

Entrusted: The 60-Year Dialogue of Informed Consent

Presenters:

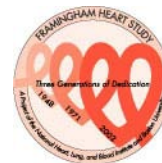
Greta Lee Splansky, Maggie Kelly-Hayes
and Sue Blease

Framingham Heart Study

BUMC IRB

Protocol FHS-H-22762

January 16, 2008



Learning Objectives

- Describe **evolution of consent process.**
- Demonstrate the role of **supplemental materials to inform in** complex studies
- Outline how we ensure proper use of data by **tracking individual participants' consent choices.**

Boston University School of Medicine
Boston University Goldman School of Graduate Dentistry
Members of

January 1982 Volume 13 Number 1

Boston University Medical Center

Centerscope

Pg. 16 **Listening to the
heartbeat of America**



**Framingham Heart Study's
impact on a nation's lifestyle**

Why Framingham

- In 1948, NIH in infancy
- 44% of deaths in US due to cardiovascular disease
- Primary focus of epidemiological studies was infectious disease
- Framingham participated in 1917 TB study
- New opportunity to study unbiased stable population sample over time

Noteworthy contributions from the FHS

- **Risk factor determination**
- **Temporal trends in health conditions**
- **Lifetime risk of disease**

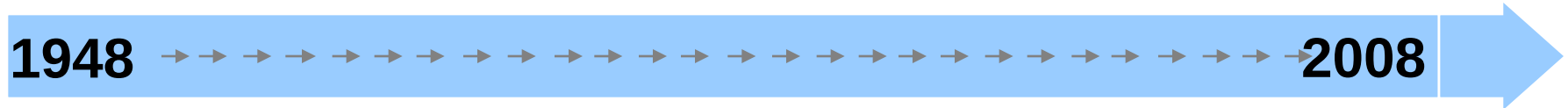
Overview of the Framingham Heart Study

- **Population-Based Observational Study**
- **Longitudinal Design**
- **Clinic and Off-site Exams**
- **2 to 6 Year Exam Cycles**
- **Repeated and Novel Measures**
- **Six Cohorts**



Framingham Heart Study

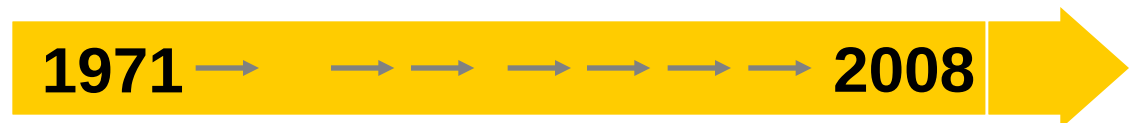
Intergeneration cohorts



Original cohort

N = 5,209 men and women (ages 28-62)

1644 spouse pairs, 596 extended families



Offspring study

N = 5,124 men & women (ages 5-70)

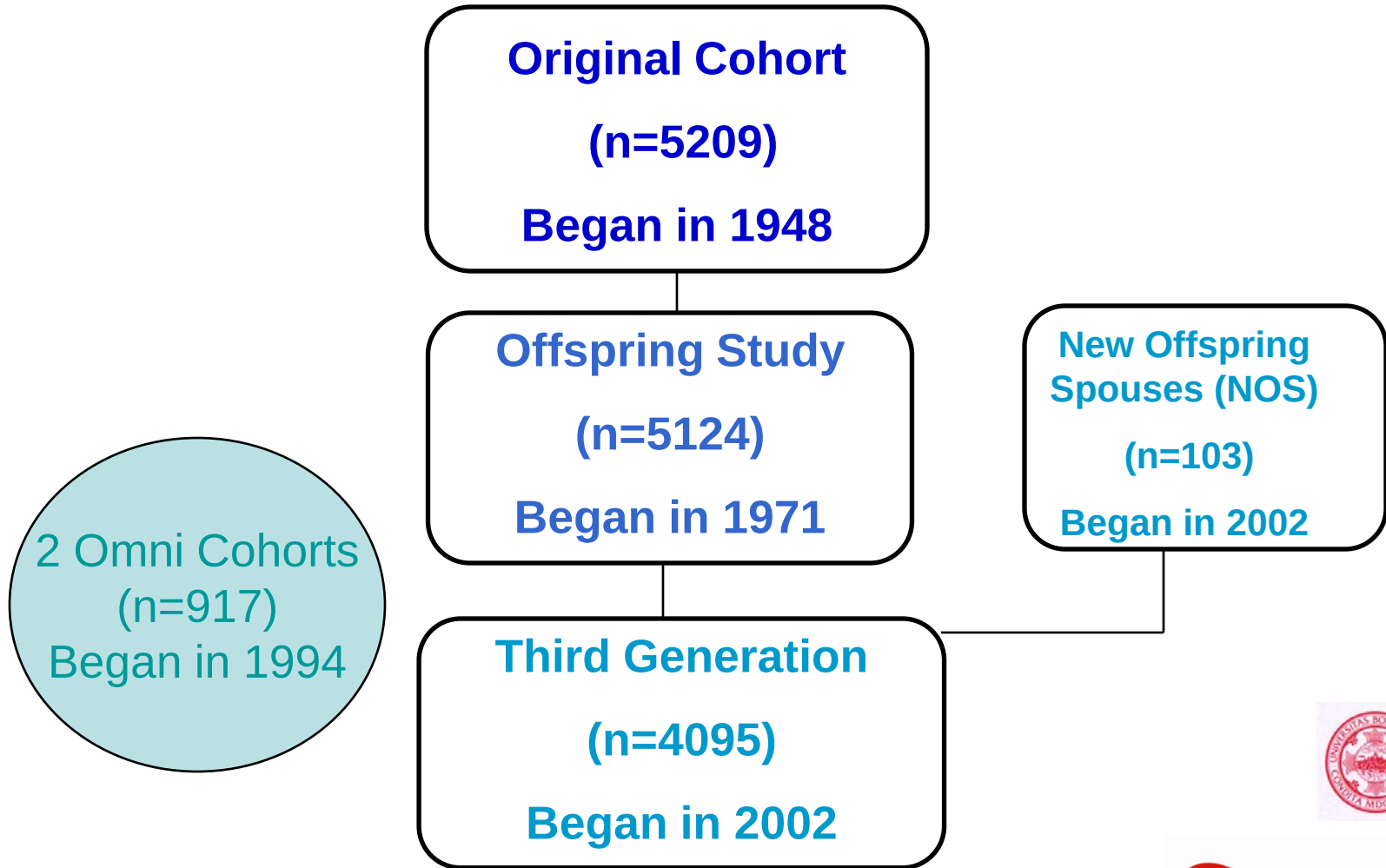
1576 spouse pairs, 3514 biological offspring



Third Generation study:

N = 4,095 men and women

OVERVIEW OF FRAMINGHAM COHORTS



Consent History at FHS

- 1948-1968 FHS under direct auspices of US Public Health Service, NIH, NHLBI with informal undocumented informed consent demonstrated by voluntary attendance at a series of examinations over 20 years.
- 1971- FHS under auspices of BUMC, formal consent begins with 2 sentence document. Text is revised at every exam cycle and often mid-cycle. Over time, more details of the research are specified in consent forms several pages long.
- 2001- Every FHS participant folder is reviewed to note all versions of consent forms signed by each individual participant starting in 1971.

First FHS Consent Form

DECK C3 FRAMINGHAM OFFSPRING STUDY EXAM1

RECORD NUMBER _____

CONSENT FOR INTERVIEW AND EXAMINATION

I have been fully informed of the nature of this study which includes a medical history, physical examination, blood tests and electrocardiogram and give my consent to be examined. I also authorize the Framingham study staff to secure pertinent medical information from my family, physicians, and/or hospital records for the purposes of this study.

Date_____ Name_____

NIH – 1635-3 9-71 OMB 66-R1236 Expires Dec. 31, 1974

NAME: _____

Voluntary Participation. You are free to withdraw your consent and to discontinue participation for any of the procedures in the Framingham Study at any time. You may choose to withdraw your samples at a future date and your sample will be destroyed at that time.

Please answer the following questions:

YES	NO	I agree to participate in the Physical Examination and Genetic Studies of factors contributing to heart, lung and blood diseases, stroke, dementia, osteoarthritis, osteoporosis, deafness, cancer, and other major diseases and health conditions.
☐	☐	

YES	NO	I agree to provide a blood sample from which a living tissue sample (cell line) will be made. This cell line will be stored at the BU/Framingham laboratories. The DNA will be extracted from it and will be made available to qualified scientists studying the diseases listed above.
☐	☐	

09.21.01

Research Consent Form

Offspring Exam 8

Please check the appropriate box beside each statement you agree with:

- 1) ☐ YES ☐ NO I agree to participate in the Framingham Heart Study examinations described above to study the frequency of and factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, and other diseases and health conditions.
- 2) ☐ YES ☐ NO I agree to provide a blood sample from which DNA and other components can be extracted. The DNA will be made available to researchers studying the diseases listed above.
- 3) ☐ YES ☐ NO If a cell line has not already been collected, I agree to allow a cell line to be made from a sample of my blood to provide a renewable supply of DNA. (A cell line is a frozen sample of specially processed white cells from your blood that allows us to grow more white cells and get more DNA from them in the future as needed for research projects).
- 4) ☐ YES ☐ NO I agree to participate in the genetic studies of factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, and memory loss.
- 5) ☐ YES ☐ NO I agree to participate in genetic studies of other diseases and health conditions including but not limited to joint disease, bone loss, and cancer.
- 6) ☐ YES ☐ NO I agree to participate in genetic studies of reproductive conditions and mental health conditions such as alcohol use and depressive symptoms.
- 7) ☐ YES ☐ NO I agree to allow researchers from private companies to have access to my DNA and genetic data which may be used to develop diagnostic lab tests or pharmaceutical therapies that could benefit many people. (Note: You or your heirs will not benefit financially from this, nor will your DNA be sold to anyone.)
- 8) ☐ YES ☐ NO I agree to allow the Framingham Heart Study to release the findings from non-genetic tests and examinations to my physician, clinic, or hospital.
- 9) ☐ YES ☐ NO If a genetic condition is identified that may have potentially important health and treatment implications for me, I agree to allow the Framingham Heart Study to notify me and with my permission to notify my physician.

Key Aspects of Informed Consent in Observational Research

- Data Collection – What happens in the examination cycle? Burden, Risk, Benefit, **Consent with Options**
- Data Access - **Repositories** of FHS GWS and phenotypic data, Security, Staff Training & Certification
- Reporting Results – Scientific Publications, Standard Measures, **Incidental Findings, Novel Biomarkers and Genetic Associations**

(Current Challenges)

INFORMED CONSENT IS A TWO WAY PROCESS

Science 17 February 2006

Vol. 311, no. 5763, p. 933

NEWS OF THE WEEK GENOMIC DATABASES: NIH Goes After Whole Genome in Search of Disease Genes

Jocelyn Kaiser

The National Institutes of Health (NIH) is ramping up efforts to find genes involved in common diseases. **A wave of new projects will take advantage of reduced costs to search for disease genes in people who are already enrolled in existing studies, including the famed Framingham Heart Study. The data will be freely available to other scientists.** Genetic studies on large groups aren't new. But few have searched the entire genomes of participants for common genetic markers called single nucleotide polymorphisms (SNPs)...Using new technologies and the HapMap, a map of human genetic variation completed last year that allows gene hunters to use fewer markers, **the cost of such "whole genome association" studies has dropped 30-fold, says Francis Collins, director of the National Human Genome Research Institute.**

EXAM 1

DECK C3

FRAMINGHAM OFFSPRING STUDY

RECORD NUMBER

CONSENT FOR INTERVIEW AND EXAMINATION

I have been fully informed of the nature of this study which includes a medical history, physical examination, blood tests and electrocardiogram and give my consent to be examined. I also authorize the Framingham study staff to secure pertinent medical information from my family, physician, and/or hospital records for the purposes of this study.

DATE

NAME

19-11-1974

CONSENT FORM PERMISSION FOR RELEASE OF GENETIC SAMPLES AND DATA **THROUGH APRIL 30, 2007**

Cohort Group	Permission for release of genetic samples and data 0=Non-Profit Permitted, For-Profit Prohibited 1=Non-Profit & For-Profit Permitted 2=Non-Profit Permitted, For-Profit Indeterminate* 3=Non-Profit & For-Profit, No genetics Permitted	Frequency
Original Cohort n=5209	0	31
	1	369
	2	4,679
	3	130
Offspring n=5124	0	210
	1	2,441
	2	2,346
	3	127
Gen 3 n=4095	0	85
	1	3,997
	2	0
	3	13

* 'For-Profit Use' not established for consents before July 2001. The consents have no opt in/out check box for use by Private Company.

Supplementary Sources of Information for Participants

- Recruitment calls, admitting interview, consent interview
- Explanation of procedures at examination stations
- Exit interview
- Access to Investigators and staff
- Media coverage
- Newsletters, Brochures
- Routine Result reports
- Special letters
- Web site <http://www.framinghamheartstudy.org>
- Focus groups and Advisory Boards

Gen 3 Exam 1:

Consent for Genetic Research

(2002-2005)

N (%)	Consent for Genetic Research
3997 (97.6%)	Permission for all genetic research
85 (2.1%)	Restriction on private companies
13 (0.3%)	No permission for genetic research

Not included in Gen 3 Exam 1 consent process:

Consent for genetic studies of particular health conditions

Consent to receive genetic results if a potentially important health risk is identified and treatment is available

Offspring Exam 8: Consent for Genetic Research

Yes	No	Consent for genetic research
2583	2	Studies of heart & blood vessel diseases, lung & blood diseases, stroke and memory loss
2581	4	Studies of other diseases including joint disease, bone loss, & cancer.
2577	8	Studies of reproductive conditions and mental health conditions
2381	203	Allow researchers from private companies to have access to my DNA and genetic data

Abstracting Consent Data from FHS Consent Form Text and Checkboxes (1971-2001)

- Every version of FHS consent forms is assigned a version number.
- Every participant's FHS folder is reviewed and version numbers of all FHS consent forms are recorded in a data file for every individual including check box selections.
- All restrictions to consent are coded by version number. Restrictions may be imbedded in text of consent form, displayed as check boxes at the end of the consent form or, rarely, initiated *ad lib* by participants.
- Records of consent form versions and check box options are used programmatically with the associated restriction codes to indicate how the research data from individual participant may be accessed. The permissions and restrictions of the most recent consent form supersedes earlier versions for each individual. *Ad lib* communications are added and are effective until a later consent form is available.

Restrictions by Version to Research in FHS Consent Forms

VERSION	Freq	Percent	Cum Freq	Cum Percent	res4	YES/NO restriction	Restriction based on the follow ing	Group
	33	0.6	33	0.6	res4=0	NO	Assumption No consents before exam 12.1	1
1	456	8.9	492	9.6	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
2.1	29	0.6	521	10.2	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
2.2	143	2.8	664	13	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
23.2B	1	0	665	13	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
26.4	1	0	666	13	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
26.4B	1	0	667	13	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
3.1	92	1.8	906	17.7	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
3.2	47	0.9	953	18.6	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
4.1	45	0.9	998	19.5	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
4.2	72	1.4	1070	20.9	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
4.3	55	1.1	1125	22	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
4.4	54	1.1	1179	23	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.1	14	0.3	1193	23.3	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.1B	40	0.8	1233	24.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.2	1	0	1234	24.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.3	81	1.6	1315	25.7	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.4	72	1.4	1387	27.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.5	36	0.7	1423	27.8	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.6B	1	0	1424	27.8	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
5.7	1	0	1425	27.8	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.1	32	0.6	2500	48.8	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.2	4	0.1	2547	49.7	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.3	1	0	2548	49.7	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.5	17	0.3	2565	50.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.5B	1	0	2566	50.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
6.6	18	0.4	2584	50.4	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
6.7	7	0.1	2591	50.6	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
6.8	36	0.7	2627	51.3	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
6.9	15	0.3	2642	51.6	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
6.10	40	0.8	2540	49.6	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
6.11	3	0.1	2543	49.6	res4=1 res1=1	YES	Language written in the body of consent also restricts cell line	2
7.1	23	0.4	2670	52.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.2	54	1.1	2746	53.6	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.3	126	2.5	2872	56	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.3B	1	0	2873	56.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.4	1	0	2874	56.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.5	433	8.5	3307	64.5	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.5B	3	0.1	3310	64.6	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.6	539	10.5	3849	75.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.6B	1	0	3850	75.1	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.7	206	4	4056	79.2	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.8	271	5.3	4327	84.4	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.8A	15	0.3	4342	84.7	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.8B	1	0	4343	84.8	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.9	692	13.5	5035	98.3	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.9B	17	0.3	5052	98.6	res4=0	NO	Assumption made, nothing in the body of the consent nor check box	1
7.10	21	0.4	2691	52.5	res4	NO/YES	Check box regarding commercial use	3
7.10B	1	0	2692	52.5	res4=0	NO/YES	Check box regarding commercial use	3
7A.2	14	0.3	5066	98.3	res4	NO/YES	Check box regarding commercial use	3
7A.3	25	0.5	5091	99.4	res4	NO/YES	Check box regarding commercial use	3
OSTEO1	3	0.1	5094	99.4	res4=1	YES	Language written in the body of consent	2
OSTEO2	6	0.1	5100	99.5	res4=1	YES	Language written in the body of consent	2

Challenge: To map participant choices from consent versions, into a simple dataset, that indicates distribution for data and samples

- 36 years (1971-2007)
- ~229 consent versions
- 6 cohort groups
- 1-29 exams attended

Data Management Consent Goals

Ensure that the participants' choices are carried out with regards to use of their data and samples

- Document choices
- Communicate choices for release of data/samples
- Update choices

Tracking Participant Consent Forms

1. Capture consent in clinic or off-site
2. Enter data it into Clintrial database
3. Create data set of all consents
4. Extract participants last choice from one or more consents
5. Reduce to a 'use group' dataset

1. Capturing Participant Choices

- Consent form
- Incidental comments
- Phone calls
- Letters

2. Entering Data in Clintrial

3. Create data set of all consents

NUMBER OF DOCUMENTED CONSENTS, FROM 1971 THROUGH JULY 31, 2007

(Paper consents were administered for the first time in 1971 N=68279)

Cohort Group	Idtype	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Original Cohort	0	30,151	44.16	30,151	44.16
Offspring	1	32,501	47.60	62,652	91.76
New Offspring Spouse	2	104	0.15	62,756	91.91
Generation 3	3	4,117	6.03	66,873	97.94
OMNI Generation 1	7	995	1.46	67,868	99.40
OMNI Generation 2	72	411	0.60	68,279	100.00

Consent Check Boxes Over Time

A. 1971 No check boxes

FRAMINGHAM OFFSPRING STUDY

DECK C3

RECORD NUMBER

EXAM 1

CONSENT FOR INTERVIEW AND EXAMINATION

I have been fully informed of the nature of this study which includes a medical history, physical examination, blood tests and electrocardiogram and give my consent to be examined. I also authorize the Framingham study staff to secure pertinent medical information from my family physician and/or hospital records for the purposes of this study.

DATE

NAME

B. 1998 Two check boxes

NAME

COHORT EXAM 25

Page 2 of 2

CONSENT BY SUBSTITUTED JUDGMENT

Please answer the following questions:

YES ☐ NO ☐ I agree to participate in the Physical Examination and Genetic Studies of factors contributing to heart, lung and blood diseases, stroke, dementia, osteoporosis, diabetes, cancer, and other major diseases and health conditions.

YES ☐ NO ☐ I agree to provide a blood sample from which a living tissue sample (cell line) will be made. This cell line will be stored at the BWH Framingham laboratories. The DNA will be extracted from it and will be made available to qualified scientists studying the diseases listed above.

I have been informed that any questions concerning the research and procedures of this study may be directed to Philip A. Wolf, M.D., Boston University Framingham Study (508) 855-5475 or Daniel Levy, M.D., at The Framingham Study, (508) 877-6562, and that any questions I have regarding my rights as a research subject can be directed to the Boston University Medical Center Institutional Review Board Coordinator at (617) 636-7707. The Framingham Study is a medical research project sponsored by the National Institute of Health. It is authorized under 45CFR 162.143. The system of records which applies to the Framingham Study is documented in the Federal Register, Vol. 60, No. 13, Friday, January 20, 1995, pages 4264-4266.

I understand that participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which I otherwise am entitled, and I may discontinue participation at any time without penalty or loss of such benefits.

You have been asked to grant consent for participation of your _____ in this study, on higher behalf. In the judgment of the physicians caring for _____, he/she is unable adequately to understand the Informed Consent Form, due to severity of illness, and/or the effects of medications, and/or is otherwise unable to sign the form.

I have read this Informed Consent Form and the above paragraph, and I understand them. I understand that the decision to grant consent for this study is final and that the patient would have made more benefits able to make such a decision. I have been informed of the risks and benefits involved, and all of my questions have been answered by my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team.

I hereby give consent for _____ to participate in this research.

Date

Signature

Date

Witness

Phr. May 2, 2002

75

FILED BY: Mary Ann, L.L. 1/1/02

Phr. May 2, 2002

C. 2005 Nine check boxes

BOSTON UNIVERSITY SCHOOLS OF MEDICINE
PUBLIC HEALTH DENTAL MEDICINE AND
THE BOSTON MEDICAL CENTER

RESEARCH CONSENT FORM
Offspring Exam 8

H-22762- THE FRAMINGHAM HEART STUDY N01-HC-25195 1910G

When study results are published, your name and any other potentially identifying information (i.e. code number) will not be revealed. You will be kept informed through periodic publications from the Framingham Heart Study of any new findings about genetics, cardiovascular disease or other health conditions generated from the DNA analysis.

Information from this study and from your medical record may be reviewed and photocopied by the Food and Drug Administration (FDA) and/or state and federal regulatory agencies such as the Office of Human Research Protection as applicable, and the Institutional Review Board of Boston University Medical Center.

Please check the appropriate box beside each statement you agree with:

1) ☐ YES ☐ NO I agree to participate in the Framingham Heart Study examinations described above to study the frequency of and factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, and other diseases and health conditions.

2) ☐ YES ☐ NO I agree to provide a blood sample from which DNA and other components can be extracted. The DNA will be made available to researchers studying the diseases listed above.

3) ☐ YES ☐ NO If a cell line has not already been collected, I agree to allow a cell line to be made from a sample of my blood to provide a renewable supply of DNA. (A cell line is a frozen sample of specially processed white cells from your blood that allows us to grow more white cells and get more DNA from them in the future as needed for research projects).

4) ☐ YES ☐ NO I agree to participate in the genetic studies of factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, and memory loss.

5) ☐ YES ☐ NO I agree to participate in genetic studies of other diseases and health conditions including but not limited to joint disease, bone loss, and cancer.

6) ☐ YES ☐ NO I agree to participate in genetic studies of reproductive conditions and mental health conditions such as alcohol use and depressive symptoms.

7) ☐ YES ☐ NO I agree to allow researchers from private companies to have access to my DNA and genomic data which may be used to develop diagnostic lab tests or pharmaceutical therapies that could benefit many people. (Note: You or your heirs will not benefit financially from this, nor will your DNA be sold to anyone).

8) ☐ YES ☐ NO I agree to allow the Framingham Heart Study to release the findings from non-genetic tests and examinations to my physician, clinic, or hospital.

9) ☐ YES ☐ NO If a genetic condition is identified that may have potentially important health and treatment implications for me, I agree to allow the Framingham Heart Study to notify me and with my permission to notify my physician.

Offspring Exam 8

Last Amendment: 4/5/2007

Approval valid from May 16, 2007 through May 15, 2008. Chair: Initials: S. A.

Page 1

D. 2004 Waiver, use previous consent(s)

Consent Form Waiver-Cohort Exam 29

I, _____, of the Boston Medical Center (BMC) agree to a waiver of the process for a separately signed and dated written consent to research. (Waiver of consent is an exception to the usual process for research. It is only used when it is not feasible to have separate or written consent as described by the Human Subjects and a separate signature is not required. It is not to be used for research that involves a significant risk to the participant or that involves a significant risk to the community.)

The agreement will be arranged with a family member according to established protocols. The family member will be responsible for the consent of Exam 29. It will be required to provide written or verbal consent for the exam under the new waiver. Should the family member object to a blood sample, this objection will be honored. Waivers, who do not sign a consent form and/or signed consent for the exam under the waiver, this sheet will be completed by BMC staff with the participant's chart.

To Be Completed by Clinic Team

Site: _____ Exam Number: _____ Staff ID: _____

Participant Name: _____

4a- Clinic Exam 1- NH 2- Residence 3- Blood draw only

4b- Other _____ (with sig)

of Current Status: _____ If H-Status 1, send to Neurology Group

Consent, 2- Waiver Only, 3- Consent form signed may qualify for Waiver.

Dementia Rating Scale (VDRS) _____ or _____

Review Outcome/Severity Score _____ or _____

Status _____ or _____

Score _____ at exam _____ or _____

Score _____ at exam _____ or _____

or _____

Dementia Review Tracking

Neurology for Review: _____ 1-Yes 2-No

at Neurology: _____

Over 2

4. Extract participants' last choice

CHECK BOX

CB1-CB9



RESTRICTION

RES1-RES12



DISTRIBUTION

YES/NO



USE GROUP

NO RELEASE/NO-NON-PROFIT/FOR-PROFIT

Extract Check Box Value and Code Restriction for Distribution of Genetic Data and Samples

Early Consent

CB2 ☐ YES ☐ NO Provide blood for DNA and Cell Line → Res1 Res3 → Dist y/n

Recent Consent

CB2 ☐ YES ☐ NO Provide blood for DNA → Res3 → Dist y/n

CB3 ☐ YES ☐ NO Provide blood for Cell Line → Res1 → Dist y/n

CB7 ☐ YES ☐ NO Permission to private companies → Res4 → Use Group p/np

SUMMARY OF LAST DOCUMENTED CHECK BOX USED FOR RESTRICTIONS FOR CLINIC OFFSPRING EXAM 8 APRIL 1, 2005 THROUGH APRIL 30, 2007

Meaning of Check Box for Gen3 Consents	'Nth' Check Box on Consent Form	Check Box Code 1=Yes 0=No blank =Missing	Offspring Clinic Consent Frequency n=2585
Agree to participate in the physical exam	1st	Yes No Missing	2,585 0 0
Genetic research permitted (Restriction 3)	2nd	Yes No Missing	2,583 2 0
Cell line permitted (Restriction 1)	3rd	Yes No Missing	2,579 5 1
Genetic studies of heart, blood vessel, lung and blood vessel disease permitted (Restriction 10)	4th	Yes No Missing	2,583 2 0
Genetic studies of other diseases not limited to joint, bone loss and cancer permitted (Restriction 11)	5th	Yes No Missing	2,581 4 0
Genetic studies of reproductive, mental health and alcohol permitted (Restriction 12)	6th	Yes No Missing	2,577 8 0
Commercial research permitted (Restriction 4)	7th	Yes No Missing	2,381 203 1

5. Reduce to a 'use group' dataset

User Groups For Genetic Data and Samples

- **Use Prohibited**
- **Non-Profit Use Only**
- **For-Profit Use Permitted**

Breakdown of Last Documented Choice, for Cohort, Offspring, Gen3 and NOS Participants (Non-Profit Use Only, July, 2007)

No Release for any genetic studies n=263

Release For Non-Profit Use n=14,268

Total n=14,531

If distribution is **prohibited for genetic studies** in general, it will always be prohibited for use by private (for-profit) companies.

Breakdown of Last Documented Choice, for Cohort, Offspring, Gen3 and NOS Participants (Non-Profit and For-Profit Use, July 2007)

User Status Group

1 General Research Use (P+NP) (n=7056)

2 Non-Profit Use Only (n=7212)

To construct “general research” and “non profit” user groups

General research user: “use_grp”=1 (n=7056)

Non profit user: “use_grp”=1 + “use_grp”=2 (n=14268)

Gen 3 Exam 2: Proposed Informed Consent

Check Boxes for Genetic Research

I agree to provide a blood sample from which DNA and other components can be extracted. (Res3)

I agree to participate in the genetic studies of factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss and other diseases and health conditions (Res10 + Res11)

I agree to participate in genetic studies of reproductive health and mental health conditions such as alcohol use and depressive symptoms (Res12)

I agree to allow researchers from private for-profit companies to have access to my DNA and genetic data (Res4)

If a genetic condition is identified that may have potentially important health and treatment implications for me, I agree to allow the Framingham Heart Study to notify me and with my permission to notify my physician

Informed Consent is a Two-Way Process

**It is our duty at Framingham to
ensure that the participants'
choices are updated and
carried out**

