

Computer Tool for Routine Rapid HIV Counseling and Testing in Emergency Care Settings

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Designing an IT System for ECS

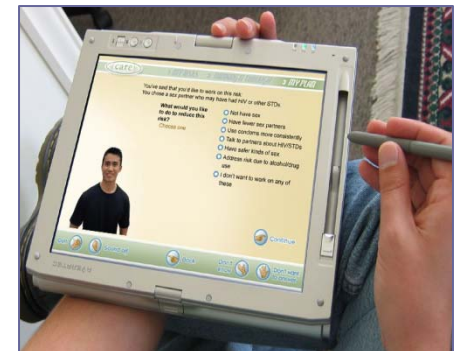
GOAL – To facilitate routine opt-out testing in ECS while providing evidence based risk reduction counseling and automated data collection.

- **ACASI risk assessment**
- **Legal consent (with safety check)**
- **Computerized risk reduction counseling**
- **Admin module for local referrals**
- **Client/provider summary**
- **Longitudinal use**
- **Automated evaluation and reporting**

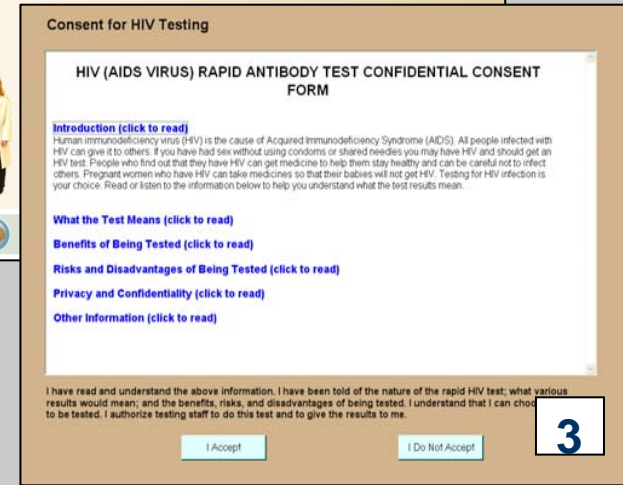
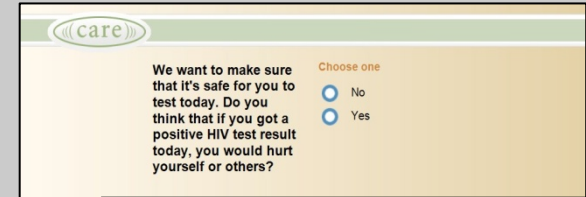
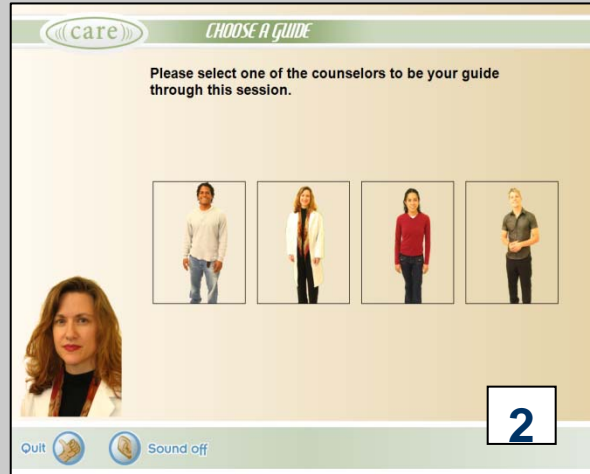
CARE (base software)



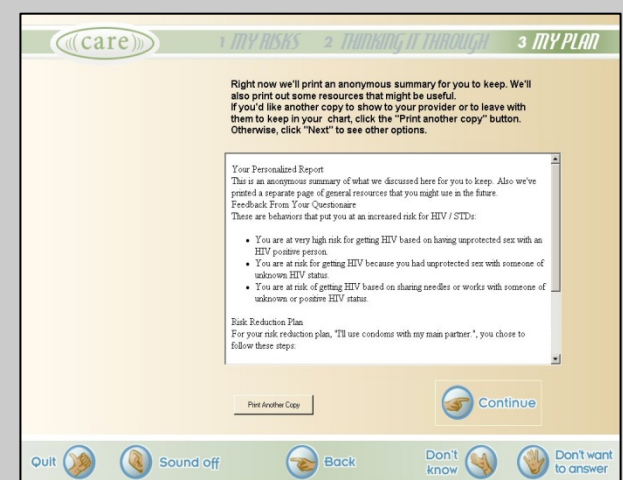
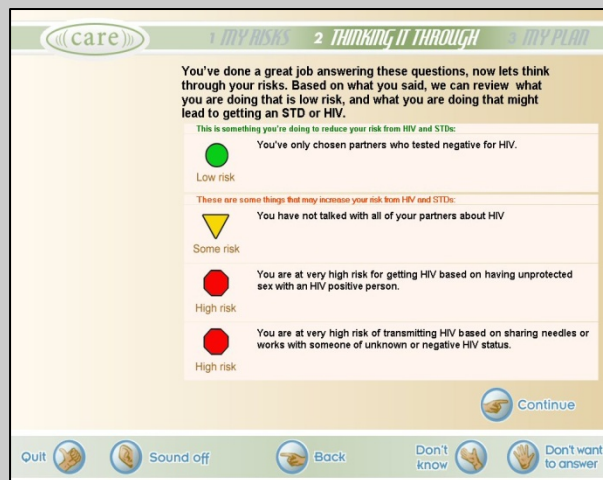
- **Computer Assessment & Risk Reduction Education for HIV/STIs**
 - SBIR funding (phases I & II), CDC
 - NIA, UW CFAR, Hopkins CFAR
 - CFAR SBPRC PEMS implementation
 - NICHD CARE-India
- **Theoretical framework: Integrative Model**
(Fishbein), Social Cognitive (Bandura),
Motivational-Interviewing (Rollnick)
- **Platform: .NET framework with SQL database**
- **Delivered: on Tablet PC**



Example - CARE Computerized C/T/R



- 1-Tablet computer
- 2-Counselor' selection
- 3-HIV test consent
- 4-Tailored feedback
- 5-Skills videos
- 6-Health Plan summary with referrals



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Emergency CARE Evaluation

- **Formative Stage**

- ECS staff focus groups, patient software usability testing
- Seattle, Baltimore

- **Feasibility / Effectiveness**

- Randomized trial, Seattle

Formative Research (Seattle, Baltimore)

- **Patients: Usability Interviews, n = 35**
 - Field notes during observation
- **Staff: 2 focus groups, n=18**
 - Verbatim typed transcripts
 - Current practice for HIV counseling & testing (C & T); Barriers to testing; demonstrated CARE tool; elicited perceptions, beliefs
- **Data analyzed using content analysis**
 - Atlas ti, Inter-rater reliability 0.9

Formative Findings

Patients

- **Tool was acceptable & usable, minimal need for staff help**
- **Enhanced self evaluation, lack of judgment, privacy, ability to provide feedback & education**
- **58% preferred computer to human HIV C & T**

Formative Findings

Staff Clinicians, counselor, tech, front desk staff

- **Time major barrier to HIV C & T**
- **Concerns, rapid HIV testing**
 - result f/u (false +, referrals)
 - creating demand, though recognized importance of HIV testing
- **Saw role for computer tool;**
 - time saver, consistency/privacy

RCT - Seattle ECS Results

- N= 971 approached, 54% acceptance
- Randomized to CARE (239) vs. chart review (285) before healthcare
- Demographics
 - 63% male
 - 54% people of color
 - 49% chemical dependency screen positive (26%IDU)
 - 87% unprotected vag/anal sex past 6 months
 - 28% HIV test in past 6 months (57% past year, 25% never)

RCT Urgent Care Results



- 251/258 (97%) CARE users got rapid HIV test result (prevalence 0.4%, 95% CI 0.01 - 2.2%) vs. 0 controls
- 59% CARE users had unprotected sex since last test with all developing risk reduction plans; risk noted in 1 control chart, & few counseled to reduce HIV risk
- Cost (hardware, staff time, supplies) = \$39.90/test (for one staff, one computer)

Client Acceptability

Usability/Acceptability (N=239)

<u>Characteristic</u>	<u>Home</u>
Easy to Use	97%
Private Enough	96%
Length Just Right	86%
Helpful in lowering risks	91%
Prefer over staff counseling	55%

Future Considerations for UC Testing

- **Need CARE-light** for brief risk assessment for high flow and need automated reporting to health department and CDC. (Cost \$25,000 license free initial equipment, report customization for 80 patients/day setting).
- **Need to determine impact on longitudinal risk behaviors and follow up for recommended health care** to know if the full care is worthwhile or if CARE light will be adequate. (For full CARE tool need more hardware (Cost \$35,000 license free)).
- **Barrier to scale up** - need multiple tablets and a rapid testing staff so all clients can be tested
- **For general use** - Would be ideal to include a general health history to make provider care more efficient and to integrate into EMR (\$250,000), and to automate data transfer to local and state health departments (\$25,000)

The Future of CARE:

- Currently:
 - HIV/STD prevention (testing and risk reduction counseling)
 - HIV-Positive version (risk reduction and med adherence)
- Available soon
 - Web version
 - Care light - HIV Testing and risk data collection
 - Spanish-language versions, India versions
 - Alternative authentication module (fingerprint)
 - Version for integrated primary care
- Customizable to the setting or content need

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Resources Online:

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Questions?



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