

NHANES Updates

Board of Scientific Counselors



National Center for
Health Statistics

Kathryn Porter
March 7, 2013

National Health and Nutrition Examination Survey

- 24-hour Urine Collection Pilot
- Health Measures at Home Study
- Update NHANES DNA Bank



National Health and Nutrition Examination Survey

- 24-hour Urine Collection Pilot
- Health Measures at Home Study
- Update on NHANES DNA Bank



CDC Winnable Battle



CDC Home



Centers for Disease Control and Prevention

CDC 24/7: Saving Lives. Protecting People.™

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Morbidity and Mortality Weekly Report (MMWR)

[MMWR](#)



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Control of Hypertension Among Adults – National Health and Nutrition Examination Survey, United States, 2005-2008

Supplements

June 15, 2012 / 61(02);19-25

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Control of hypertension was 43.6%





Making Food Healthier and Healthier Food More Affordable: Sodium Reduction Rationale

Walmart Commitment

Reduce sodium by 25 percent in key categories of food products in Walmart by 2015.

Suppliers will be asked to voluntarily fill out a scorecard annually so that Walmart can assess and report our progress towards our target.

Target categories

Key sodium categories include:

Grain products such as yeast breads and rolls, dough, cookies, crackers, and breakfast pastries

Meats such as luncheon meats, hot dogs, bacon, fresh poultry, pork, beef, frozen and canned chicken beef, and sausage

Dairy category items such as processed cheese, cottage cheese, semi- and hard cheese and egg substitutes are included

Sauces and condiments such as salad dressings, mayonnaise, ketchup, barbecue sauce, pasta sauce

Snacks such as potato chips, snack mixes, corn chips and cheese puffs

Packaged prepared foods such as soups, canned pastas, boxed dinners, frozen entrees, pizza, pasta, rice, potato sides, frozen potatoes, and frozen vegetables in sauce

Rationale

The 2005 Dietary Guidelines recommend Americans consume less than 2,300 mg (approximately 1 tsp of salt) of sodium per day. Additionally, it recommends individuals with hypertension, blacks, and middle-aged and older adults should aim to consume no more than 1,500 mg of sodium per day¹³. However, it is estimated that Americans



NHANES 24-Hour Urine Collection Pilot Study



- Measure sodium and other analytes
- March 16 – May 31st
- Random ½ sample of examined 20-69 y.o.
- Asked to collect urine for 24 hours
- Kit picture here



UMEC



- 2 staff members per team
- Open 7 days per week
- Parked next to MEC



NHANES 24-Hour Urine Collection Pilot Study

**June 2013: determination if 24-hour urine
collection will be part of NHANES 2014**



National Health and Nutrition Examination Survey

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Health Measures at Home Study (HMHS) Overview

- Assess the feasibility of interviewers collecting physical measures in the home
- NHANES participant volunteers n=130
- Short examination done in the home 1-3 weeks after the NHANES examination
- August 31, 2012 – January 20, 2013

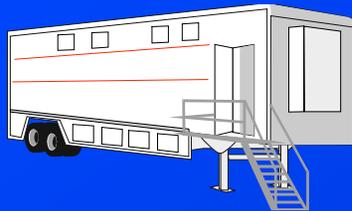


Why?

- Add physical measures to the National Health Interview Survey
- Data could be produced in a more timely manner
- Sub-national health estimates could be calculated
- The study will help us understand the operational and analytical impact



HMHS Study Design



Mobile Exam Center (MEC)



NHANES Exam at MEC

Ht & Wt at MEC
Portable equipment



Health Technician
Ht, Wt, BP, DBS
Portable equipment



Field Interviewer
Ht, Wt, BP, DBS
Portable equipment



Field Interviewer
Ht, Wt, BP, DBS
Portable equipment



Health Technician
Ht, Wt, BP, DBS
Portable equipment



HMHS Data Collection

Dried Blood Spots

- Hemoglobin A1C (HgA1c)
- High-density lipoprotein (HDL)
 - Total Cholesterol (TC)

Anthropometry

- Height (cm)
- Weight (kg)

Blood Pressure

- Systolic blood pressure (mmHg)
- Diastolic blood pressure (mmHg)



HMHS Training and QA/QC

- The training program was designed by NHANES staff who provided written protocols and hands-on experience
- Field staff were monitored through site visits and via conference call. Re-training was also conducted as needed while in the field



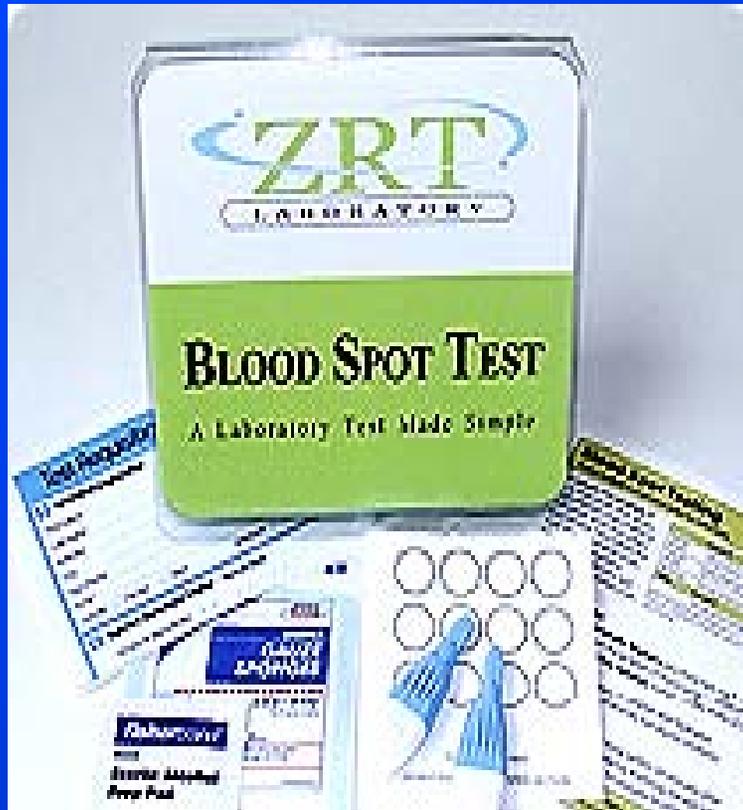
HMHS Equipment



HMHS Equipment



DBS Equipment



- Included in the ZRT DBS kit
- 1 Ahlstrom 226 collection card
- 2 BD Lancets
- 1 Alcohol Prep
- 2 Gauze 2x2 pads in pkg.
- 1 Bandage
- 1 ZRT laboratory shipping bag
- ZRT label to place on DBS card



Suitcase and Packed Equipment



Upcoming Reports

- National Health Statistics Report
 - Methodology and operations of the study (DHIS lead)
- Manuscripts for journals (DHANES lead)
 - Blood Pressure
 - Dried Blood Spots

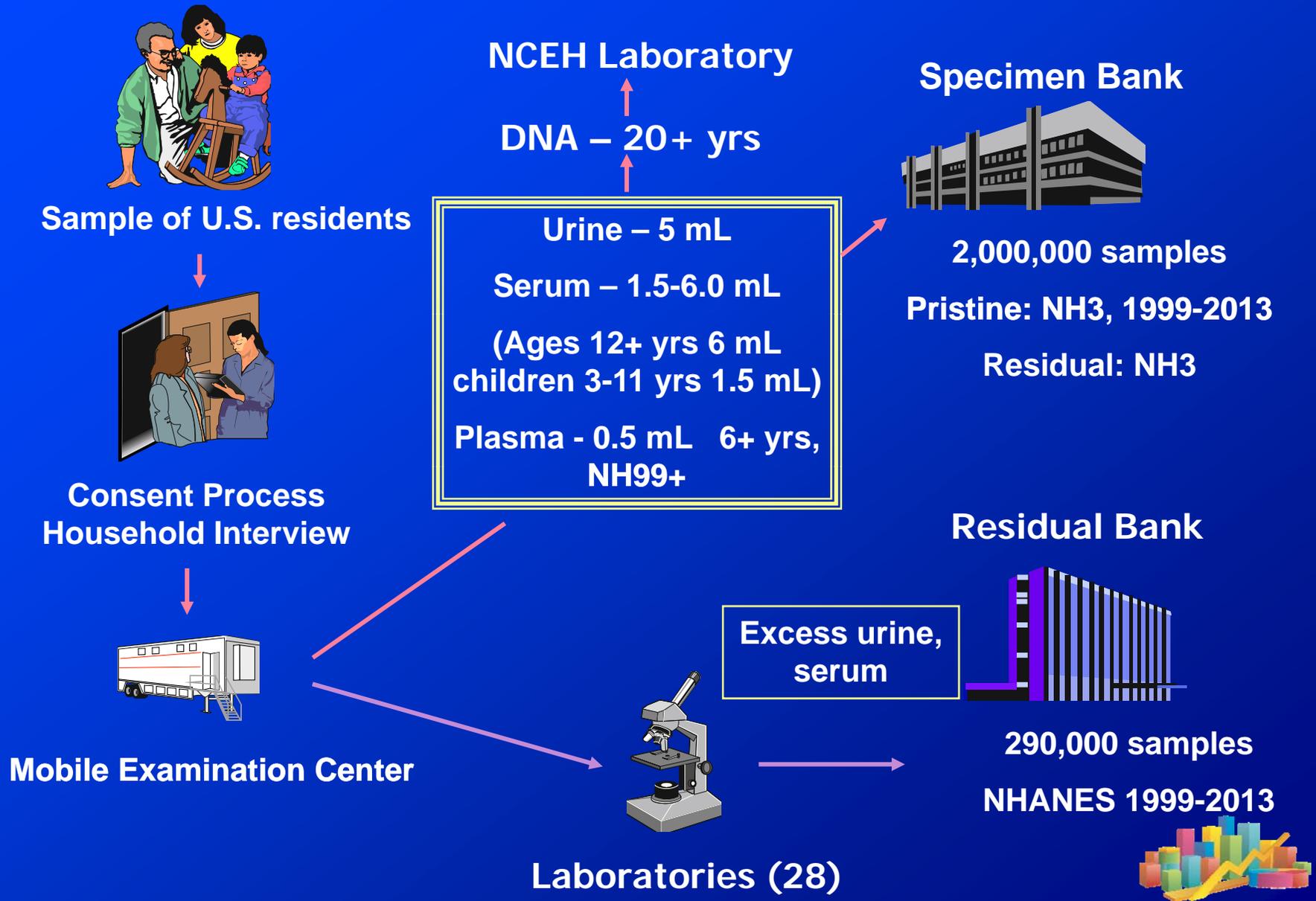


National Health and Nutrition Examination Survey

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NHANES Specimen Bank Overview



Consents

- Household interview consent
- Examination consent
- Consent to store blood and urine for non-genetic future research
 - Ages 3 and older (assent 7-17 yrs)
- Consent store blood for future genetic research (ages 20+)



NHANES Genetic Consents Over Time

	Age	Separate DNA consent	Opt-out later	Notice of DNA studies	Plan to contact with results
NH III	12+	no	no	none	—
99-02	20+	yes	yes	Newsletter	no
07-12	20+	yes	yes	website	no



NHANES DNA Bank

- Started in 1991
- Specimens available for use from:
 - 91-94: n=7,000
 - 99-02: n=8,000
 - 07-12: n=13,800



Application Process

http://www.cdc.gov/nchs/nhanes/genetics/stored_specimens.htm





FEDERAL REGISTER

The Daily Journal of the United States Government

SCRIPT 0 Sign in Sign up

Notice

National Health and Nutrition Examination Survey (NHANES) DNA Samples

A Notice by the Centers for Disease Control and Prevention on 06/11/2012



ACTION Notice.

SUMMARY

The National Health and Nutrition Examination Survey (NHANES) will not be receiving DNA proposals in the near future. NHANES is changing its plan for making DNA available for genetic research and its proposal guidelines. NHANES will announce when it will reopen its repository for use of DNA specimens for research protocols once it has developed its new plan of operation.

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PUBLIC INSPECTION
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Monday, June 11, 2012
Agencies:
Department of Health and
Human Services
Centers for Disease Control and

Issue

- Genetic technologies have evolved faster than our ability to manage research results
 1. Candidate genes
 - a. apriori knowledge of SNPs
 2. Genome wide association studies (GWAS)
 - a. Incidental findings – now what?



NHANES Genetics Workshop 5/11

- Panel of experts
- What results should be reported back – are standards or guidelines available?



Binning the Genome

Bin 3

Genes of unknown clinical implication

Bin 2

Variants within genes that are clinically valid but not directly actionable

Bin 1

Variants within genes that have **direct clinical utility** based on professional organization diagnosis and treatment guidelines

Only Bin 1 variants should be considered for reporting

Berg. *Genetics in Medicine* (2011)



Next steps – Fall 2013

“Guidelines for Returning Individual Results from Genome Research Using Population-Banked Specimens: A Workshop”

National Research Council

- Committee on National Statistics
Committee on Population

Institute of Medicine

- Roundtable on Translating Genomic-Based Research for Health



Thank you!

