

Unique Testing Code Creation and Applications

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UTC Training Overview

- ➔ UTC Background
- ➔ 1999 CTS Data Analysis
- ➔ Creating the UTC
- ➔ Unduplicating Databases using UTCs
- ➔ Sensitivity and Specificity of the UTC

Background

- Counseling and Testing System (CTS) data describes testing episodes.
- CTS data does not give a count of people tested or an accurate rate of infection.
- In addition, this data has not allowed for the identification of new infections or for the monitoring of emerging risk groups.

Background

- The Unique Testing Code (UTC) was created as part of the Focused Assessment of Counseling and Testing (FACT) Study.
- The UTC was designed to improve the usefulness of collected data by:
 - Counting the number of persons tested rather than tests performed.
 - Monitoring testing patterns by frequency and location.
 - Describing characteristics of one-time and repeat testers.

Example Analysis using UTCs

- CTS data from 1999 was analyzed using the UTC.
- Repeat testers were compared with one-time testers on a diverse range of factors including gender, race/ethnicity, age, risk behaviors, testing settings and geographical location.

Results of Example Analysis

- In 1999, 108,257 HIV tests were performed at publicly funded sites in Texas (excluding City of Houston) and 70% of those tested had complete UTCs.

Testing episodes w/complete UTC included in analysis	75,662
Repeat testers	5,934
% of repeat testers testing 2 times	89%
% of repeat testers testing 3 times	9%
% of repeat testers testing 4 or more times	2%

Results

- Males were more likely to test than females.

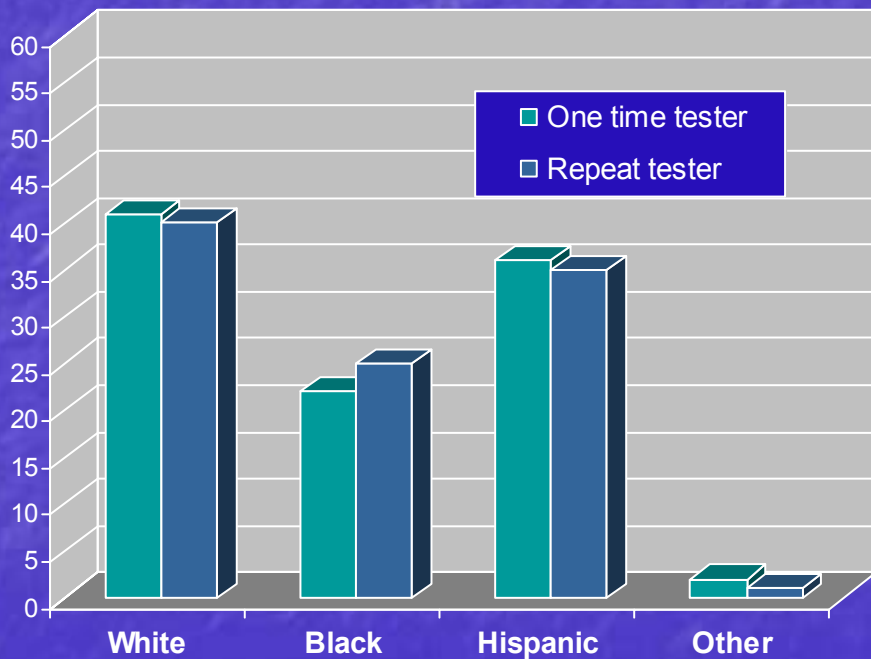
	% of Total Tested	% of Total Repeat Tested
Males	54%	59%
Females	46%	41%

- Repeat testers as a whole were no more likely to be HIV positive than one-time testers; each at 1%.
- Among the repeat testers, 16 seroconversions to HIV positive were observed.

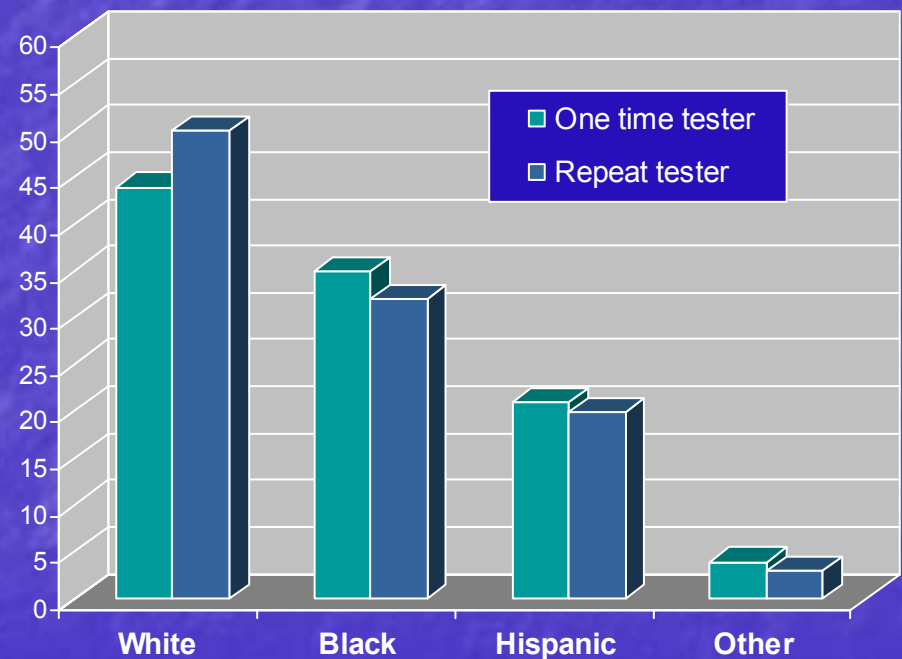
Results

Proportions of One-Time and Repeat Testers by Race/Ethnicity

State Level*



Counseling and Testing*

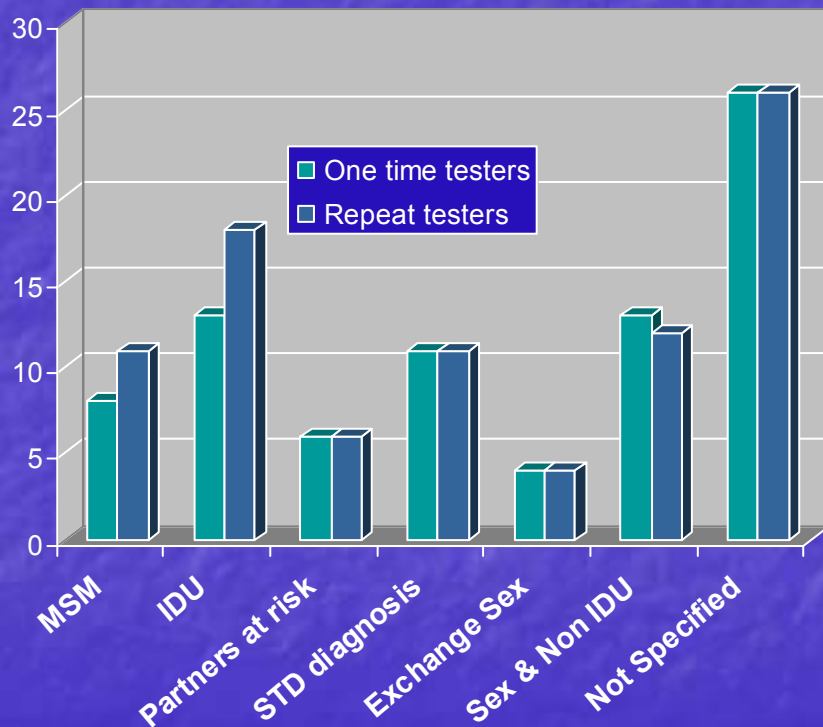


*Estimates based on preliminary data.

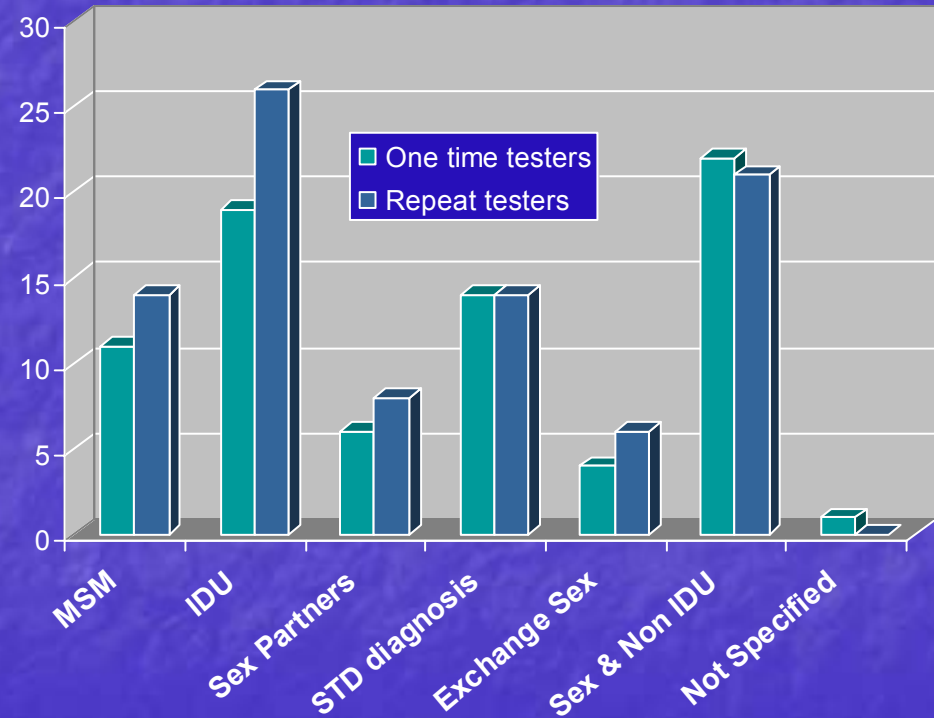
Results

Proportions of One-Time and Repeat Testers by Risk Behavior

State Level*



Counseling and Testing*



*Estimates based on preliminary data.

Data Elements in the UTC

Name Elements



Date of Birth Elements



Race Code



Sex Code

Name Elements

- First letter of the first name
- Last two letters of the last name (maiden name for women)
- Letters are converted to a 2 digit numeric code: A=01, B=02, C=03

Date of Birth Elements

- The Date of Birth is split into three separate variables
- Month: 2 digit number
- Day: 2 digit number
- Year: 4 digit number

Sex and Race Elements

Race is converted to a numeric code:

- White=1
- Black=2
- Asian/Pacific Islander=4
- American Indian/Native American=5
- Other/Multiracial=8
- Unknown=9

Sex is converted to a numeric code:

- M=1
- F=2

Example UTC

Douglas Shehan; DOB: March 13, 1972;
Race: White; Sex: Male

D = 04

A = 01

N = 14

Date of Birth = 03131972

Race = 1

Sex = 1

UTC

0401140313197211

Unduplicating Databases in SPSS

1. Create UTCs for each case
2. Aggregate Cases by UTCs
3. Perform analyses by the number of people, not by the number of cases

Duplicate UTCs indicate the same person!

UTC Sensitivity and Specificity

Sensitivity

- Duplicate UTCs that represent the Same person
- UTCs evaluated using Miragen Antibody Profiling
- 90 – 94% sensitivity

Specificity

- Unique UTCs that represent Different people
- UTCs evaluated using data from the TX Birth Certificate Registry
- Approximately 99.5% specificity

Discussion

- The use of unique testing codes provides a viable system of surveillance for anonymously monitoring the HIV testing population.
- UTCs combined with recently developed testing technologies to identify new infections greatly improves the capacity of testing programs to monitor the leading “edge” of HIV infection.