

PUBLIC INFORMATION & COMMUNICATION SERVICES (PICS)
NIH - TASK ORDER

RFTOP#274 TITLE: Focused Process Evaluation to Assess the
Usefulness and Effectiveness of Experimental Displays of Information about Clinical
Trials for Spanish-Speaking Consumers

PART I – REQUEST FOR TASK ORDER (TO) PROPOSALS

A. POINT OF CONTACT NAME:

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Bethesda, MD 20892-2045

B. PROPOSED PERIOD OF PERFORMANCE: 13 weeks from date of award.

C. PRICING METHOD: Firm Fixed Price. Firm should provide a single price. Please describe the methods to be employed and the estimated number of employee hours required. Firm rates for use of testing facilities and equipment, if Government facilities are not used. Describe the development of task scripts and number of cycles involved in refining scripts, subject to the overall ceiling for the task order.

Currently available funding is limited to \$49,500. If, in the opinion of your firm, this is not a sufficient amount to conduct a thorough evaluation, specify: (1) how to best spend available funds; (2) which tasks will remain undone; and (3) the additional amount necessary to complete the evaluation.

D. PROPOSAL INSTRUCTIONS: Proposals should be submitted to Dr. Tony Tse by email at: tse@nlm.nih.gov. Please enter in the subject line the following text:

RFTOP# 274 Proposal. A signed task order form will later be requested from the successful bidder.

E. RESPONSE DUE DATE: Wednesday, 8/12/2005, at 4:00 PM EDT

F. TASK DESCRIPTION: The Consumer Health Research (CHR) program at LHCBC/NLM (1) investigates consumer health information seeking and access in online environments and (2) explores informatics-based approaches to assist consumers in finding and using health information (see <http://lhncbc.nlm.nih.gov/lhc/docs/reports/2004/tr2004003.pdf>). One of the four CHIR areas focuses on *the use of Cross Language Information Retrieval (CLIR) and document display techniques to leverage existing English-language consumer health applications by enhancing access to non-English speakers*. ClinicalTrials.gov (<http://clinicaltrials.gov/>), a service of the NIH for linking patients to medical research, has been used as a test-bed system for this project.

Initially, the CHR team designed, tested, developed, and evaluated a Spanish-English CLIR-based prototype for ClinicalTrials.gov (Rosemblat et al., 2003¹; 2004²). We selected Spanish as the initial language to study due to the rapid growth of the Spanish-speaking population in the U.S., although the same technique can be used to incorporate other languages. Many current systems allow users to enter queries in Spanish and retrieve relevant documents *in English*. However, while this approach allows potentially relevant English-language documents to be retrieved, the language barrier keeps them largely inaccessible to Spanish-speakers. Thus for ClinicalTrials.gov, we have gone beyond retrieval, and explored different ways to display important data fields in Spanish, through a display mechanism that would offer enough information to allow Spanish-speaking users to identify clinical trials that may relevant to their personal needs. To this end, we have created abbreviated documents or “doclets.”

Doclets provide a subset of the information available in the English-language documents, consisting of data fields that use *controlled vocabulary* in Spanish: Overall Recruitment Status, Condition(s), Intervention(s), Study Type, Study Design, and select eligibility criteria (Age and Gender). Because these data fields use consistent vocabulary (i.e., are *controlled*), it is possible to translate them all (manually) once for use in an online English-Spanish look-up table. Although the table will be constantly updated as new English-language terms appear in the ClinicalTrials.gov corpus, such a “translate once-look up anytime” approach is economical, and look-up table entries could be used by other health-related applications. In addition, static text such as subtitles and headings, links to relevant health topics at MedlinePlus en español, and the Brief Title free-text field (i.e., study name) are also provided in Spanish in the doclets. Finally, for users who read English, links to the corresponding full-text English documents are provided (Figure 1).

¹ Rosemblat G, Gemoets D, Browne AC, Tse T. Machine translation-supported cross language information retrieval for a consumer health resource. Proc AMIA Symp. 2003: 564-8.

² Rosemblat G, Tse T, Gemoets D. Adapting a Monolingual Consumer Health System for Spanish Cross-Language Information Retrieval. ISKO. 2004:315-21.

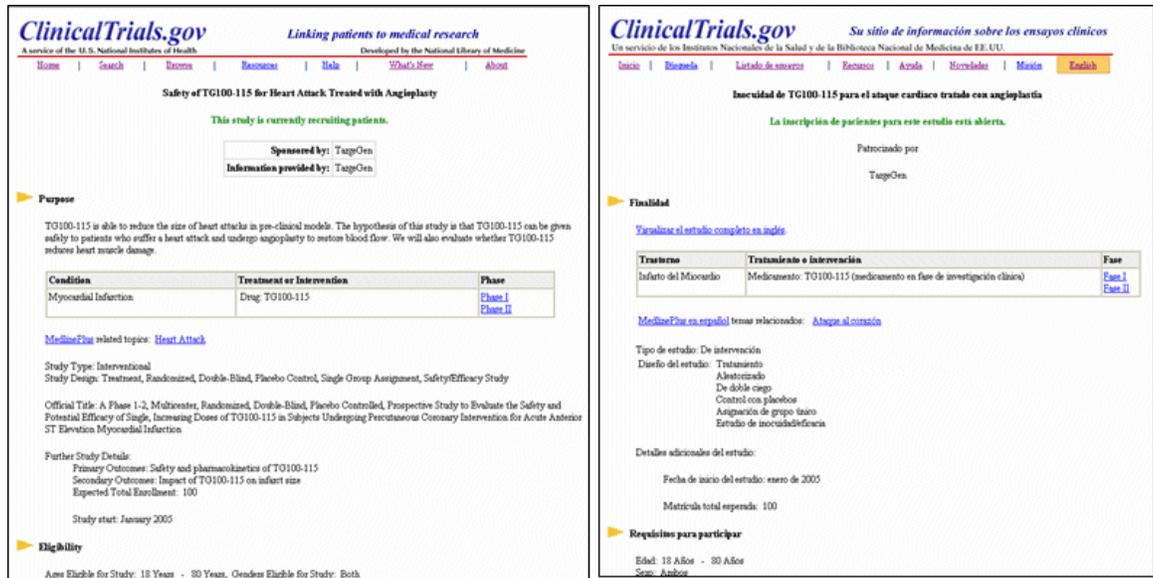


Figure 1: ClinicalTrials.gov document (right) and Spanish-language doclet (left)

1.0 Program goals

Consistent with the NIH-wide mission of promoting health and reducing health disparities, the goals of this CLIR project are to:

- Develop mechanisms for leveraging existing English-language consumer health information systems and making them accessible to users for whom English is not a primary language. (Next section (5,6))
- Develop display mechanisms to assist non-English speaking users in accessing, understanding, and applying the health information they find, as CLIR only addresses the retrieval of relevant documents in English without considering the display in a target language. (Next section (1,2,3,4))
- Develop a cross-language process that can be applicable to other languages. We selected Spanish because of the HHS commitment to providing full health information access to this growing segment of the US population. (Next section (3,6))
- Facilitate awareness of clinical trials among the Hispanic community and potentially address the under-representation of Hispanic participants in clinical studies. (Next section (1,2))

ClinicalTrials.gov was selected because of its unique position as a national clinical trials registry, providing information about ongoing and completed clinical trials to the public. A version of ClinicalTrials.gov that is accessible to the Spanish-speaking users is important

2.0 Key Questions

The proposed formative evaluation is intended to establish whether the experimental Spanish-language doclets meet the needs of Spanish-speaking users seeking

information about clinical trials, despite the limited amount of information relative to the corresponding English-language documents. User testing with Spanish-speaking health consumers will provide data regarding the target audience's information needs, their ability to use doclets to obtain relevant information easily and accurately (compared to the full documents in English), and their satisfaction with the doclets. We intend to use the feedback to ensure that further development of doclets take into account usability and accessibility issues identified by the intended users. The proposed evaluation will address the following primary questions:

1. What information do Spanish-speaking users want when seeking information about clinical trials? Is the information provided in the doclets sufficient to understand what the trials are about? [Goals (b,d), previous Section]
2. Do doclets allow users to judge relevance of studies with respect to specific needs so that they can apply the information they find? [Goals (b,d)]
3. Are users satisfied with the current design of doclets? [Goals (b,c)]
4. How do doclets compare with full documents in information seeking (e.g., accuracy in locating relevant studies, ability to grasp the purpose of a study)? [Goals (a,d)]
5. How frequently are doclet features used (e.g., link to corresponding English-language document)? [Goal (a)]
6. Are the doclets helpful, concise, and clear? [Goals (a,c)]

3.0 Study Design

All testing will be conducted in accordance with OMB regulations and therefore no clearances will be required. Within the context of an experimental Spanish-English CLIR version of ClinicalTrials.gov, the doclets will be evaluated through

- 1) Structured interviews to elicit expectations about the usefulness of specific information types needed to locate and understand the purpose of a clinical trial (Previous Section 1,2,4,6)
- 2) Hands-on usability lab testing and direct observation (e.g., think-aloud) (Previous Section 2,4,5)
- 3) Web log analysis as a record for query input, search strategy, and number/type of strokes (Previous Section 1,2,4,5)
- 4) Semi-structured interviews/evaluation instruments to elicit satisfaction with the doclets and ideas for new functions or improvements (Previous Section 3,4,6)
- 5) Semi-structured interviews with a select group of representative users to assess the functions and design of the CLIR prototype (Previous Section 1,2,4)

The contractor will work closely with LHCBC/NLM staff for the purposes of:

3.1. Developing Usability Task Scenarios

- Identify tasks that the key user groups will be expected to perform
- Develop task scenarios that will test user's ability to use the Spanish-language doclets; ascertain user's expectations with regard to the content; and help gauge user preference for existing and desired features
- Develop the prototype and final LHCBC/NLM-approved versions of usability testing scripts/task scenarios tailored to each audience (user groups).
- The doclets will be tested based on: 1) Language of the content, 2) Coverage, 3) User Satisfaction

3.2. Recruitment:

- Identify potential places for recruitment of participant, such as Free / Walk-in Clinics in Spanish-speaking neighborhoods (e.g., Adams Morgan area in Washington, D.C., North Arlington in Virginia), organizations associated with the Carlos Rosario School in Washington, D.C., which caters to new Hispanic immigrants, physicians whose medical practice is predominantly made up of Spanish speakers, and/or any other source identified by the contractor
- Recruit, screen, and select all participants for the study from the user groups as outlined below
- These studies will not require OMB clearance since only 9 users will be tested in each category, representing the general Hispanic population who seek information on clinical trials in Spanish on the Web. Key user groups include:
 - 1) Demographics
 - a. Monolingual Spanish speakers, ages 20-45
 - b. Monolingual Spanish speakers, ages 45+
 - c. Bilingual Spanish speakers, ages 20-45
 - d. Bilingual Spanish speakers, ages 45+
 - 2) Literacy
 - a. Low (e.g., completed elementary school) and/or
 - b. Medium (e.g., completed middle school)
 - c. High (e.g., completed H.S. or college, excluding health sciences majors)

3.3. Testing Strategies

A total of 24 participants, 3 from each of eight key audiences (comprised by the four demographic groups and at least two of the literacy groups, e.g., Monolingual Spanish speakers, ages 20-45 of low/medium literacy; monolingual Spanish speakers, ages 20-45 of high literacy; etc.), will be asked to complete three different evaluation activities: a total of 8 participants for the structured interviews to elicit satisfaction with the doclets and new ideas for functionality or improvements; a different group of 8 participants for the semi-structured interviews; and the last group of 8 participants for the semi-structured interviews to assess the function and design of the CLIR prototype. The rest of the participants will be asked to perform the hands-on usability lab testing; and they will be further subdivided into subgroups according to their use or expectations of the experimental Spanish-language Web site. These subgroups will be asked different questions and will complete a different set of tasks to elicit how well the Web site meets their various expectations. No more than 9 participants in any group or subgroup will be asked the same question.

The contractor will work closely with LHCBC/NLM staff to determine testing strategies appropriate to each area of study. With input from LHCBC/NLM, the contractor will develop prototype and final LHCBC/NLM -approved versions of usability testing scripts focused on each of the primary audience groups. Tests of the Spanish-language Web site will be conducted in Spanish. Contractor should have the capability to translate usability test materials, and should provide an itemized bid of translation costs, along with other costs of the usability study.

3.4. Facilities and Equipment

The contractor shall be able to perform usability testing at their own facilities or at the National Cancer Institute's User-Centered Informatics Research Laboratory, which is no-charge to Government agencies. Facilities costs for the usability lab must be included as part of the total cost. The facility selected should be adequate for conducting usability tests such as the one described as part of this Process Study. The usability tests will be conducted at a usability lab where LHCBC/NLM staff can watch the proceedings, preferably from behind a two-way mirror. The lab shall accommodate persons with disabilities. The contractor will videotape usability testing sessions, with permission of the participants, and will supply LHCBC/NLM with copies of the unedited tapes at the conclusion of the study.

3.5. Remuneration

All participants will be remunerated for their time, at a rate determined by the contractor in accordance with industry standards.

4.0. Analysis

The contractor shall summarize the data, analyze it to determine the most pressing usability problems, and in light of that make recommendations for resolving those problems. The contractor shall also make recommendations for desirable new features based on usability data and direct feedback and observation of study participants.

5.0. Reports

The contractor shall deliver the following written versions of the final report:

- 1) A Microsoft Word narrative that shall describe the results in detail, identifying strengths and weaknesses of the NIH Spanish-language Web site and making recommendations, based on usability data, for modifications to Web site layouts, navigation schemes, and language.
- 2) A concise Microsoft Word Executive Summary that shall present the most salient points and high-level analysis in narrative form.
- 3) A Microsoft Power Point presentation of the information in the Executive summary.

In addition, the contractor will make an oral presentations of the evaluation's methodology and findings to LHCBC/NLM senior staff.

6.0. Milestones

The contractor will prepare a work plan with milestones or a timeline for tasks to be accomplished. It is anticipated that the evaluation will be completed within thirteen weeks of award of the contract:

- | | |
|-----------|---|
| Week 1 | Meet with project officer and staff and identify key audiences and tasks. |
| Week 2 | Deliver work plan and task schedule (timeline). |
| Week 3 | Submit draft test scripts. Submit participant recruitment schedule. |
| Weeks 4-5 | Submit final test scripts. Recruit participants. |
| Week 6 | Submit confirmation of arrangements for use of testing facility and videotaping of sessions. Submit list of participants identified by group membership, age, gender, experience using the Web, and literacy level. |

- Weeks 7-9 Conduct user testing. Submit unedited videotapes/logs of testing sessions.
- Weeks 10-12 Submit Final Report, Recommendations, Executive Summary, and Power Point presentation.
- Week 13 Make oral presentations to LHCNBC/NLM staff.

7.0. Deliverables

The contractor shall provide LHCNBC/NLM with the following deliverables:

- 1) Work plan with tasks and schedule of milestones (timeline)
- 2) Recruitment plan and schedule
- 3) Draft and final usability scripts/task scenarios
- 4) List of participants identified by group membership, age, gender, country of origin, level of experience using the Web, and literacy level as diagnosed by the Cloze test or some such instrument, previously approved by LHCNBC/NLM staff
- 5) Unedited videotapes of testing sessions
- 6) Microsoft Word detailed final report and Executive Summary
- 7) Microsoft Power Point presentation

8.0. Pricing

Firm rates and an hourly ceiling for each labor classification for usability testing. Pricing for the development of scripts/task scenarios should be based on labor hours subject to the overall ceiling for the task order. The total amount for participant remuneration must be included as part of the total cost. Facilities costs for the usability lab must be included as part of the total cost.

9.0. Clearances

All studies will be conducted in accordance with OMB regulations. No clearances are required.

10.0 Privacy

Confidentiality of all participants will be assured. Names will not be associated with any of the data collected, nor kept as part of a permanent record of the study.

11.0 Funding

This Task Order will be funded to the level of \$49,500 via an award from the FY2005 NIH One Percent Evaluation Set-Aside funds.

12.0 Instructions to Offerors

The proposal shall be prepared in two parts: a Technical Proposal and a Price Quote. Each shall be separate and complete in itself so that evaluation of one may be accomplished independent of evaluation of the other.

12.1. Technical Proposal Instructions

12.1.1 Understanding and Approach

- 1) Offerors are to provide a clear, concise statement of the scope and purpose of the contract that demonstrates complete understanding of the intent and requirements.

- 2) The proposal shall provide a work plan that specifies how each of the requirements in each of the tasks is to be accomplished, including scheduling of time and personnel. The proposed evaluation procedures will be assessed by LHNCBC/NLM to determine the extent to which these procedures are likely to produce objective and meaningful feedback.

12.1.2. Corporate experience/technical competence of staff

- 1) The proposal shall describe contractor experience in Web site usability testing and analysis, including experience in the following:
 - Recruiting and remunerating Spanish-speaking Hispanic subjects from target populations
 - Preparing and conducting task analysis studies
 - Preparing and conducting paper prototype tests, if needed
 - Preparing and conducting user interviews in Spanish
 - Recording and analyzing response data
 - Evaluating Spanish-language health or medical Web sites
 - Preparing clear and concise reports and presentation from the response data, and delivering results in English
 - Making recommendations for modifications to Web page layouts and navigation schemes and site language

- 2) The proposal shall describe how the professional personnel employed under the contract will operate organizationally, and shall identify the project manager by name and title. Resumes or curriculum vitae shall be submitted on all professional staff assigned to this study. Each resume shall detail the individual's level of Spanish-language proficiency, knowledge of principles of communicating health information in Spanish to Hispanic audience, knowledge of key health issues affecting Hispanic populations, and experience testing and evaluating Spanish-language Web sites.

12.2 Contractor facilities

- A) If contractor proposes to use their own facilities instead of the National Cancer Institute's User-Centered Informatics Research Laboratory, the proposal shall detail the technical capacity of contractor usability testing facilities in the greater metropolitan Washington, DC area, including hardware, software, Internet access, and video equipment.

- 2) The proposal shall describe how the facilities will accommodate testing of Web sites on different connection speeds and browsers, and how the resulting videotapes will provide a clear and accurate representation of the actual testing.

- 3) The contractor shall describe capability to accommodate persons with disabilities either at the testing facility site or at the person's home or office. The contractor shall be familiar with hardware and software used by persons with disabilities. The contractor shall be familiar with Section 508 of the Rehabilitation Act and its application to electronic media and Web sites.

12.3. Price Quote Instructions

The offeror must submit a cost proposal fully supported by cost and pricing data in sufficient detail to allow a cost analysis that establishes the reasonableness of the proposed costs. The price breakdown in support of the scope of work and deliverables shall be furnished.

G. EVALUATION FACTORS

Task Order Proposals submitted under this request shall be evaluated using the following factors:

1) Contractor understanding and approach (25 pts)

The proposal provides a statement of the scope and purpose of the contract that demonstrates complete understanding of intent and requirements. The work plan covers all tasks and all phases of the project, including a feasible timeline. There is consistency between the proposed level of effort and the budget justification.

2) Corporate experience/technical competence of staff (45 pts)

The proposal documents expertise in Spanish-language Web site usability and shows a successful track record of conducting Web site usability tests. Staff is highly proficient in Spanish --preferably native Spanish-speaking-- and has knowledge of principles of health communication and health issues in the Hispanic population sufficient to (1) recruit an adequate pool of "real" and diverse users for testing; (2) inform the development of relevant usability testing tasks and scripts; and (3) provide substantive insight in the interpretation of usability testing results and recommendations for Web site improvements. It is also important that the bilingual staff have demonstrated experience in writing for all literacy levels in Spanish.

3) Contractor facilities (25 pts)

Facilities are adequate for conducting Web site usability tests and have both high-speed and 56K modem Internet connections, one-way mirrors, and split-screen videotaping capacity.

4) Price (5 pts)

While price will not be the most important evaluation factor, proposed prices will be considered in determining the firm that represents the best value to the Government.

H. AWARD CRITERIA

The acceptability of the technical portion of each contract proposal will be based on an evaluation performed by the project officer. The project officer will evaluate each proposal in strict conformity with the evaluation criteria of the RFTOP, utilizing point scores and written critiques. The contracting officer/specialist, in conjunction with the project officer, will establish a competitive range comprising all the most highly rated proposals. The technical proposal will receive paramount consideration in the selection of the contractor for this acquisition. If the technical evaluation reveals that two or more

offerors are approximately equal in technical ability, then the estimated cost of performance will become paramount. The Government reserves the right to make an award to the best advantage of the Government, cost and other factors considered, and reserves the right to make an award without further discussion of the proposals received.

I. PAYMENT SCHEDULE

The contractor may request and payment may be made in the percentages listed below:

- 1/6th of the award value, payable upon acceptance by LHNCBC/NLM of the work plan with schedule of milestones.
- 1/6th of the award value, payable upon acceptance by LHNCBC/NLM of the recruitment plan and schedule.
- 1/3rd of the award value, payable upon acceptance by LHNCBC/NLM of the final usability scripts/task scenarios for each critical audience, as defined in 3.2. above.
- 1/3 of the award value. One-half this amount is payable upon acceptance by LHNCBC/NLM of the final report, Executive Summary, and Power Point presentation. The other half is payable upon completion of the oral presentation to LHNCBC/NLM senior staff.
- All invoices must be submitted in accordance with the invoicing instructions in the base contract as revised by this task order. All payments are subject to the review and approval of the government Project Officer.

J. QUESTIONS

Questions about this solicitation may be sent to: Dr. Tony Tse (tse@nlm.nih.gov). The cutoff date for receipt of questions is August 05, 2005.

RFTOP#274 TITLE:
PART II - CONTRACTOR'S REPLY: CONTRACT # _____ TO
NICS-_____

Contractor:

Points of Contact:

Phone-

Fax-

Address:

TOTAL ESTIMATED COST: Pricing Method
TOTAL ESTIMATED NUMBER OF HOURS:
PROPOSED COMPLETION DATE:

FOR THE CONTRACTOR: _____
Signature Date

SOURCE SELECTION:

WE HAVE REVIEWED ALL SUBMITTED PROPOSALS HAVE DETERMINED THIS FIRM
SUBMITTED THE BEST OVERALL PROPOSAL AND THE PRICE/COST IS REASONABLE.

Billing Reference # _____

Appropriations Data: _____

(ATTACH OBLIGATING DOCUMENT IF AN ROC WILL NOT BE USED.)

RECOMMENDED:

FAX # Signature - Project Officer Date

APPROVED: _____

FAX # Signature - Contracting Officer Date

NIH APPROVAL -

CONTRACTOR SHALL NOT EXCEED THE ESTIMATED LABOR HOURS OR ESTIMATED TASK ORDER
AMOUNT WITHOUT THE WRITTEN APPROVAL OF THE CONTRACTING OFFICER & PICS
COORDINATOR

APPROVED: _____
Signature -Mr. Larry Manning, NIH-PICS Coordinator Date