

## Community-embedded Reproductive Health Care for Adolescents in Latin America:

### Proposal for potentiating results and outputs of the CERCA research.

**Project description.** In Latin America, adolescent sexual activity starts early, with little effort made to prevent sexually transmitted infections or pregnancy, resulting in high incidence of teenage pregnancies, unsafe abortions and sexually transmitted infections. Latin American governments and health policy implementers demand sound proof of effective strategies to improve adolescent sexual and reproductive health (SRH).

**CERCA (Community-Embedded Reproductive health Care for Adolescents in Latin-America)** has aimed to improve global knowledge about how health systems could be more responsive to the changing SRH needs of adolescents. Implemented by Latin American and European research institutes in Bolivia, Ecuador, and Nicaragua, CERCA tested community-embedded interventions to improve adolescent communication on SRH issues; access to accurate SRH information; use of SRH services in primary health settings; and use of modern contraceptives. One randomised and two non-randomised controlled studies demonstrated the interventions' usefulness.

The study ran from March 2010 until February 2014 in research settings in three Latin American cities: Cochabamba, Bolivia; Cuenca, Ecuador; and, Managua, Nicaragua. Currently the consortium is processing the obtained data and disseminating the results. The project has been financed by the European Commission FP7 Programme.

Specific scientific and technical objectives of the research project:

- 1) Assess adolescent SRH needs in the research settings.
- 2) Develop a comprehensive strategy and framework of community-embedded interventions to enhance access to adolescent-friendly reproductive care in primary health services, support an enabling environment, and strengthening competence to make healthy choices.
- 3) Develop an approach to reach adolescents for awareness raising activities and survey purposes through the use of media (mobile phone text messages).
- 4) Implement, monitor and perform an impact evaluation of the intervention strategy.
- 5) Analyse the community-embedded health care approach in the three research sites.
- 6) Assess policy impact using the community-based participatory research (CBPR) action method.
- 7) Obtain and assess quantitative research evidence for improving the intervention strategy.
- 8) Bridge the gap between research and policy by involving policy and decision makers.
- 9) Disseminate findings to the scientific, public and political community.

The results and outputs of the CERCA research can be potentiated by investigating CERCA findings with complementary research and by disseminating current and future study results to scientists and policy makers. The consortium is looking for new resources to reap the harvest of this project.

From the global CERCA intervention strategy: a set of school-based activities in Bolivia

Target group	Type of activity	Number	Number of participants
<b>WORKSHOPS</b>			
Adolescents in 6 schools Quintanilla area	Workshops students on: sexual awareness, communication and search for information, self-esteem and project of life, decision taking and resolution of conflicts.	4 types of workshops per school, class and to all the last 4 classrooms of secondary education.	1616 students, 59 classrooms and 236 workshops done in total.
Adolescents in 6 schools Sarcobamba area	Workshops students on: sexual awareness, communication and search for information, self-esteem and project of life, decision taking and resolution of conflicts.	4 types of workshops per school, class and to all the last 4 classrooms of secondary education.	1158 students, 43 classrooms and 169 workshops done in total.
<b>E-mail</b>			
Adolescents in schools Quintanilla and Sarcobamba areas	emails with information on sexual and reproductive health promoting a healthier behaviour	8 types of emails sent to 5 schools	500 students received the 8 emails
<b>Multiple text messaging (SMS)</b>			
Adolescents in schools Quintanilla and Sarcobamba areas	SMS with information on sexual and reproductive health promoting a healthier behaviour	8 types of SMS sent to 9 schools	1823+- students received the 8 SMS
<b>Text messaging (SMS): receiving and answering questions</b>			
Adolescents in schools Quintanilla and Sarcobamba areas	Text message with personal medical or psychological questions	more than 600 SMS answered in 18 months	47% new users 53% repeated users
<b>Medical and psychological visits on site (school setting)</b>			
Adolescents in schools Quintanilla and Sarcobamba areas	medical and psychological consultation was offered in a school setting for free and with confidentiality on SRH	1 time every two weeks during 7 months, except during vacations	more than 283 students used the consulting room

**Innovation.** *Mobile phone technology to increase uptake.* “Adolescent-friendly” mobile phone text (SMS) messages were used for cost-effective and efficient adolescent outreach, resulting in significant response by adolescents. In 1.5 years in Bolivia, 507 questions were received by SMS, approximately 44% of total cell phone collected numbers (1146). This brings preventive health care to adolescents or other patients who do not access health centres due to stigma, taboo, costs or waiting time.

*Community-Based Participatory Research (CBPR)*, an innovative collaborative approach enabling community members, health users and health providers to take ownership of the research, critically reflecting on iterative cycles of monitoring and evaluation. CBPR enables a deeper understanding of the local context, as well as creation of a more accurate framework for testing and adapting “best practices” to meet community’s needs. To this end, community advisory boards have been established in all three CERCA sites. At the national level, staff from Ministries of Health, experts and members of international and local NGOs participate in community board meetings, with community leaders, adolescents, youth educators, and parents involved at the local level. Monthly (local boards) and twice a year (national boards) discussions enable a continuous process of strengthening intervention uptake. Participation of national and community stakeholders in the advisory committees established purposely for CERCA has helped bridge the gap between researchers and policy decision makers.

CERCA use of *Intervention-Mapping (IM)*, a step-by-step process used to develop health promotion programs including: health needs assessment; defining program objectives; selecting appropriate theoretical models; designing intervention program; adopting and implementing health intervention activities; and evaluation of health outcomes and intervention efficacy. This study did not adhere to a single method but instead used the Action Research framework to guide the research progress and the Intervention Mapping approach to guide the process of developing and selecting interventions.

**Scientific justification: Scientific and societal aspects.** In order to achieve CERCA intervention objectives, consortium partners identified relevant theoretical models and strategies. Specifically, the **Theory of Planned Behaviour (TPB)** and the **Social Cognitive Theory (SCT)** frameworks were used to develop and design intervention strategies. Recent studies have demonstrated the ways in which both theories can successfully promote safe sexual behaviour. TPB has proven effective for influencing adolescents' behaviour with regard to modern contraceptive use and health seeking behaviours. SCT helped in the development of strategies to improve interpersonal communication about sex and adolescent sexuality in families, communities and within public health services. Stakeholder discussion groups in the three project sites helped identify promising interventions.

CERCA design took account of renewed international health organisations (WHO/PAHO) interest in **community-oriented primary care**. A comprehensive approach, including family and community support, mobilisation of parents, community leaders and local institutions has increased impact of the planned interventions on adolescent SRH. Use of the **participant observation methodology** during ethnographic field study contributes to gathering knowledge on how different community actors perceive CERCA interventions and implementation process. This innovative approach helps identify adolescent SRH needs in research settings and evaluate the intervention as a whole.

The CERCA project stressed **national ownership** of health interventions and strategies as affirmed by 140 nations in the [Paris Declaration on Aid Effectiveness](#). Involving national and local "health policy and practice oriented" stakeholders and establishing National and Community Advisory Boards in Bolivia, Ecuador and Nicaragua, strengthens policymaker and health professional ownership of results, when then strengthen national health systems, especially in primary health care.

### **Scientific calibre of the research group.**

The consortium consists of seven partners, four from Latin American associated countries and three from EU member countries, and is coordinated by the International Centre of Reproductive Health (ICRH) of the Ghent University. The project consortium brings together experts and practitioners from a variety of regions and disciplines. This group takes advantage of the interdisciplinary characteristics of the consortium members (universities, research institutions). Moreover, the consortium members have the participation of different stakeholders of the society such as policy makers, researchers, health care providers, patients, community adding not only practical experience but also a network structure to disseminate, scale up and deepen the generated knowledge.

The consortium:

ICRH: International Centre for Reproductive Health, Ghent University, Belgium. [www.icrhb.org](http://www.icrhb.org)

SG: South Group, Cochabamba, Bolivia. [www.southgroup.nl](http://www.southgroup.nl)

UC: Universidad de Cuenca, Facultad de medicina, Cuenca, Ecuador. [www.ucuenca.edu.ec](http://www.ucuenca.edu.ec)

LUHS: Lithuanian University of Health Sciences, Department of family medicine, Kaunas, Lithuania [www.lsmuni.lt/en](http://www.lsmuni.lt/en)

UvA: Amsterdam Institute for Social Science Research, University of Amsterdam, Amsterdam, Netherlands [www.aisr.unva.nl](http://www.aisr.unva.nl)

CIES: Centro de Investigación y Estudios de la Salud, postal 3507, Managua, Nicaragua. [www.cies.edu.ni](http://www.cies.edu.ni)

ICAS: Instituto Centroamericano de Salud, Managua, Nicaragua. [www.icas.net](http://www.icas.net)

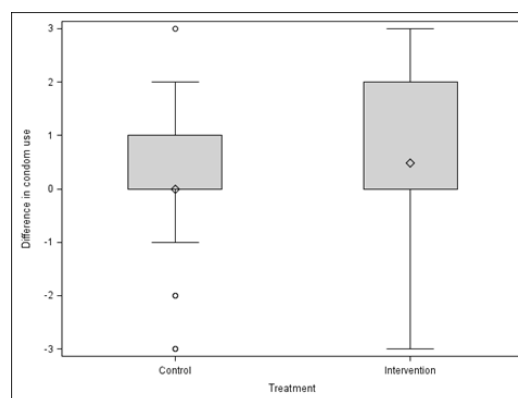
The table below shows the various areas of expertise of the seven consortium partners:

### Areas of expertise per consortium partner

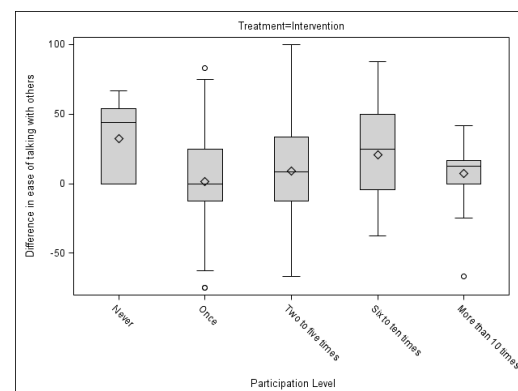
Area of expertise	Consortium partner	ICRH	SG	UC	LUHS	UvA	CIES	ICAS
Sexual and reproductive health (SRH)		+++	+	+++	++	+++	+	+++
SRH for adolescents		+++	+	+++	+++	+++	+	+++
Primary health care		+++	++	+++	+++	++	++	++
Community participation		+++	++	++	++	+++	+	+++
Health research in Latin America		+++	+++	+++	+	+++	+++	+++
Health system research		+++	+++	++	++	+++	+++	++
Interventional research		+++	+++	++	++	+++	++	+++
Action research methodology		+++	++	+	+	+++	+	+++
Qualitative and/or anthropological research		+++	+++	+	++	+++	++	+++
Quantitative research methods, statistics		+++	+++	+++	++	+	+++	++
Website design and IT		++	+++	+	+	++	++	++
Translating research into policy		+++	+++	++	++	++	+++	++
Close collaboration with national policy makers		++	++	++	+	++	+++	+
Project management		+++	++	++	+	+++	+++	++
Experience in multi-country research projects		+++	+	+	+	+++	++	+

**Results.** CERCA generated new quantitative and qualitative evidence on determinants of adolescent SRH; demonstrated multi-level intervention strategy impact; identified feasible, promising new interventions; and generated expertise in development of adolescent SRH research. Monitoring and quantitative survey data demonstrated feasibility, acceptability and statistically significant impact and outcomes for: use of mobile phone messages for outreach; service provision by trained young adults and health providers in community; and provision of adolescent friendly services in primary health care centres and schools. Specific results:

1. Statistically significantly more adolescents in the intervention group used condoms on average compared with the control group (Ecuador).



2. Statistically significant association between participation in intervention activities and ease of communication on SRH (Bolivia).



3. Adolescents exposed to the intervention were 1.4 times more likely to have a positive trend in overall knowledge and use of sexual health services than control group adolescents (Ecuador).
4. Adolescents believing in gender equality are 1.18 times more likely to use contraception (aOR: 1.58, 95% CI: 1.18; 2.11).
5. Statistically significant modulating effect of religiosity on adolescent condom use (Bolivia).
6. Factorial validation of the Attitudes toward Women Scale for Adolescents (AWSA) in assessing sexual behavior patterns in Bolivian and Ecuadorian adolescents
7. The identification of socio-cultural, health system related and adolescent-specific factors that according to health providers affect young people's access to existing health services.
8. The CERCA project explored the pragmatics of adolescents' communication on sex that includes silence, implied expectations, gendered conflicts, and temporally delayed knowledge.
9. The qualitative research revealed power dynamics related to shifting socio-sexual norms on issues such as the reputational value of female virginity, knowledge versus use of modern contraceptives, and adult control over young people's relationship and sexual choices.
10. In Ecuador 105,456 people were reached by a CERCA activity; and in Nicaragua 12,108 adolescents, 220 health authorities, 7160 parents, 6079 community members participated in CERCA activities.
11. Overall, 516 activities have disseminated CERCA results, including:
  - a. Declaration of Cuenca launched the 14th of March 2014 : "Promoviendo el cuidado de la salud sexual y reproductiva de los adolescentes" <http://chn.ge/1fobtSN>
  - b. International conference in Cuenca Ecuador, 11-13 February 2014: "Promoviendo el cuidado de la salud sexual y reproductiva de los adolescentes" [www.proyectocerca.com](http://www.proyectocerca.com)
  - c. International conference in Managua Nicaragua, 18-19 September 2013 <http://www.cies.edu.ni/cies/index.php/proyectos-de-investigacion/cerca/13-el-proyecto-cerca>
  - d. 4 scientific articles published in A1 open access scientific journals
  - e. 4 scientific articles submitted for review to A1 scientific journals
  - f. 1 scientific article published in A2 scientific journal
  - g. In progress: 3 scientific articles to be submitted to an A1 scientific journal.
  - h. In progress: 1 scientific article to be submitted to an A2 scientific journal.
  - i. 3 country reports on the main study results
  - j. 3 freely downloadable documentary videos
  - k. An online course on provider-patient communication

Current and future publications are downloadable at CERCA website: [www.proyectocerca.org/Default.aspx?tabid=86](http://www.proyectocerca.org/Default.aspx?tabid=86)

12. The CERCA research had a **policy impact at local level** (establishment of local adolescent SRH networks with city government funding, adolescent-friendly services installed in health centres, use of CERCA approach for sexual education in schools), **at national level** (CERCA researchers contributed to the development of national strategies for adolescent pregnancy prevention) and at **international level** (CERCA researchers invited as experts to WHO meetings in Geneva (2013) and Ankara (2014) for development of research protocols related to adolescent sexual health.

**Future perspectives & request for funds.** CERCA generated literature review, qualitative and quantitative survey data on adolescent SRH determining factors; monitoring and qualitative data on feasibility and acceptability of adolescent interventions; and statistically significant impact and outcomes data on the intervention strategy. Following up this scientific output can enhance its usefulness; translate the results into operational instruments; and ensure results dissemination reaches decision-making audiences. The following activities require support from financial donors.

**General Objective: Improve adolescent SRH by potentiating CERCA results and outputs.****Specific Objective 1: Investigate CERCA findings with complementary research.**

**Result 1.1:** *Assess limitations and factors of success with SRH education in schools and communities with Kirby analytical framework (UNESCO 2009).* **Findings:** (1) Impact evaluation showed statistically significant association between adolescent participation in school SRH education and communication on SRH issues in Bolivia; and (2) Inclusion of young adults in the provision of SRH community level education was well received by adolescents, parents and local authorities in Nicaragua. **Activities:** (1) In-depth analysis of existing survey data and monitoring data; and (2) Triangulation with data from previous and additional qualitative research activities.

**Result 1.2:** *Nuanced assessment of limitations and factors of success for using mobile phone text messaging to improve adolescent sexual health.* **CERCA data:** Many adolescents replied with comments or concrete questions to SMS messages sent by programme implementers. **Activities:** (1) In-depth analysis of existing monitoring data regarding frequency and nature of SRH information requests by adolescents; (2) Content analysis of SMS messages; (3) Triangulation with data from previous and additional qualitative research activities; (4) Assessment of acceptability and feasibility for action scale-up.

**Result 1.3:** *Detailed analysis and feasibility study of factors hindering and enabling uptake of specific adolescent SRH services in primary health centres, using “Dick” criteria (World Health Organ Tech Rep Ser. 2006).* **Findings:** (1) Significant improvement in use and knowledge of sexual health services among adolescents in Ecuador; and (2) Well-received individual adolescent counselling on sexual health issues by health professionals in schools in Bolivia. **Activities:** (1) Detailed analysis of in-school survey data to identify factors that can influence SRH access; (2) Collection and analysis of new monitoring data from primary health centres on the use of adolescent SRH services after project intervention; (3) Triangulation with data from previous and additional qualitative research activities; (4) Test feasibility of increasing adolescent contraceptive access through health centre-monitored dispensers in communities.

**Result 1.4:** *Better understanding of factors modulating the impact of the adolescent sexual health interventions.* **Finding:** Religious and gender attitude factors modified the intervention’s impact. **Activities:** (1) In-depth analysis of quantitative impact evaluation data; (2) Triangulation with data from previous and additional qualitative research activities.

**Specific Objective 2: Disseminate current and future study results to scientists and policy makers.** **Activities:** (1) Based on CERCA findings and evidence, develop tools for development of SRH-promoting interventions, implementation of SRH education in schools and communities, use of mobile phone text messaging for adolescent SRH; (2) Publish new scientific articles of current and new study data; (3) Present current and new study findings at scientific conferences; (4) Target policymakers with evidence-based communications; (5) Provide expert advice to new interventions and research on adolescent SRH; (6) Generate funds for scale-up and replication.

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