

Technical Assistance and Training for the CIES Operations Research Program, Bolivia

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SUMMARY

The Center for Research, Education, and Services (Centro de Investigación, Educación y Servicios, or CIES), a local non-governmental organization, has developed sexual and reproductive health programs in Bolivia since 1987.

At CIES's request, the Frontiers in Reproductive Health (FRONTIERS) Program conducted a workshop on the preparation of operations research (OR) proposals and provided technical assistance to carry out research projects. A representative of each of the nine CIES regional offices and three staff from CIES headquarters participated in the workshop, which was held in March 2002.

A research team was put together to provide technical assistance and to increase the institution's capacity of CIES to conduct more studies. The team consisted of two professionals from CIES headquarters and two Population Council Bolivia researchers that met periodically to monitor the progress of research projects in the region.

To provide technical assistance, visits were made to the CIES regional offices and workshops were conducted on the: 1) preparation of OR proposals, 2) use of EpiInfo, 3) data analysis and interpretation, and 4) presentation of results and writing of final reports.

During the visits to regional offices, instruments and skills were developed to facilitate the application of research techniques and procedures. These activities were always conducted with either one of the two members of CIES headquarters.

In May 2002, ten studies were launched, seven of which were completed. The final reports are published in the paper "Compendio de Investigaciones Operativas en Salud Reproductiva" (Compendium of Operations Research in Reproductive Health) that will be widely disseminated by FRONTIERS and CIES.

Preliminary and final results of the studies were presented at the 2003 Annual Research Conference (Jornadas Anuales de Investigación 2003). A plan was then developed to use the results and lessons learned. Consequently, the STI program of CIES was restructured and the service provision program for men is being expanded to other offices.

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1. BACKGROUND

In February 2002, the Center for Research, Education, and Services (Centro de Investigación, Educación y Servicios, or CIES) requested technical assistance from the Population Council's Frontiers in Reproductive Health (FRONTIERS) Program to give a workshop on the preparation of operations research (OR) proposals in sexual and reproductive health and on the use of research results. Each CIES regional office carried out an OR project and CIES headquarters conducted a nation-wide study with the participation of regional clinics.

CIES is a non-profit organization that seeks to improve health conditions for women, men, adolescents, and children by providing education and medical services. The main objectives of this organization are to reduce maternal and child morbidity and mortality and to promote the exercise of sexual and reproductive rights.

Technical assistance for CIES began in March 2002 with a workshop on the preparation of OR proposals. Two FRONTIERS staff of the Population Council Bolivia Office and the FRONTIERS Associate in Peru facilitated the four-day workshop, which was attended by twelve participants—nine from the CIES regional offices and three from CIES headquarters. The ten research projects proposed during the workshop were implemented, but only seven were completed. The other three (provision of postpartum contraceptive services, development of a model to help providers discuss sexuality topics during medical consultations, and improvement of contraceptive counseling to increase the number of continuous DMPA users) were not completed for different reasons.

The main strategy to increase CIES's institutional capacity to conduct new research projects and use their results was to create a research team at CIES headquarters. This team, together with FRONTIERS personnel, was to provide each regional clinic with on-site technical assistance to conduct their own OR projects.

2. OBJECTIVES AND RESULTS

The objectives of this project were:

- Provide technical assistance to CIES to implement OR projects
- Provide workshops and on-site training in research topics
- Form a standing research committee at CIES.

Expected results included:

- Successful completion of at least five research projects
- Formation of a technical research team comprised by CIES headquarters personnel trained to provide technical assistance for new OR projects, including the evaluation of research proposals, use of EpiInfo (data analysis software), data analysis, and writing of research reports

- Dissemination of research results within the organization and to other organizations
- Replication of at least two successful strategies at other CIES regional offices or at other organizations.

Most of these results have been achieved. Seven OR projects have been completed, research results have been disseminated through two national research conferences organized by CIES, and replication of successful strategies is underway at some regional offices. A two-member research team was trained in the use of OR methodologies and is now able to provide technical assistance to the regional offices on research issues. Observers evaluated the team's performance during the following activities:

- Training in different research topics, including preparation of research proposals, design of ethical safeguards, development of data collection instruments, database management, and data analysis
- Review and pretesting of data collection instruments
- Technical assistance on preparing final reports and results presentations
- Solving problems and answering providers' questions at each study phase.

The CIES team gradually assumed larger responsibilities with increasingly less technical assistance from FRONTIERS. CIES prepared the 2005 annual research program without assistance from FRONTIERS.

3. ACTIVITIES

3.1 Assembling the Research Team

The research team consisted of four members: two Population Council Bolivia staff and two CIES staff. This research team directed and coordinated activities, identified technical assistance needs, and monitored project implementation. The members of the team were:

- Elizabeth Abastoflor, Monitoring and Evaluation Coordinator, CIES
- Silvia Villarroel, Medical Advisor, CIES
- Fernando Gonzáles, In-Country Advisor, FRONTIERS, Population Council
- Patricia Riveros, Researcher, FRONTIERS, Population Council

The research team met periodically to discuss and analyze research progress. In addition, the team defined training agendas and discussed technical assistance needs. The agreements they reached were routinely shared via email with providers (PIs) from participating regions, which helped expedite solutions and agreements.

3.2 Training

The research team trained local physicians through workshops. It also provided one-on-one training during its visits to study sites. FRONTIERS conducted four workshops in the city of La Paz that were attended by one or two providers from each CIES regional office, with 18 to 20 participants per workshop. Each workshop lasted two to four days and covered: 1) preparation of OR proposals (April 2002), 2) use of EpiInfo (September 2002), 3) data analysis and interpretation, and 4) presentation of results and preparation of research reports. The materials and presentations used at the workshops are on the CD provided with this report. The workshops were designed to help participants carry out research tasks. At each workshop, participants worked on materials for their research projects and scheduled activities that were to be completed before the following workshop. The principal investigators created their own databases, entered and analyzed their data, put together tables and graphs for presentations, and drafted preliminary versions of their final research reports, which were then reviewed and edited by the research committee. (See training agendas in Appendix 1. Appendix 2 lists all the training materials included in the CD attached to this report).

CIES organized two research conferences that were held in 2002 and 2003. At those conferences, members of FRONTIERS staff gave talks on the presentation of research results (2002) and the utilization of research results and their ethical, regulatory, and political implications (2003).

Workshops

Workshop 1: Preparation and follow-up of OR proposals

At this workshop, facilitators helped participants to identify research problems, propose solutions, and develop a methodology to test those solutions. Interventions that were not feasible or too expensive to implement, or went beyond the scope of CIES priorities, were discarded. At the end of the workshop, participants had produced 10 draft proposals that included problem statements, alternative solutions, general objectives, hypotheses and dependent variables, study design, and a list of instruments and techniques to measure the variables. The participants completed the proposals at their clinics and sent them via email to CIES headquarters for review. Since CIES had requested that each office conduct a research project, no proposals were rejected, but several substantial recommendations were made to decrease the cost and complexity of each project and to include ethical safeguards. This technical assistance process lasted nearly four months and included visits to some regional clinics. The proposals were then submitted for approval to the CIES technical committee (consisting of the executive director, the administrator, and program directors) at headquarters. The committee returned the proposals with recommendations that were to be incorporated into the final versions.

Workshop 2: Use of EpiInfo

The purpose of this workshop was to train participants in the use of EpiInfo, a free, user-friendly, statistical software package. The workshop was held at a commercial computer school; students had a computer each and created databases using their questionnaires and observation lists. The workshop covered topics such as installing EpiInfo, determining sample size, creating databases, and entering data. At the end of the workshop, project databases were ready for data entry. Participants received a copy of EpiInfo 6.04 on CD.

Workshop 3: Data analysis and interpretation

This workshop took place once participants had completed their EpiInfo databases. The workshop discussed basic methodological and statistical topics such as the identification of variables (nominal, ordinal, continuous), results yielded by each variable (percentages, central tendency), and basic statistical tests (Chi square, t test). Back at their clinics, participants conducted their own data analysis to test their hypotheses and answer research questions.

Workshop 4: Presentation of results and writing of research reports

This workshop took place once participants had completed their data analysis. During the workshop, participants selected relevant data, produced graphics, and received recommendations as to how to present results according to the characteristics of the data and desired impact on each particular audience.

At the end of the workshop, participants had produced a report draft and a research report summary. Lastly, each participant delivered a ten-minute presentation and received feedback from the group as to report content and presentation quality. (See Appendix 3 for a copy of the final reports prepared by the participants. Summaries of the reports are included in Section 4 further in this document.)

3.3 On-Site Technical Assistance

Providers received on-site, one-on-one training in development of instruments and application of research techniques and procedures. To that end, two teams were organized, consisting of one FRONTIERS staff and one CIES staff each. One of the teams monitored the Santa Cruz, El Alto, and Sucre projects, and the other the La Paz, Oruro, Cochabamba, Tarija, Potosí, and Beni regional projects. On average, the teams carried out two visits to each regional office.

Instruments for each research project were developed on site. During the visits, local principal investigators were also trained in the use of research-related methodologies such as directing focus groups and conducting interviews and observations.

3.4 Presentation of Results

Researchers received technical assistance to prepare presentations to be delivered at CIES research conferences. Technical assistance was provided via email and on an individual basis the day before the presentation. The research conferences were held in December 2002 and December 2003 in the city of Cochabamba. All medical staff of the CIES regional offices was in attendance, as well as CIES officers, special guests from the Ministry of Health (MOH), donors, and institutions interested in the topics studied by the projects. Approximately 30 professionals attended each conference.

3.5 Level of effort

Activities were carried out entirely by FRONTIERS staff and the CIES team. Each of the two Population Council Bolivia staff devoted an average of five days per month to this project. CIES staff members conducted technical assistance activities in the course of their regular work.

4. DESCRIPTION OF PROJECTS AND RESULTS

This section presents the characteristics and results of the seven OR projects that were completed. Since the clinics in Potosí and Tarija followed the same research protocols, the results of these projects are presented in one single summary. (See Appendix 3 for the original reports in Spanish.)

4.1 Evaluating the Quality of STD Care in CIES Tarija and CIES Potosí

CIES believes that comprehensive medical and educational interventions can improve a population's health and promote the exercise of sexual and reproductive rights. Thus, for CIES, an important component of sexual and reproductive health programs is prevention and treatment of sexually transmitted infections (STIs).

As part of its comprehensive STI program, CIES:

- offers early diagnosis and timely quality treatment of STIs, according to the MOH norms for syndromic STI management;
- promotes the use of condoms for dual protection —contraception and STI/HIV/AIDS prevention; and
- provides guidance on the exercise of sexual and reproductive rights and promotes low-risk sexual behaviors among the population.

CIES, although having established guidelines for STI service delivery, has not evaluated provider compliance with those guidelines or their impact on clients. Since each regional office was requested to conduct an OR project, CIES Tarija and CIES Potosí decided to

carry out diagnostic studies on STI services. Because of the similarity of their projects, this report presents their results in the same section.

CIES Tarija provides about 7,020 sexual and reproductive health consultations annually, 1,136 (15%) of which are devoted to STI treatment. CIES Potosí conducts 6,925 sexual and reproductive health consultations annually, 30 percent of which concentrate on STI cases.

The objective of this project was to evaluate the effectiveness and quality of CIES information and education services offered to STI clients in medical offices and waiting rooms. To that end, exit interviews (80 at CIES Tarija and 100 at CIES Potosí) were conducted with clients diagnosed with STIs. The data collection period lasted two months. Of the respondents, 97 percent (CIES Potosí) and 44 percent (CIES Tarija) were women, an unexpected finding that merely reflects the composition of users visiting the sites. At CIES Tarija, 33 percent of the interviewees were clients returning for a second STI visit, whereas the percentage of return clients at CIES Potosí was 88 percent.

Regarding the provision of information on STIs, more STI clients received information from the nurse in the waiting room than from the physician (see Table 1). This constitutes a case of non-compliance with CIES guidelines that state that both providers are to inform the clients.

Table 1: Provision of information on STIs by CIES providers

Provider	CIES Tarija		CIES Potosí	
	n	%	n	%
Physician during consultation	14	17	8	8
Nurse in waiting room	42	53	58	58
Both (doctor and nurse)	24	30	26	26
None	0	0	8	8
TOTAL	80	100	100	100

Table 2 shows that STI clients at CIES Tarija and CIES Potosí were not counseled on some essential topics, such as treatment for the partner, condom use, prevention of reinfection, and asymptomatic STIs.

Table 2: Information given to client during visit

	CIES Tarija (n = 80)		CIES Potosí (n = 100)	
	n	%	n	%
Drawings, photographs, posters	68	85	58	58
STI prevention	74	93	92	92
Printed materials to take home	50	63	63	63
Explanation of recommended treatment	78	98	100	100
Prescription for medication	80	100	100	100
Recommendation to treat partner	74	93	50	50
Condom use	62	78	62	62
STI information and treatment for partner	70	88	18	18
STI transmission	76	95	92	92
Reinfection	72	90	95	95
Asymptomatic STIs	56	70	78	78

Table 3 shows that the only message that had an effect on recall among CIES clients was the use of condoms to prevent new infections. Other preventive behaviors, such as abstinence and monogamy, were recalled only by a small percentage of clients, and even fewer recalled the importance of compliance with recommended treatment.

Table 3: Recollection of essential facts of STI prevention and treatment

Behaviors that indicate recollection of STI prevention aspects	CIES Tarija		CIES Potosí	
	n	%	n	%
Use of condom	64	80	58	58
Abstinence and use of condom	10	12	13	13
Having only one partner	4	5	6	6
Observing treatment	0	0	3	3
Did not know/Did not respond	2	3	20	20
TOTAL	80	100	100	100

Table 4 shows that discharge, abdominal pain, burning sensation during urination, and genital irritation and swelling are the STI symptoms most clients recognized. Genital warts and ulcers were frequently mentioned by CIES Tarija clients, but not so by CIES Potosí clients.

Table 4: Recollection of STI symptoms

Problems or symptoms	CIES Tarija (n = 80)		CIES Potosí (n = 100)	
	n	%	n	%
Genital discharge	54	67	82	82
Abdominal pain	6	7	71	71
Burning sensation when urinating	64	80	63	63
Genital pain	44	55	55	55
Genital itching or redness	36	45	42	42
Swelling of the genitals	10	12	13	13
Presence of blood in urine	0	0	5	5
Genital warts	42	52	3	3
Weight loss	6	7	0	0
Genital ulcers	22	27	3	3

Regarding knowledge on reinfection, at CIES Tarija, almost all clients mentioned that reinfection could occur through sexual intercourse, whereas at CIES Potosí, only 26 percent were aware of this fact. The project team issued recommendations to correct problems identified at CIES Tarija and CIES Potosí. Such recommendations included the following: physicians should assume a more active role when providing information; at counseling sessions, providers should use and distribute more IEC materials to help clients remember key messages; and providers should use a checklist (or another job-aid) to ensure the discussion of all relevant topics—especially the importance of treating the partner— during their counseling sessions.

4.2 CIES El Alto: Incorporating a Model to Provide Comprehensive Sexual and Reproductive Health Services for Men

The Ministry of Health included a subprogram to promote male participation in sexual and reproductive health services in the 1999-2002 National Sexual and Reproductive Health Plan. Nonetheless, rather than encouraging demand for contraceptive services for men,¹ this subprogram sought mainly to integrate men as companions of pregnant women. Several studies in Bolivia have shown that men are interested in receiving information about preventive health care and comprehensive health care services.² These

¹ SRH National Program, result 7

² Santa Cruz, El Momento de Involucrar a los Hombres en Salud Sexual y Reproductiva (Appropriate timing to Involve Men in Sexual and Reproductive Health), Cistac/AVSC Publication, 2001; Trinidad, Derechos Sexuales y Reproductivos (Sexual and Reproductive Rights) Cistac, FHI, CIEPP, Legal frame work on men and health Cistac/AVSC

results, however, have been largely ignored. With this OR project, CIES El Alto sought to develop and test a model to provide comprehensive health services for men to meet the needs identified by other research projects.

The project used a simple pre- and post-intervention design without a control group. In addition to statistics on the number of services provided, baseline and endline surveys were conducted among clinic clients. The baseline study carried out 50 exit interviews with male clients, whereas the endline study conducted 50 exit interviews with men and 50 exit interviews with women above 18 years of age.

The model included the following services:

- STI/HIV screening, treatment, counseling, syndromic management, and laboratory tests
- Contraception (condom and no-scalpel vasectomy)
- Laboratory tests – RPR or VDRL, spermogram, prostatic antigen, testosterone level
- Prostate cancer screening (with transrectal echography)
- Urology
- General medicine
- Dental care
- Mental health screening and referral
- Referral to higher care levels or to specialized services depending on pathology

To offer these services, a consultation office for men only was set up to ensure the user's complete confidentiality and privacy. The office was equipped with a urology kit, a no-scalpel vasectomy kit, and surgical materials. Laboratory services were also equipped to provide prostatic antigen screening tests and STI diagnostic services.

Education staff was trained to include sexual and reproductive health topics for men in their talks and promotional activities. Additionally, these staff members and the physicians attended a second training session aimed at sensitizing them about male health care issues. Flyers were also designed to promote these new services and campaigns were conducted in city fairs. The results showed that first-time users at CIES El Alto increased from 62 percent to 66 percent.

Figure 1 shows patient flow by type of service. Before the intervention, the number of male users of general medicine services had declined. Once the model had been implemented, the flow of male users increased by 24 percent, a statistically significant increase.

Figure 1. Patient flow by type of service

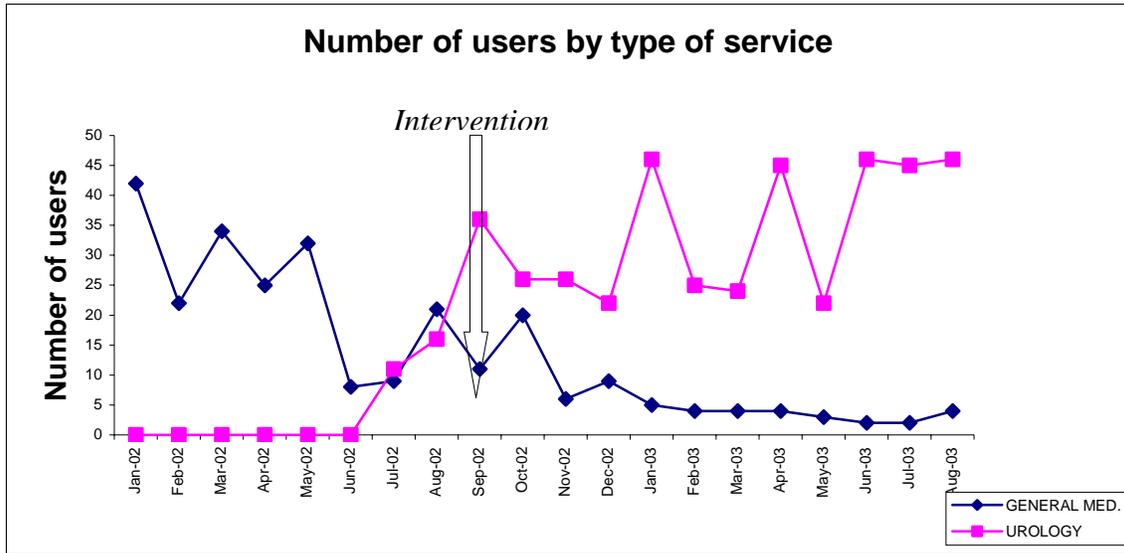


Figure 2 shows that before the intervention services for some ailments and pathologies were not in demand, including erectile dysfunction, urethral pain, and urinary retention, which required urology specialists. After the intervention, services for contraception, painful urination, and varicocele increased, as well as the number of surgical urologic procedures performed. While the use of urology services increased dramatically, men’s use of consultations for general medicine declined.

Figure 2. Number of pre- and post-intervention male users, by type of consultation

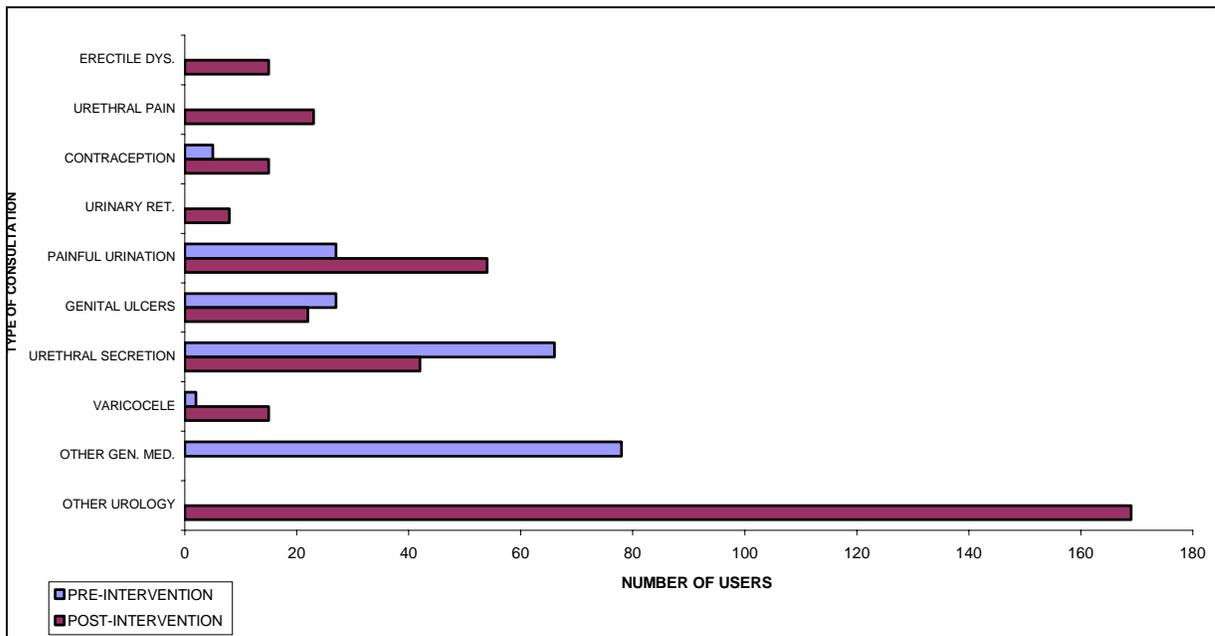


Table 5 presents some results of the baseline and endline exit interviews related to service delivery practices and satisfaction of clients with services. The percentage of users that were very satisfied with the services increased from 66 percent (pre-intervention) to 92 percent (post-intervention). Counseling and information activities also improved, and users were more likely to say that they had received care from the type of provider they preferred.

Table 5. Changes in service delivery practices and satisfaction with services

Question	Answer	Pre-intervention		Post-intervention		P Value
		N	%	N	%	
Did you receive information in the waiting room?	YES	30	60	26	52	0.42
Did you feel uncomfortable when these topics were discussed?	NO	21	42	22	44	0.13
Did you receive counseling?	YES	28	56	27	54	0.84
Did you feel uncomfortable when these topics were discussed? (counseling)	NO	21	42	3	6	0.91
How satisfied did you feel with the services received?*	1	33	66	46	92	0.01
Were your concerns addressed during your visit?	YES	43	86	45	90	0.54
Was your health condition clearly explained to you?	YES	41	80	43	86	0.59
Was your treatment clearly explained to you?	YES	38	76	46	92	0.03
Were you allowed to ask questions?	YES	42	84	40	80	0.60
How did you feel about the way you were treated during your visit? **	1	44	88	47	94	0.45
Would you recommend these services to a friend or family member?	YES	50	100	50	100	1.00
Did you receive the service from the person you preferred? ***	YES	14	28	31	62	0.00
TOTAL		405	67	426	71	0.58

(*) 1 means very satisfied; (**) 1 means good; (***) result of “Who gave you the service?” and “Did you receive the service from the person you preferred?” Matches mean satisfied users.

This study will help implement the model at other regional CIES centers that are not currently offering health care services for men. This will contribute to improving overall quality of care and to providing quality health care to men.

4.4 CIES Sucre: Comprehensive Sexual and Reproductive Health Services for Men

The objective of this project was to develop, test, and assess the impact of a comprehensive sexual and reproductive healthcare model for men at CIES Sucre. This project followed the same OR protocol used by CIES El Alto. Apart from urology, the services offered by CIES Sucre were the same as those offered by CIES El Alto.

As at CIES El Alto, a non-experimental design was used, with pre- and post-intervention evaluation. The research team used service statistics and baseline and endline exit interviews with male clients above 15 years of age to evaluate the model.

The following services were incorporated into the CIES Sucre clinic:

- STI/HIV screening, treatment, counseling, syndromic management, and laboratory tests
- Contraception (condom and no-scalpel vasectomy)
- Laboratory tests – RPR or VDRL, spermogram, prostatic antigen, testosterone level
- Prostate cancer screening (with transrectal echography)
- Urology
- General medicine
- Dental care
- Mental health screening and referral
- Referral to higher care levels or to specialized services depending on pathology

As at CIES El Alto, a consultation office for men only was set up to ensure the user's complete confidentiality and privacy. The office was equipped to provide the above services, and a urologist was incorporated into the work team, in accordance with a shared-risk agreement. The agreement consisted of paying the urologist an agreed amount based on the number of clients served. The education staff was trained to include sexual and reproductive health topics for men, especially male pathology care, in their activities. Additionally, these staff members and the physicians attended a sensitization workshop on male health care issues.

The number of users increased after the intervention for selected services. Nonetheless, the increase was not statistically significant (see Figure 3).

Figure 3. Number of pre- and post-intervention users, by type of consultation

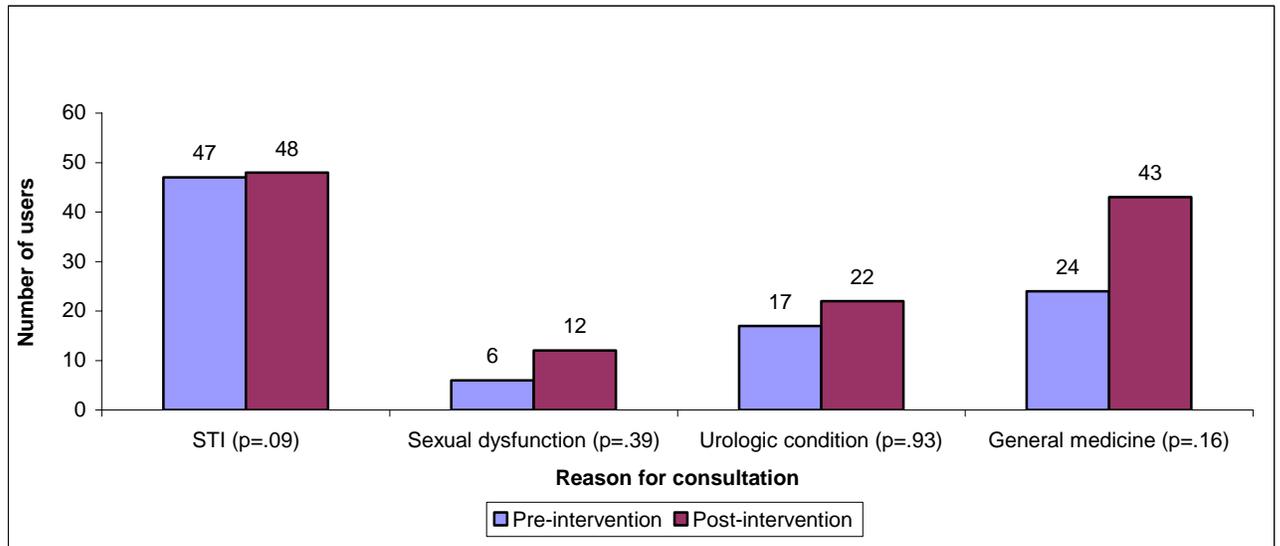


Table 6 presents the responses to 12 questions asked to the interviewees. The table shows positive results in two indicators: users that received orientation and users that felt they could ask questions. Both indicators show statistically significant differences. However, fewer clients reported to have received an informative talk in the waiting room. The remaining indicators do not present statistically significant changes.

Table 6. Changes in service delivery practices and satisfaction with services

Question	Answer	Pre-intervention		Post-intervention		p Value
		N	%	N	%	
Did you receive information in the waiting room?	YES	32	64	14	28	0.00
Did you feel uncomfortable when these topics were discussed?	NO	45	90	44	88	0.75
Did you receive counseling?	YES	29	58	45	90	0.00
Did you feel uncomfortable when these topics were discussed? (counseling)	NO	43	86	32	74	0.16
How satisfied did you feel with the services received?*	1	26	52	29	58	0.55
Were your concerns addressed during your visit?	YES	36	72	28	56	0.10
Was your health condition clearly explained to you?	YES	46	92	43	86	0.34
Was your treatment clearly explained to you?	YES	44	88	44	88	1.00
Were you allowed to ask questions?	YES	38	76	48	96	0.00
How did you feel about the way you were treated during your visit? **	1	41	85	39	81	0.58
Would you recommend these services to a friend or family member?	YES	49	98	50	100	0.32
Did you receive the service from the person you preferred? ***	YES	46	92	44	88	0.51

(*) 1 means very satisfied; (**) 1 means good; (***) result of “Who gave you the service?” and “Did you receive the service from the person you preferred?” Matches mean satisfied users.

Other results showed that less than 25 percent of the respondents received information on topics such as contraception, prostate cancer diagnosis, hygiene and nutrition, and sexual and reproductive rights. In contrast, more than half of the respondents of the endline survey received information on STIs.

This study will help implement the model at other regional CIES centers that are not currently offering healthcare services for men. This will contribute to improving overall quality of care and to providing quality health care to men.

4.5 CIES La Paz: Impact of Youth Participation on an Education Module about Sexuality and Contraceptive Use

Unplanned adolescent pregnancy in Bolivia is a public health problem that has repercussions in the life and development of this population group. Various studies have shown that adolescents frequently have unplanned sexual relations and lack the ability to negotiate safe sexual behaviors to protect them against unwanted pregnancy and STIs. In addition, a large proportion of adolescents lack information about contraceptive methods and fear they can affect their fertility. Those who do know about contraceptive methods have limited access to them, either because of cost considerations and the negative attitudes of health providers or because they are embarrassed to ask for contraceptives at drugstores or clinics.

Having acknowledged these problems, several reproductive health programs have focused on disseminating sexual and reproductive health information and on training adolescents in these topics. As part of its sexual and reproductive rights education program aimed at high school students and community groups, CIES designed a module called “Para Vivir Nuestra Sexualidad” (To Live Our Sexuality, or PVNS), which includes themes such as self-esteem, values, assertive communication, gender, rights, violence, dependence, contraception, and STIs/HIV/AIDS. The implementation of this module in the city of La Paz was assigned to three educators and 34 teacher-leaders.

With the PVNS Module, knowledge on contraceptive methods increased. Although the impact of the module on behavioral change has not been assessed, researchers noted that many adolescents who participated in the module had unplanned pregnancies.

The main objective of this project was to evaluate to what extent changes in contraceptive use could be attributed to the increased knowledge and improved attitudes of adolescents that participated in the PVNS module.

The project was conducted in 2002 and 2003 in the city of La Paz. The study was based on a static comparison of a non-equivalent control group and an experimental group. A self-administered questionnaire was used to collect data among 404 public high school students aged 15 to 19, half of whom had participated in the PVNS education module. The questionnaire included questions to measure the knowledge, attitudes, and practices of the adolescents regarding contraceptive methods, self-esteem, and sexuality.

The results showed no statistically significant differences between the experimental group and the control group in regards to age, gender, and education level. Concerning sexual activity, 73 (36%) respondents in the experimental group said they were sexually active, compared to 45 (22%) in the control group.

Table 7 compares sexually active adolescents who had attended with those who had not attended the PVNS module, according to use of contraception in their last sexual intercourse. Results showed no significant differences between the groups in terms of contraceptive use.

Table 7: Participation in the education module and use of contraception in last sexual intercourse

Participated in module	Contraceptive use		Total
	Yes	No	
Yes	24 (32.9%)	49 (67.1%)	73 (100%)
No	10 (22.2%)	35 (77.8%)	45 (100%)
Total	34	84	118

Odds ratio: 1.71 (0.68 – 4.42); Chi square: 1.54; p Value: 0.21

The questionnaire also explored the reasons for not having used a contraceptive method at the last intercourse. Results showed that having casual or unplanned sexual relations (50%) and forgetting to use a method (35%) were the most frequently mentioned reasons for not having used a contraceptive method at the last intercourse (see Table 8).

Table 8: Reasons for not having used a contraceptive method at last sexual intercourse

Reason	n	%
Has casual and sporadic sex	59	50
Forgot to buy/bring a method	41	35
Does not know about contraceptive methods	10	9
Partner gets angry if contraception is used	4	3
Informant is in love	4	3
Total	118	100

Among those who did use contraception, the most frequently used methods were the male condom (53%), the pill (17%), and periodic abstinence (15%).

Regarding how knowledgeable informants were about contraception, the research team found out that those who had attended the PVNS module had significantly higher scores than those that had not participated. However, these differences were rather modest (See Table 9.)

Table 9: Knowledge about contraceptive methods

Participated in module	Score			Total
	High	Medium	Low	
No	28 (13.8%)	128 (63.4%)	46 (22.8%)	202 (100%)
Yes	45 (22.3%)	134 (66.3%)	23 (11.4%)	202 (100%)
Total	73	262	69	404

Chi square: 11.76; p Value: 0.002

The best-known contraceptive methods were the male condom (95%), the pill (79%), and the female condom (64%). No differences were found between the two groups with regard to perceived access to methods. In both groups, adolescents bought contraceptives at pharmacies. Participants in the PVNS module were more likely to conceptualize the exercise of responsible sexuality as a right and to consider sexuality as something natural that can be planned and that involves assuming responsibility for one's health.

The self-esteem of adolescents who participated in the education module improved significantly, as measured by questionnaire items such as "I love myself more," "I value myself," "I am more aware," "I know who I am," and "I am more confident."

In conclusion, the PVNS module produced changes in sexuality and contraception knowledge and attitudes, improved the self-esteem of participants, but did not increase contraceptive use. The most important finding of this study is that the CIES program needs review and new strategies should be tested to produce behavioral changes.

4.6 CIES Santa Cruz: Impact of a Community Education Program on the Demand for Pap Tests

CIES Santa Cruz participates in the National Program for the Early Detection of Cervical Cancer by performing Pap smears and colposcopies, and referring positive cases for biopsy and cauterization to tertiary level care MOH facilities. For this project, CIES Santa Cruz tested a community education program to: 1) increase the demand for Pap smears, 2) increase the number of women informed about their Pap smear results, 3) increase knowledge on the test, and 4) improve attitudes toward Pap testing. The project was conducted among low socio-economic groups in four neighborhoods (Los Chacos, Rancho Nuevo, 10 de Octubre, and La Cabaña) in city section UV 144 with an estimated population of 6,982 (in 1,114 homes), and in two neighborhoods in city section UV 50 (Alto San Pedro and Villa Warnes) with a population of 6,352.

The study used a simple pre- and post-intervention design without a control group. The dependent variables were the number of women that received a Pap smear at CIES Santa Cruz, as per service statistics, and knowledge and attitudes toward Pap testing, as determined by baseline and endline surveys of women that participated in organized groups such as mothers' clubs, neighborhood boards, CEMA students, and school mothers. Sample size for each survey was 300 women (50 from each neighborhood). Three focus groups with 30 men from the community were also conducted.

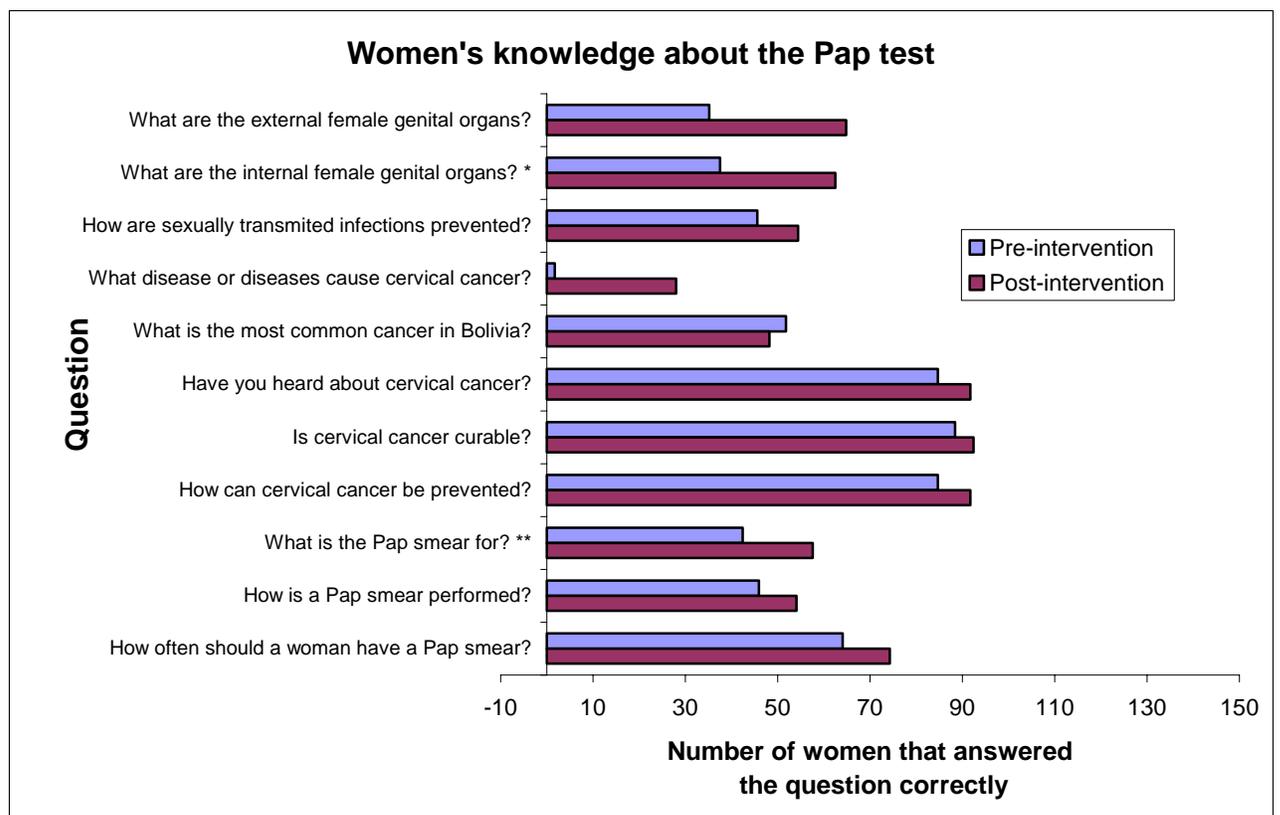
The intervention consisted of conducting three education sessions for the women that had been interviewed in each survey. The contents of the sessions were developed using the baseline results from the knowledge and attitude surveys and the results of the focus groups with men. Additional content was extracted from educational materials about Pap testing, previously developed by CIES. All 300 participants attended the first session, and 20 percent missed the last session. Each education session lasted approximately two hours. Local school parents were invited to attend public information talks entitled "Cervical Cancer is Curable," during which flyers and pamphlets were handed out. The content of the talks was based on baseline results concerning women and men. The talks

lasted two hours and were held one month after the education sessions had ended. Approximately 70 people attended each talk.

Demand for Pap smears did not increase after the intervention (174 pre-intervention Pap smears and 174 post-intervention Pap smears). Nor did the number of women informed about their Pap smear results change after the intervention (151 women).

The research team used eleven questions to evaluate knowledge. The average number of correct answers increased from 6 in the baseline survey to 8 in the endline survey, a statistically significant difference. However, only slight increases were observed for the 11 items included in the questionnaire (see Figure 4).

Figure 4. Baseline and endline scores on the knowledge test



* Some women expressly mentioned the cervix.

** A repeated comment in post-intervention surveys was “Cervical cancer is curable if detected early”.

Women’s attitudes toward the Pap smear

To assess women’s attitudes toward the Pap smear, two questions were used: “Do you think it’s important to collect your Pap smear results?” and “Would you have a Pap smear again or would you have one if you hadn’t had one before?” The answers to these questions were mostly “yes,” both before and after the intervention. Before the intervention, the most frequent reason women gave for not collecting Pap smear results was that they lived far away from the health center. After the intervention, the most frequent reason was carelessness or lack of time. Surveys also revealed that 60 percent of

the women did not depend on their partner's opinion to undergo a Pap smear. However, almost half of the women surveyed (44%) depended on their spouses to afford the test.

Qualitative analysis of focus groups for men

The main findings of the focus groups were:

- Most men believed that health education deals with the prevention, emergence, and treatment of diseases.
- They associated cervical cancer with sexually transmitted infections, painful intercourse, and lack of hygiene.
- Most men agreed that Pap smears prevent cervical cancer (this may lead to increased participation of their wives in the program).
- There is limited information in the community about the anatomy of female reproductive organs and about the characteristics of the Pap smear.
- The community acknowledges the importance of periodic Pap smear controls.

Regarding the use of an education and information strategy, baseline data are required to adapt such strategy. This will allow CIES to replicate it in other regions of the country.

For the dissemination of research results, two target audiences were identified:

Primary Audience: All staff at CIES Santa Cruz, CIES headquarters medical staff, and attendees at the *Jornadas Médicas de CIES IV* (IV CIES Medical Conference), where research results will be presented.

Secondary Audience: *Instituto Oncológico del Oriente Boliviano* (Oncology Institute of Eastern Bolivia), *Sociedad de Gineco-Obstetricia Santa Cruz*, (Santa Cruz Association of Gynecology and Obstetrics), and the medical staff of the MOH Health Service Department.

4.7 CIES Cochabamba: Comparing Single-Dose versus Multi-Dose Treatments for Chlamydia

The CIES Cochabamba clinic is located in a commercial area in a low-income neighborhood. The clinic provides an annual average of 1,700 medical consultations, of which 40 percent are for STI clients. At CIES Cochabamba, the project team found that many female gynecological clients sought care for reinfection by *Chlamydia Trachomatis*. Workshop participants deemed it important to discover the causes of this behavior and to test alternative treatments to solve the problem.

The treatments recommended by the Bolivian MOH for *Chlamydia Trachomatis*, a sexually transmitted infection, are Doxycycline 100mg orally twice a day for seven days and Azithromycin 1g orally single dose. Studies have shown that Doxycycline is highly effective, but socio-cultural and economic factors may reduce its effectiveness due to non-compliance with this lengthy treatment. By interviewing gynecological clients, the

research team discovered that non-compliance resulted from: a) clients not buying the number of pills needed to complete the treatment; b) clients forgetting to take the drug all 7 days; and c) clients being embarrassed to undergo another gynecological exam after the first treatment had failed.

Discontinuing treatment increases costs because of the need for repeat visits and additional laboratory tests and treatment. To solve this problem, the research team tested the effectiveness of a shorter, single-dose treatment with Azithromycin. As this is a single-dose regimen, the number of clients successfully treated for this infection could increase. But this treatment is four times as expensive as the seven-day treatment with Doxycycline.

The main objectives of this study were to: a) compare the effectiveness of the conventional seven-day treatment with Doxycycline with the single-dose treatment with Azithromycin, and b) identify the factors that facilitate or hinder compliance with the Doxycycline treatment. Women testing positive for Chlamydia were eligible to participate in the CIES Cochabamba study. Age and socio-economic level were not inclusion criteria.

The project used an experimental design to compare a single-dose Azithromycin treatment with a multi-dose Doxycycline treatment for *Chlamydia Trachomatis*. Success was defined as collecting *Chlamydia*-negative slides. Participants were randomly assigned to one of the two treatment groups.

1. During regular consultations at two CIES Cochabamba medical offices, the gynecologists collected vaginal samples for Chlamydia screening from all women with signs or symptoms of vaginal infection.
2. Women testing positive for Chlamydia received information about the study and were invited to participate. Informed consent was requested after having explained the risks and benefits of participating in the study, that participation was voluntary, and that participants had the right to withdraw from the study and to ask for further information at any time. No one was denied treatment as a result of the decision to participate.
3. If the client agreed to participate in the study, she was assigned to one of the two treatment groups. Randomization was achieved using the last digit of the woman's year of birth, which could be found in her clinical history. If the year had not been recorded, the woman was asked to provide that information. Clients whose year of birth ended in an odd number were assigned to Group 1, and those whose year of birth ended in an even number were assigned to Group 2. Treatment was free in all cases.
4. Approximately 21 days from the beginning of treatment, a new vaginal sample was collected from each study participant and sent to the laboratory. Laboratory staff did not know the type of treatment that had been administered to the client.

5. Positive and negative test results were recorded in the clinical histories and entered into a matrix used for data analysis.
6. All participants, regardless of their test results, were interviewed.
7. Any participant testing positive 21 days from the beginning of treatment received additional care. The new treatment and its results were not included in the study.

Due to the small volume of patients presenting at the CIES Cochabamba clinics, only 42 women could be recruited in six months. Since this number was lower than the estimated sample size for the study, the confidence level decreased (80%).

All participants were interviewed twice: before treatment and 21 days from the beginning of treatment after receiving their laboratory results. The same questionnaire was used for the pre- and post-intervention interviews and for both treatment groups. The first interview collected the participant's personal data and the treatment assigned.

In both treatment groups, age, education level, and marital status were similar. The average age was 30 years. The research protocol included a follow-up visit 21 days after the beginning of treatment, for the two antibiotic regimens. Results showed that 57 percent of the women who received the single-dose treatment returned to the clinic to attend a control visit, compared to 73 percent of the women in the multi-dose group.

The percentage of negative cultures for *Chlamydia Trachomatis* after 21 days was practically the same for both treatment regimens (see Table 10). No statistically significant differences were observed.

Table 10: Effectiveness of treatment by type of regimen

Negative culture	Single-dose	Multi-dose	Total
Yes	14 (70.0%)	16 (72.7%)	30
No	6 (30.0%)	6 (27.3%)	12
Total	20	22	42

Odds ratio: 0.88; Chi square: 0.04; p Value: 0.845

The results also showed that 80 to 90 percent of the partners of infected women complied with the recommended treatment. This is in sharp contrast with the notion that compliance with lengthy treatments is low. With respect to abstinence, roughly 25 percent of the participants in both study groups did not abstain from sexual activity.

The results of this study have policy implications for CIES, among which the most important is that both regimens are equally effective. Since the single-dose Azithromycin treatment is almost 4 times as expensive as the multi-dose Doxycycline regimen, the latter could become the treatment of choice. Appropriate counseling could ensure compliance with the lengthier Doxycycline treatment. Providers should emphasize the importance of client's abstaining from sexual activity during the client's or the partner's treatment and recommend and explain the correct use of condoms, for example, as an alternative to abstinence.

5. DISSEMINATION

To increase its research capacity, CIES decided to organize annual research conferences with representatives of all CIES regional offices to present the results of research projects conducted throughout the year. To date, four conferences have been held. The first conference took place in October 2000 and focused on adolescent health. The second, held in October 2001, dealt with sexually transmitted diseases. In 2002 and 2003, with FRONTIERS' technical assistance, two more conferences were organized to present the preliminary (2002) and final (2003) results of seven OR projects and information on two ongoing studies.

The target audience of the presentations of research results included the directors and medical staff of the nine CIES regional offices, administrative personnel of CIES headquarters, as well as health officials and a policymaker from the Ministry of Health. The final research results are compiled in a publication that will be widely distributed throughout the country.

As a follow-up to the presentation of results, the CIES research team prepared the document "Recommendations and Policy Implications of Operations Research Projects, 2002-2004." This document proposes new guidelines for the sexual and reproductive health program, based on the conclusions and recommendations of various OR projects (see Appendix 4).

6. ACHIEVEMENTS

- A standing research committee at CIES was formed to review and issue recommendations on OR project proposals. The committee approved the implementation of seven OR projects.
- Research became an important element of CIES institutional agenda.
- Between 10 and 14 medical professionals from the CIES regional offices conducted their own research and acquired skills to prepare research proposals and instruments, apply research techniques, write final reports, and present research results.
- Research results were disseminated not only among CIES staff, but also to government officials.
- The CIES research team produced the document "Recommendations and Policy Implications of Operations Research Projects, 2002-2004."
- The CIES research team prepared the 2004 OR agenda.
- No additional budget had to be allocated to cover research expenses. All direct research costs were within the annual budget of the CIES regional offices.

7. IMPLEMENTATION PROBLEMS AND SOLUTIONS

- Implementation of research projects was lengthier than expected. There were difficulties in incorporating research activities into the regular activities of CIES centers.
- On occasion, FRONTIERS staff and the CIES team did not manage to meet all technical assistance needs. This delayed the progress of research projects.
- Project activities required medical professionals to make a time commitment outside of their working day.
- Three out of the ten OR projects proposed did not complete their activities. The principal investigators of two of those projects did not have the time to conduct the required activities. And the research team of the third project did not adhere to the protocol, thus invalidating the results.

8. UTILIZATION AND INSTITUTIONALIZATION OF RESULTS

As part of the activities to institutionalize results, CIES began in November 2004 to implement new OR projects with the technical assistance of CIES headquarters. The new research agenda included: 1) an intervention to decrease missed opportunities for reproductive health service provision; 2) testing of strategies to increase contraceptive use among adolescents; and 3) evaluation of strategies to provide STI treatment to women and their partners. Additionally, CIES created a new position, Research and Evaluation Coordinator.

Regarding the use of project results, the research team prepared the document “Policy Implications and Recommendations of Operations Research Projects, 2002-2004” (see Appendix 4) that summarizes the agreements reached at the IV CIES Medical Research Conference. This document has been widely disseminated among directors and providers at CIES regional offices. To increase the likelihood of using research findings, approved recommendations have been incorporated into the routine supervision plan to regularly monitor the application of research results.

Specific research findings are being used to prepare the 2005 Annual Operations Plan and new STI/HIV protocols. Changes that have been carried out include the implementation of the model to provide comprehensive sexual and reproductive health services for men at the nine regional clinics, and the completion of a new flow chart for STI treatment to improve quality of information.³

9. LESSONS LEARNED ON INCREASING RESEARCH CAPACITY

³ CIES. Nuevos protocolos para el manejo de ITS/VIH SIDA (New STI/HIV/AIDS Protocols) . La Paz, October, 2004. CIES. Plan Operativo Anual 2005: Salud de Hombres (2005 Annual Operations Plan: Men’s Health).

The Frontiers in Reproductive Health Program has conducted four projects to strengthen the evaluation and research capacity of PROCOSI, the *Centro para Programas de Comunicación* (Center for Communication Programs, or CPC), CIES, and MOH hospitals participating in Pathfinder's post-abortion care program. These capacity-building projects have usually included a workshop on research methodology followed by direct technical assistance to develop research projects and to prepare final reports. Of these, the CPC and the CIES projects have been the most successful. The technical assistance project for CPC developed a monitoring and evaluation system that is still in use at the center. The CIES project institutionalized, without external funding, a program to conduct new OR projects, whose results are being incorporated into other programmatic efforts. We believe that several factors contributed to the success of the CIES project:

- As opposed to public sector workers, at CIES, which is a private organization, providers are motivated to implement projects and managers are interested in using research results and are empowered to make budget decisions to fund research and to scale-up successful interventions.
- As opposed to PROCOSI and Pathfinder, CIES did not hire staff specifically for this project; it assigned research activities to existing staff. Thus, at the end of the project, the newly acquired institutional capacity was not jeopardized by the inability to retain trained staff. Further, CIES does not depend on the willingness of affiliated organizations to scale-up research results.
- The decision to hold annual research conferences proved instrumental to the success of the project. These conferences provided a mechanism for institutionalizing research activities and facilitated the dissemination and scaling-up of results. The conferences set a timeframe within which project activities were to be completed, thus promoting compliance with deadlines and facilitating provision of technical assistance because all projects faced similar challenges at about the same time.
- Finally, the technical assistance provided through workshops, email, and on-site visits helped participants assess their progress using concrete indicators: acquired skills to write project proposals, developed study designs to test the impact of their interventions, used statistical software, created databases, produced research results, wrote a research report, and prepared presentations using commercial software. Future technical assistance projects should propose other indicators to measure skill acquisition in a more formal manner.

APPENDICES

APPENDIX 1. TRAINING AGENDAS

TALLER “ELABORACIÓN DE PROTOCOLOS DE INVESTIGACION OPERATIVA” CIES

Objetivos

- Proporcionar a los participantes los elementos teóricos que sustentan la investigación operativa
- Desarrollar habilidades para la elaboración de propuestas de investigación operativa en temas de salud reproductiva

Productos esperados:

1. Versión preliminar de una propuesta de investigación operativa desarrollada por cada participante
2. Versión preliminar de una propuesta de investigación operativa colaborativa, que será desarrollada en forma conjunta por cuatro o más regionales de CIES

Metodología

- Presentaciones dialogadas, seguidas de preguntas y discusión sobre un tema
- Trabajo individual en cuadernos, para cada tema desarrollado
- Trabajo individual en procesador de palabras
- Presentación de trabajos en plenaria y retroalimentación del grupo
- Retroalimentación individual de los facilitadores del taller

Materiales de capacitación utilizados:

Manual: Manual para el diseño de investigación operativa en planificación familiar. A. Fisher, J. Laing y otros. Population Council. Edición en español, 1995.

Libro: Investigación operativa en planificación familiar, lecturas selectas. J. Foreit, T. Frejka. Editores. Population Council. 1999

Presentaciones:

Objetivos y productos esperados.ppt

Objetivos, hipótesis y variables.ppt

Diseño del estudio.ppt

Muestra.ppt

Descripción de la intervención y definiciones operacionales.ppt

Documentos de trabajo:

Ejemplos de definiciones operacionales.doc
 Matriz para escribir propuestas de IO.doc
 Formulario de evaluación individual.doc.

Lunes 4 de marzo

Hora	Tema	Resp.	Materiales	Lugar
9:00-9:15	Presentación y objetivos del taller	F. Gonzáles	Data show	Hotel Rey Palace
9:15-9:45	Introducción a la Investigación Operativa	F. León	Retroproyectora Manual IO	Hotel Rey Palace
9:45-10:45	Formato de propuesta Antecedentes de la propuesta	F. Gonzáles	Data show Formato prop.	Hotel Rey Palace
10:45-11:00	Receso			
11:00-11:45	Identificación, definición y justificación de un problema de investigación	F. León	Retroproyectora Ej. propuesta	Hotel Rey Palace
11:45-13:00	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
13:00-14:00	Receso			
14:00-14:45	Objetivos	F. Gonzáles	Data show Ej. propuesta	Hotel Rey Palace
14:45-15:45	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
15:45-16:00	Receso			
16:00-16:30	Hipótesis y tipos de variables	F. León	Retroproyectora Ej. propuesta	Hotel Rey Palace
16:30-17:30	Redacción de propuestas		Propuestas personales	Hotel Rey Palace

Martes 5 de marzo

Hora	Tema	Resp.	Materiales	Lugar
9:00-9:45	Descripción de la intervención Definiciones operacionales	P. Riveros	Data show Ej. propuesta	Hotel Rey Palace
9:45-10:45	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
10:45-11:00	Receso			
11:00-11:30	Diseño del estudio Muestreo	F. León	Retroproyectora Ej. propuesta	Hotel Rey Palace
11:30-13:00	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
13:00-14:00	Receso			
14:00-15:45	Redacción de propuestas		Propuestas personales	New Horizons
15:45-16:00	Receso			
16:00-17:30	Redacción de propuestas		Propuestas personales	New Horizons

Miércoles 6 de marzo

Hora	Tema	Resp.	Materiales	Lugar
9:00-10:45	Lectura de propuestas, comentarios		Propuestas personales	Hotel Rey Palace
10:45-11:00	Receso			
11:00-11:30	Recolección de datos Tabulación	P. Riveros	Data show Ej. propuesta	Hotel Rey Palace
11:30-12:00	Análisis de datos	F. León	Retroproyectora Ej. propuesta	Hotel Rey Palace
12:00-13:00	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
13:00-14:00	Receso			
14:00-15:00	Comunicación y diseminación Utilización de los resultados	F. Gonzáles	Data show Ej. propuesta	Hotel Rey Palace
15:00-15:30	Redacción de propuestas		Propuestas personales	Hotel Rey Palace
15:45-16:00	Receso			
16:00-17:00	Limitaciones del estudio Recursos e infraestructura Cronograma Apéndices, portada y abstracto	F. Gonzáles	Data show Ej. propuesta	Hotel Rey Palace
17:00-17:30	Redacción de propuestas		Propuestas personales	Hotel Rey Palace

Jueves 7 de marzo

Hora	Tema	Resp.	Materiales	Lugar
9:00-10:45	Redacción de propuestas		Propuestas personales	New Horizons
10:45-11:00	Receso			
11:00-13:00	Redacción de propuestas		Propuestas personales	New Horizons
13:00-14:00	Receso			
14:00-15:45	Presentaciones de propuestas, comentarios		Retroproyectora Transparencias Propuestas personales	Hotel Rey Palace
15:45-16:00	Receso			
16:00-17:30	Presentaciones de propuestas, comentarios		Retroproyectora Transparencias Propuestas personales	Hotel Rey Palace

TALLER: CAPACITACIÓN EPI INFO NIVEL BÁSICO - CIES

18 – 19 de septiembre 2003

Objetivo del taller

Proporcionar a los participantes destrezas en el manejo de EpiInfo, para incorporar esta herramienta en los procesos de investigación.

Objetivos de aprendizaje

Al finalizar el taller los participantes serán capaces de:

1. Elaborar cuestionarios utilizando el procesador de palabras de EpiInfo
2. Importar cuestionarios creados en otros procesadores de palabras, como Word.
3. Crear una base de datos a partir de cuestionarios
4. Introducir los datos del cuestionario en un fichero electrónico
5. Disminuir la posibilidad de errores en la transcripción de datos, estableciendo rangos, valores válidos, saltos de preguntas.
6. Revisar, detectar errores y limpiar su base de datos
7. Producir listados, frecuencias, cruces de variables, seleccionar registros, hacer correlaciones, producir pruebas estadísticas básicas, elaborar gráficos.
8. Exportar sus tablas a procesadores de texto, para elaborar sus informes

Materiales de capacitación utilizados

Manual: Manual del usuario, EpiInfo, versión 6.04. CDC. 1996

Documentos de trabajo:

Instructivo para la instalación.doc

Ejercicios.doc

Miércoles 18 de septiembre de 2003

Hora	Tema	Resp.	Materiales	Lugar
8:30-8:45	Bienvenida y presentación de objetivos	F. Gonzáles	Data show	New Horizons
8:45-9:15	Introducción a EPED Recuperación de archivos Word en EPED Tipos de variables	F. Gonzáles	Data show	New Horizons
9:15-10:45	Elaboración pantalla de captura	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Instrumentos de investigación Diskettes	New Horizons
10:45-11:00	Receso			
11:00-12:30	Elaboración pantalla de captura	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Instrumentos de investigación Diskettes	New Horizons

12:30-14:30	Receso			
14:30-15:45	Elaboración pantalla de captura	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Instrumentos de investigación Diskettes	New Horizons
15:45-16:00	Receso			
16:00-18:30	Elaboración pantalla de captura	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Instrumentos de investigación Diskettes	New Horizons

Jueves 19 de septiembre

Hora	Tema	Resp.	Materiales	Lugar
8:30-9:00	Introducción a ENTER	P. Riveros	Data show Instrumentos de investigación	New Horizons
9:00-10:45	Introducción de datos	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Formularios llenos Diskettes	New Horizons
10:45-11:00	Receso			
11:00-12:30	Introducción de datos	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Formularios llenos Diskettes	New Horizons
12:30-14:30	Receso			
14:30-15:00	Introducción a ANALYSIS	P. Riveros	Data show	New Horizons
15:00-15:45	Análisis descriptivo de datos	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Diskettes	New Horizons
15:45-16:00	Receso			
16:00-17:00	Análisis descriptivo de datos	P. Riveros F. Gonzáles E. Abastoflor S. Villarroel	Diskettes	New Horizons
17:00-17:30	Instalación Epi Info	P. Riveros	Discos instaladores EpiInfo	New Horizons
17:30-18:00	Seguimiento y retroalimentación	E. Abastoflor		New Horizons

Seminario taller
Análisis e interpretación de resultados de investigación
13 al 15 de agosto de 2003

Objetivo

Proporcionar a los participantes destrezas para el análisis estadístico de datos en el paquete EpiInfo; la interpretación de resultados y la forma de presentarlos.

Productos

1. Primera versión de la “sección resultados” de investigaciones desarrolladas por CIES
2. Estructura del informe final de las investigaciones desarrolladas por CIES

Requisitos

La participación del investigador principal en el taller (no un reemplazante).
Cada participante debe traer al taller lo siguiente:

1. Base de datos completa y depurada con datos de su investigación
2. Instrumentos utilizados para la recolección de información
3. Protocolo de la investigación en disquete
4. Máquina de calcular portátil

Materiales de capacitación utilizados

Presentaciones:

Análisis estadístico.ppt
Elaboración de cuadros e ilustraciones.ppt
Meta análisis.ppt

Documento de trabajo:

Comandos *Análisis*

Día 1 mañana

Hora	Contenido	Método	Responsable
9:00 9:15	Introducción y objetivos del taller	Exposición	F. Gonzáles
9:15 10:00	Resultados de investigación	Exposición dialogada	F. Gonzáles E. Abastoflor
10:00 10:45	Elaboración de cuadros y gráficos útiles	Exposición con ejemplos Trabajo individual en EpiInfo	P. Riveros S. Villarroel
10:45 11:00	Receso		
11:00 12:30	Análisis estadístico descriptivo	Exposición con ejemplos Trabajo individual en EpiInfo	P. Riveros
12:30 14:00	Almuerzo		

Día 1 tarde

14:00 14:45	Pruebas estadísticas utilizando EpiInfo	Exposición con ejemplos Trabajo individual en EpiInfo	P. Riveros
14:45 16:15	Ejercicios de producción de frecuencias, tablas y análisis	Trabajo individual en EpiInfo	P. Riveros F. Gonzáles
16:15 16:30	Receso		
16:30 17:30	Ejercicios de producción de frecuencias, tablas y análisis.	Trabajo individual en EpiInfo	P. Riveros F. Gonzáles

Día 2

Hora	Contenido	Método	Responsable
9:00 9:15	Plan de análisis	Instrucciones para elaborar un plan de análisis	P. Riveros
9:15 10:30	Elaboración de planes de análisis por cada regional	Trabajo individual	P. Riveros F. Gonzáles E. Abastoflor
10:30 10:45	Receso		
10:45 13:00	Presentación de planes de análisis por cada regional	Cada regional presenta su plan de análisis y recibe retroalimentación del	F. Gonzáles E. Abastoflor S. Villarroel

		grupo	
13:00 14:00	Almuerzo		
14:00 17:30	Elaboración de tablas y gráficos a partir de los datos de cada regional	Trabajo individual por regional	P. Riveros F. Gonzáles

Día 3

Hora	Contenido	Método	Responsable
9:00 9:30	Estructura final del informe de investigación	Exposición	F. Gonzáles
9:30 13:00	Elaboración de la primera versión de las secciones: resultados; conclusiones e implicaciones programáticas de cada regional	Trabajo individual por regional	F. Gonzáles P. Riveros E. Abastoflor S. Villarroel
13:00	Almuerzo		
14:00 17:00	Presentación de resultados, conclusiones e implicaciones programáticas de cada regional	Trabajo individual por regional	F. Gonzáles P. Riveros E. Abastoflor S. Villarroel

SEMINARIO TALLER

Elaboración de Informes de Investigación

Population Council / Fronteras - CIES

Objetivo

Capacitar a los proveedores/ investigadores en la preparación y presentación de informes de investigación

Productos esperados

1. Un informe preliminar de la sección resultados de la investigación realizada por cada regional
2. Un esquema del plan de diseminación de cada regional
3. Un resumen escrito de cada investigación, con el formato propuesto por Population Council

Organización del taller

- Presentaciones dialogadas sobre los temas del taller
- Trabajo individual supervisado de los productos esperados
- Compromisos y cronograma de futuras actividades

Materiales de capacitación

Presentaciones:

Elaboración de informes de investigación.ppt

Como escribir informes de investigación.ppt

Implicaciones normativas.ppt

De la investigación a la acción.ppt

Difusión de resultados.ppt

Documento de trabajo:

Formato para la presentación de informes de IO

AGENDA
Martes 11 de septiembre - MAÑANA

Hora	Tema	Actividad	Responsable	Materiales
8:30 – 9:00	Registro de los participantes			Carpetas, lista de participantes
9:00 – 9:30	Objetivos del taller, productos esperados, agenda	Presentación	F. Gonzáles	Proyector Copias de la presentación
9:30 – 9:45	Plan de diseminación	Presentación	F. Gonzáles	Proyector Copias de la presentación
9:45 – 10:30	Cómo elaborar un buen informe de investigación	Presentación	F. Gonzales	Proyector Copias de la presentación
10:30 – 10:45	Receso			
10:45 – 11:15	El Título, antecedentes, descripción del problema, metodología	Presentación	P. Riveros	Proyector Copias de la presentación Ej. de un Informe de investigación
11:15 – 12:30	Redacción	Cada participante trabaja en su investigación	S. Villarroel E. Abastoflor	Cuaderno, lápiz, borrador, informes y propuestas de investigación

Martes 11 de septiembre - TARDE

Hora	Tema	Actividad	Responsable	Materiales
14:30 – 15:45	Implicaciones normativas (resultados, conclusiones, utilización), Anexos	Presentación	F. Gonzáles	Proyector Copias de la presentación
15:45 – 16:30	Redacción	Cada participante trabaja en su investigación	S. Villarroel E. Abastoflor	Cuaderno, lápiz, borrador, informes y propuestas de investigación
16:30 – 16:45	Receso			
16:45 – 18:00	Presentación del trabajo de cada participante	Cada participante expone su investigación y recibe retroalimentación del grupo	F. Gonzales P. Riveros S. Villarroel E. Abastoflor	

Miércoles 12 de septiembre (en New Horizons)

Hora	Tema	Actividad	Responsable	Materiales
8:30 – 12:30	Elaboración de informes de investigación	Cada participante elabora su informe en computadora	F. Gonzáles P. Riveros S. Villarroel E. Abastoflor	Informes y propuestas de investigación en papel y en formato electrónico
Receso				
14:30 – 18:00	Elaboración de informes de investigación	Cada participante elabora su informe en computadora	F. Gonzáles P. Riveros S. Villarroel E. Abastoflor	Informes y propuestas de investigación en papel y en formato electrónico

Jueves 13 de septiembre - MAÑANA

Hora	Tema	Actividad	Responsable	Materiales
9:00 – 9:30	Estrategia de comunicación	Presentación	F. Gonzales	Proyector Copias de la presentación
9:30 – 10:30	Elaboración de estrategias de comunicación	Cada participante elabora su estrategia de comunicación	F. Gonzáles P. Riveros	Matrices
10:30 : 10:45	Receso			
10:45 – 11:15	Resúmenes de investigación	Presentación	P. Riveros	Proyector Copias de la presentación Ejemplos de resúmenes de investigación
11:15 – 12:30	Resúmenes de investigación	Cada participante elabora su resumen de investigación	F. Gonzáles P. Riveros	

Jueves 13 de septiembre - TARDE

Hora	Tema	Actividad	Responsable	Materiales
14:30 – 15:00	Presentaciones orales con apoyo visual	Presentación	F. Gonzáles	Proyector Copias de la presentación Esquema de una presentación oral
15:00 – 16.30	Presentaciones	Cada participante prepara su presentación	F. Gonzáles S. Villarroel E. Abastoflor	Acetatos y marcadores
16:30 – 16:45	Receso			
16:45 – 17:45	presentaciones	Cada participante presenta su investigación	F. Gonzáles P. Riveros S. Villarroel E. Abastoflor	Retroproyectora
17:45 – 18:00	Compromisos y Clausura		F. Gonzáles P. Riveros S. Villarroel E. Abastoflor	

APPENDIX 2. TRAINING MATERIALS INCLUDED IN THE CD ATTACHED TO THIS REPORT

I. Taller: Elaboración de Protocolos de Investigación Operativa (Developing OR Protocols Workshop)

PowerPiont Presentations

1. Descripción de la intervención y definiciones operacionales
(Description of the Intervention and Operational Definitions)
2. Elaboración de propuestas de investigación operativa
(Development of OR Proposals)
3. Diseño del estudio
(Study Design)
4. Muestra
(Sample)
5. Objetivos y productos esperados
(Objectives and Expected Products)
6. Del objetivo general a la hipótesis
(From the General Objective to the Hypothesis)
7. Recolección de datos y tabulación
(Data Collection and Analysis)

Word documents

- A. Ejemplos definiciones operacionales
(Examples of Operational Definitions)
- B. Formulario de evaluación individual IO
(Individual OR Evaluation Form)
- C. Matriz para propuesta de IO
(OR Proposal Matrix)

II. Taller EpiInfo (EpiInfo Workshop)

Word documents

- A. Instructivo instalación
(Installation Instructions)
- B. Ejercicios
(Exercises)

III. Análisis de Datos (Data Analysis)

PowerPiont Presentations

1. Análisis estadístico
(Statistical Analysis)
2. Elaboración de cuadros e ilustraciones
(Making Tables and Illustrations)
3. Meta análisis
4. (Meta analysis)

Word documents

- A. Comandos ANALYSIS Epi-Info
(Epi-Info ANALYSIS Commands)

IV. Preparación de informes de investigación (Preparing Research Reports)

PowerPiont Presentations

1. Como escribir informes de investigación
(How to Write Research Reports)
2. Elaboración de informes de investigación
(Writing Research Reports)
3. De la investigación a la acción
(From Research to Action)
4. Implicaciones Normativas
(Policy Implications)
5. Difusión de los resultados
(Results Dissemination)

Word documents

- A. Formato para la presentación de informes de investigación
(Form for Presenting Research Reports)

APPENDIX 3. FINAL REPORTS PREPARED BY PARTICIPANTS

APPENDIX 4. RECOMMENDATIONS AND POLICY IMPLICATIONS OF OPERATIONS RESEARCH PROJECTS, 2002 - 2004

STI-HIV-AIDS PROGRAM

RECOMMENDATIONS	NORMATIVE IMPLICATIONS
<p>When in contact with STI clients it is necessary to reinforce information related to:</p> <p>Dual protection</p> <p>Mechanisms of reinfection</p> <p>Treatment for both partners</p> <p>STI symptoms</p> <p>Explore strategies so that the partners of users with STIs can also be treated and will complete the treatment.</p> <p>Take advantage of all opportunities to provide information on STIs to all clients. All CIES staff must provide information on aspects related to STIs</p> <p>It is necessary to reinforce the practice of providing information to users through support IEC materials.</p> <p>. Increase exposure of users to educational messages to obtain changes in behavior.</p>	<p>Include within the STI-HIV-AIDS program guidelines the need for all CIES Center personnel to provide information on aspects related to STI, taking advantage of all contact with users.</p> <p>Increase the exposure of CIES Center users to educational messages on STIs.</p> <p>Redesign educational messages to prevent re-infections, based on the following identified behaviors:</p> <p>Has only one partner and is healthy</p> <p>Will not have sexual intercourse</p> <p>Will use a condom during sexual intercourse</p>

YOUTH PROGRAM

RECOMMENDATIONS	NORMATIVE IMPLICATIONS
The program must revise and/or test new strategies that modify the behavior of youth for greater use of contraceptive methods.	The program guidelines must include the continuous implementation of OR projects that seek new strategies to increase the use of contraceptive methods among young people.

CHLAMYDIA TREATMENT

RECOMMENDATIONS	NORMATIVE IMPLICATIONS
For the treatment of vaginitis due to chlamydia, either treatment (single or multi-dose) can be used with confidence, since they both present the same probability for effectiveness.	Due to cost-effectiveness, use the multidose treatment with Doxycycline.

CERVICAL UTERINE CANCER PREVENTION

RECOMMENDATIONS	NORMATIVE IMPLICATIONS
It is necessary to apply a continuous IEC strategy in order to obtain positive changes in the population's attitudes and practices related to cervical uterine cancer prevention.	<p>Widening the degree of exposure to IEC messages related to the prevention of cervical-uterine cancer.</p> <p>Incorporating in community educators' curriculum a greater amount of messages on Pap tests and cervical cancer, taking research findings as a starting point.</p>

MEN'S HEALTH

RECOMMENDATIONS	NORMATIVE IMPLICATIONS
<p>SUCRE</p> <p>It is necessary to train personnel in the Center for Men's Care and provide them with up-to-date information.</p> <p>It is important not to neglect quality of care for the center's clients and outpatients.</p> <p>It is important to develop a strategy for the promotion, information and education of men in the community.</p> <p>It is necessary to develop a strategy of information and promotion in the CIES center.</p>	<p>Incorporate the subject of male reproductive health care in the continuous education program.</p> <p>Include different forms of promoting men's information and education in the educational services program guidelines.</p>

EL ALTO

It is preferable to have male personnel provide care for men.

In order to implement a men's health program, an exclusive consultation room for males must be established.

A promotion, information and education strategy for males need to be implemented in the communities.

When a care module for men is implemented, demands emerge that require more solutions.

Each center must adapt its infrastructure, taking research findings into account.

Promotion and educational activities of CIES centers must incorporate male reproductive health topics.

Community promotion and education materials must be reviewed to ensure they direct messages to men.

CIES centers working with men's care must plan the establishment of a urology service.