# The Mainstreaming of U.S. HIV Testing?: Evidence from the U.S. National Health Interview Survey, 1988-2010



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#### BACKGROUND

## The U.S. Centers for Disease Control (CDC) has issued increasingly inclusive guidelines for HIV testing.

In Regime 1 (1988-1992), the CDC emphasized testing persons most likely to be infected or who practice high-risk behaviors and routine testing of all persons seeking treatment for STDs, regardless of health-care setting.

In Regime 2 (1993-2005), the recommendations were extended to include hospitalized patients and persons obtaining health care as outpatients in acute-care settings, including emergency departments. Testing was advised for all pregnant women and for all patients in settings with high HIV seroprevalence. Targeted testing for persons engaging in high risk behaviors was advised elsewhere (i.e., for "most health care settings").

In Regime 3 (beginning in 2006), the CDC recommended routine HIV screening for all patients age 13-64 in all health-care settings after the patient is notified testing will be performed, unless the patient declines (opt-out screening).

#### RESEARCH QUESTIONS

# To what extent did the CDC's changing recommendations on HIV testing affect actual testing practice?

We evaluate this overarching question through the following specific research questions:

- 1. Did the circumstances of adults who were tested vary across Regimes?
- In the reasons for testing?
- In the location of testing?
- In the demographic characteristics of those tested?
- 2. Did persons age 18-64 receiving routine health care get an HIV test?
  - For those with a doctor visit in the past year?
  - For those with an ER/ED visit in the past year?
  - For those hospitalized in the past year?
  - For those having surgery in the past year?
  - For those who saw a doctor for a non-HIV STD in the past 5 years?
  - For those who were currently pregnant?

#### METHODOLOGY

We classify adult respondents (n= 103,844) as being tested during the three separate CDC regimes based on the reported calendar year of their last HIV test, the reported interval (in years) since their last HIV test, or their response to a question about being tested in the past year. Those in the 1988-1992 surveys who had been HIV tested were all classified as tested in Regime 1.

Prior to the 2000 survey year, respondents to the AIDS knowledge and attitudes supplement (1990-1995) or the sample adult questionnaire (1997-1999) who reported being tested for HIV could give multiple reasons for being tested, with each reason coded as a dichotomous variable. Beginning in 2000, respondents had to chose one main reason for testing. We combined and recoded the pre-2000 dichotomous variables to correspond to the single "main reason for last HIV test" variable. To accomplish this, the reasons reported for last HIV test had to be ranked, so a primary reason could be chosen for individuals reporting more than one reason for testing. For this analysis, more specific reasons were chosen over less specific reasons (e.g., "to determine status" was only chosen if no other reason was reported), involuntary reasons were chosen over voluntary reasons (e.g., "military," "immigration," "employment," and "insurance" were chosen as the primary reason if a respondent also reported testing as part of medical care), and other/unknown was chosen only for those who did not report a specific reason for testing.

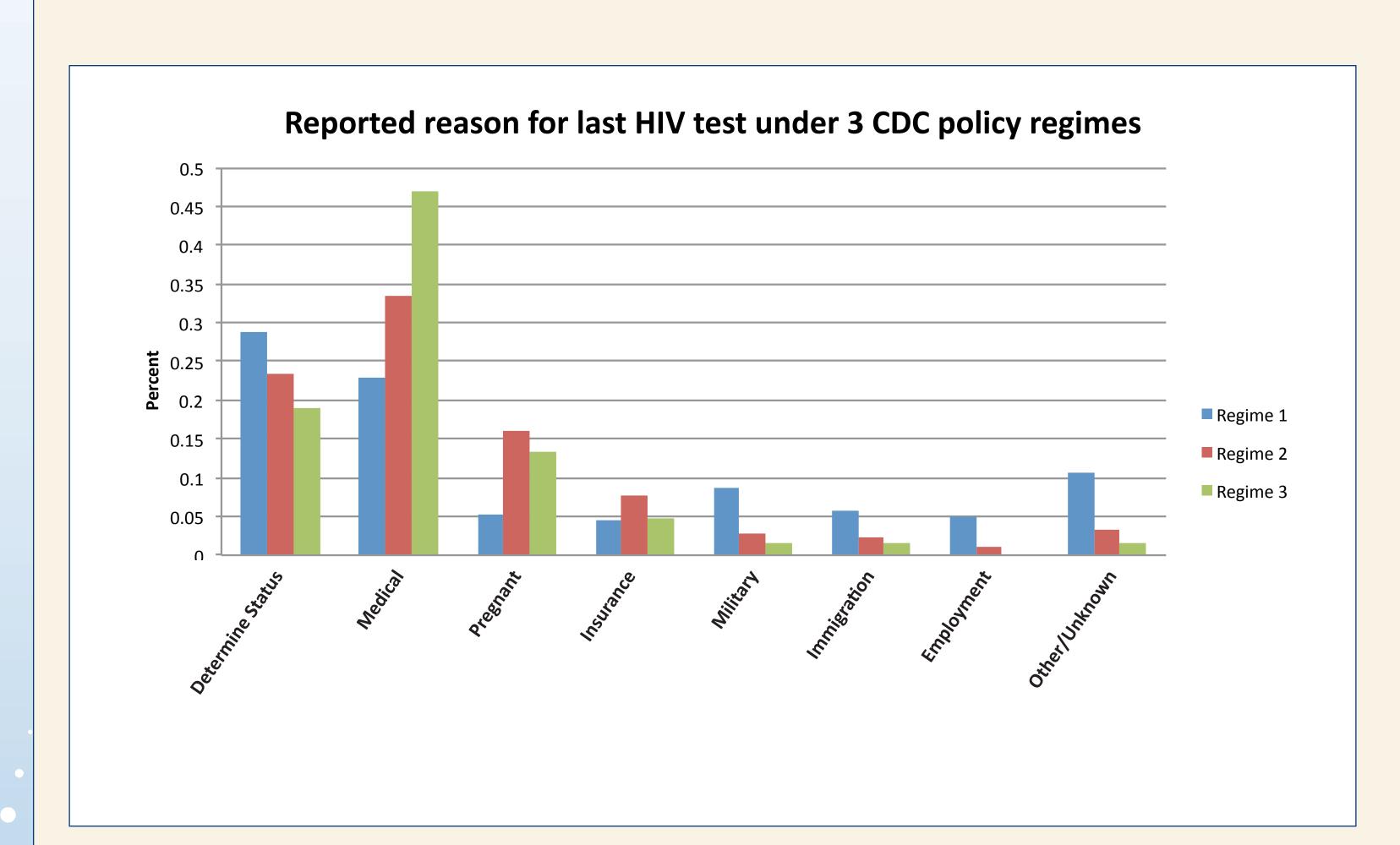
For our second research question, we considered adults age 18 to 64 who had received routine medical care in the past 12 months, were currently pregnant, or saw a doctor for a non-HIV STD in the past 5 years. We limited the sample to those who were asked about HIV testing, and calculated the percent receiving routine care who reported being tested recently (e.g., reported year of test minus survey year equaled 0 or 1, or, for STD patients, for whom the difference between survey year and testing year was 0 to 5).

#### DATA

Data come from the public use files of the U.S. National Health Interview Survey (NHIS). The NHIS is the principal source of information on the health of the U.S. population and has been fielded annually since 1957. The NHIS is representative of the non-institutionalized, civilian population and includes approximately 100,000 persons per year. Questions about HIV testing were included in the NHIS AIDS Knowledge and Attitudes Supplements beginning in 1988.

Most NHIS variables are available through the Integrated Health Interview Series (IHIS), a harmonized set of data created at the Minnesota Population Center with funding from NICHD. (See www. ihis.us.) In IHIS, the data are coded consistently over time, fully documented, and disseminated for free over the Internet. Some of the variables used in this analysis are not yet available through IHIS, but they will be added to the database soon.

### RESEARCH QUESTION 1



#### DISCUSSION 1

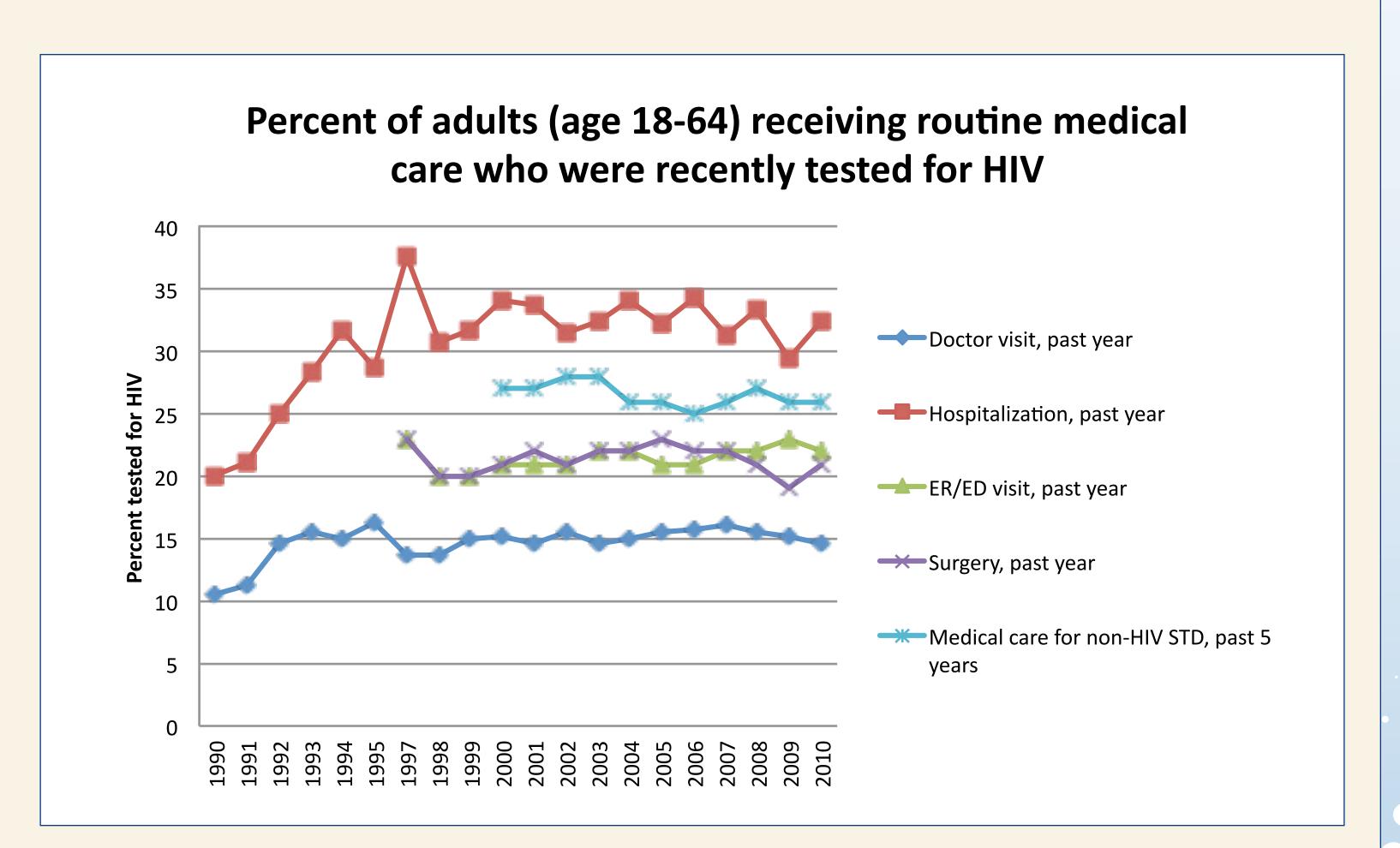
Based on the characteristics of people tested for HIV under the 3 policy regimes, changes in CDC testing recommendations had substantial effect.

This effect is most obvious in the reported reason for testing under the 3 regimes. "Illness/had medical problem," "part of routine medical check-up/surgery," and "pregnant" increasingly predominated as reasons for testing; involuntary testing (e.g., for military service or immigration) became less important.

There were also modest (though statistically significant) changes in the location of HIV testing, with mainstream medical care sites (rather than specialized clinics or non-medical settings) becoming slightly more important.

Demographic and behavioral characteristics of those tested also varied significantly across regimes, with women, minorities, the poor, and people who did not practice risky behaviors making up a larger share of those tested over time (based on multinomial logistic regression).

## RESEARCH QUESTION 2



#### DISCUSSION 2

While most people, by Regime 3, were tested through the health care system, most adults who received routine health care did NOT have a recent HIV test. The majority of adults receiving routine medical care in the past 12 months—through a doctor visit, an ER/ED visit, surgery, or hospitalization—did not have a recent HIV test. Within these categories, the proportion tested rose during the early 1990s, but then remained largely constant, despite increasingly inclusive testing guidelines from the CDC.

The CDC recommended HIV testing (with consent) for all pregnant women and all persons diagnosed with a non-HIV STD considerably earlier than it recommended universal consensual testing for other patients. The first directive was followed by most health care practitioners; the proportion of currently-pregnant women who had an HIV test in the past year rose from 21% in 1991 to around 60% for 1997 (the next year available) forward. By contrast, HIV testing for people with a non-HIV STD remained rare; only a quarter of those who saw a doctor for non-HIV STD in the past 5 years had an HIV test during that period.

#### CONCLUSION

Changes between 1988 and 2010 in the type of persons tested and reasons for testing are largely consistent with CDC recommendations. However, although most people tested are now in the health care system, most people in the health care system are still not tested.