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.

Tel. (w) 354-1883 Cairo

- Dr. El Shafei, Moushira

Current Position: Undersecretary of Family Planning, and Director, Department of Planning.
Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.
Tel (w) 355-4937 Cairo

- Dr. Ezzat, Essmat

Current Position: Retired Dean, Professor of Community Medicine.
Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

- Dr. Gabra, Nassem

Current Position: Planning Director, Suez Health Directorate.
Address: Suez Health Directorate, Suez.
Tel. (h) 220215 Suez

- Dr. Gerguis, Samir

Current Position: Director of Information and Documentation, MOH.
Address: Ministry of Health, Maglis El Shaab St., Cairo, Egypt.
Tel. (h) 3547984 Cairo
Tel. (w) 986845 Cairo

- Dr. Gowely, Ahmed

Current Position: Governor of Ismailia

- Dr. Hassan, Ali

Current Position: Director of Port Said Health Directorate.

- Dr. Hassan, Amr

Lecturer, Suez Infection Disease Research Institute.
Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

- Dr. Helmy, Sarwat

Current Position: Director of Statistics, Bani Suef Health Directorate.
Address: Bani Suef Health Directorate, Bani Suef.
Tel. (h) 326547 Bani Suef / 3929666 Alexandria

- Dr. Ismail, Mohamed

Current Position: Chairman of Ismailia Medical Syndicate
Address: Ismailia Health Directorate, Ismailia.
Tel. (w) 227955 Ismailia

- Dr. Khater, Ali

Current Position: First Undersecretary.
Address: Ministry of Health, Maglis El Shaab St., Cairo, Egypt.

- Dr. Mansour, Khaled

Current Position: Data Analyst

Address: 5 Abo El Hool St., El Taaf, Ismailia.

Tel. (h) 331725 Ismailia

- Dr. Mohamed, Amera

Current Position: Residence, Occupational Health Department, Suez Canal University.

Address: Occupational Health Department, Suez Canal University, Ismailia.

Tel. (w) 221789/221464 Ismailia

- Dr. Mohamed, Faiek

Current Position: Director of Alexandria Health Directorate

Address: Alexandria Health Directorate, 97 El Horia Road, Alexandria.

- Dr. Nagy, Samy

Current Position: Director of Ismailia Health Directorate.

- Dr. Nandakumar, A.

Current Position: DDM Representative in Egypt.

Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.

Tel. (h) 353-2738 Cairo

Tel. (w) 354-1883 Cairo

- Dr. Oan, Said

Current Position: Director of Preventive Cure, MOH.

Address: Ministry of Health, Maglis El Shaab St., Cairo, Egypt.

- Dr. Refaat, Amany

Current position: Lecturer

Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

Tel. (h) 328823 Ismailia

Tel. (w) 329068/328935 Ismailia

- Dr. Said, Adly

Current Position: Director of Curative Cure, MOH.

Address: Ministry of Health, Department of Curative Care, Maglis El Shaab St., Cairo, Egypt.

Tel. (h) 5344648 Alexandria

Tel. (w) 3545504 Cairo

- Dr. Safwat, Hala

Current Position: Director of Statistics Department, Alexandria Health Directorate.

Address: Alexandria Health Directorate, 97 El Horia Road, Alexandria.

Tel. (h) 848675 Alexandria

- Dr. Salah, Hassan

Current Position: Research Specialist.

Address: Harvard School of Public Health, 677 Huntington Ave, Data for Decision Making, Boston, MA 02115.

Tel. (h) (617) 859-7271 Boston

Tel. (w) (617) 432-0492 Boston

- Dr. Serwah, Abd El Hamid

Current Position: Lecturer, Internal Medicine Department.

Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

Tel. (h) 229609 Ismailia

Tel (clinic) 333122 Ismailia

Tel. (w) 229982 Ismailia

- Dr. Swelam, Ali

Current Position: Coordinator of DDM, DOP.

Address: Ministry of Health, Maglis El Shaab St., Department of Planning, Cairo, Egypt.

Tel. (w) 354-1883 Cairo

- Dr. Tawfek, Amerella

Current Position: Residence, Occupational Health Department, Suez Canal University.

Address: Occupational Health Department, Suez Canal University, Ismailia.

Tel. (w) 220949 Ismailia

- Dr. Waheeb, Youssef

Current Position: Assistant Professor.

Address: Clinical Epidemiology Unit, Suez Canal University, Ismailia.

Tel. (h) 242-0747 Cairo

- Dr. Walsh, Julia

Current Position: Director of Research.

Address: Harvard School of Public Health, 677 Huntington Ave, Data for Decision Making, Boston, MA 02115.

Tel. (h) (603) 868-5802 New Hampshire

Tel. (w) (617) 432-0492 Boston

Appendix III: List of Presentation Materials

- National Health Policy.
El Shafei

- Introduction to cost-effectiveness.
Walsh

- National effort on setting health priorities using cost-effectiveness analysis.
Bobadilla

- Cost-effectiveness of hemodialysis in Suez General Hospital.
Adly

- Cost-effectiveness of extended program of immunization, Suez, 1993.
Oan

- Cases and deaths report (1985-1993).
Bermawy

- Demographic trends in Egypt and current life table.
Gerguis

- National burden of disease.
Bobadilla

- Indicators of cost-effectiveness.
Bobadilla

- Using spreadsheets for measuring healthy years of life lost on an individual and population level.
Walsh, Salah

- Basic concepts and classification of costs.
Nandakumar

- Summary of calculations.
Walsh