MACS news

Health Issues From Aging vs. HIV: Medical Records Hold the Key

John Phair, MD, MACS Principal Investigator

The benefits of effective antiretroviral therapy (HAART) are apparent to everyone. In the MACS, the most significant change has been the prolonged survival of men who had advanced HIV infection. Before the availability of HAART, the median survival of MACS men who had clinical AIDS was 15 months. That means that half of men with AIDS died before 15 months had passed. Now the survival of the MACS men who have had an AIDS defining illness is 15 or 16 years and counting. It is estimated that the majority of men with HIV infection will live 35 years or more.

With longevity comes naturally occurring health issues. Therefore, older infected persons will most likely experience the same health issues as those of older uninfected individuals. With this, a new research question surfaces: Which health issues are a direct result of aging, and which are a direct result of HIV? And what role do HIV medications play? The MACS is positioned to be able to provide much needed information regarding these questions. These issues will be a major emphasis of the research going forward.

Having an accurate history of illnesses, medications, and medical emergencies for each MACS participant goes a long way in helping MACS researchers to understand the relationship between aging and HIV. Therefore, it is extremely important that each MACS participant reports any illness that has occurred since the last visit.

It is also important to provide records of hospitalizations for the MACS investigators to review. Increased protection of privacy has made hospital records increasingly difficult to obtain even when participants give permission. These records are by law the patient's property. Therefore the hospital must give the patient a copy if he asks for it.

How can you help? The most efficient way to have the records available to the MACS is for the participant to obtain them, and bring them to the clinic. These records are covered by our certificate of confidentiality and will not be available to anyone except the MACS investigators. If you have questions about this, be sure and ask the MACS Team at your next visit.

Mental Health Issues

Cheryl Watson, MSW, WIHS-MACS Neuropsych and Mental Health Coordinator

Mental health affects every area of life. Left untreated, mental health issues can undermine physical health, lead to poorer physical health, and lower sense of well-being. A report by the National Institute of Health stated,

> Depression has been found to occur at a higher rate among people who have other serious illnesses such as heart disease, stroke, cancer, HIV, diabetes, and Parkinson's. Symptoms of depression are sometimes mistaken for inevitable accompaniments to these other illnesses. However, research has shown that the co-occurring depression can and should be treated, and that in many cases treating the depression can also improve the outcome of the other illness (http://menanddepression.nimh.nih.gov).

Regular, active MACS participants receive a general physical exam twice yearly during their visits. It should be noted that like other physicals, the MACS pays closer attention to physical health than it does to issues of mental health.

Men commonly ignore, or are unfamiliar with identifying their own need for mental health care. In particular, men of color have traditionally lacked the necessary insurance funding to pay for mental health care services.

There is no need to suffer in silence. Mental health care is available from a variety of public and private sources, including low-cost or free care. Improved mental health is worth the effort. Life becomes easier to manage when mental health status is also positive.

Physicians are able to provide referrals to mental health providers during routine

(see Mental Health, page MACS4)

MACS Train Keeps Chugging Along

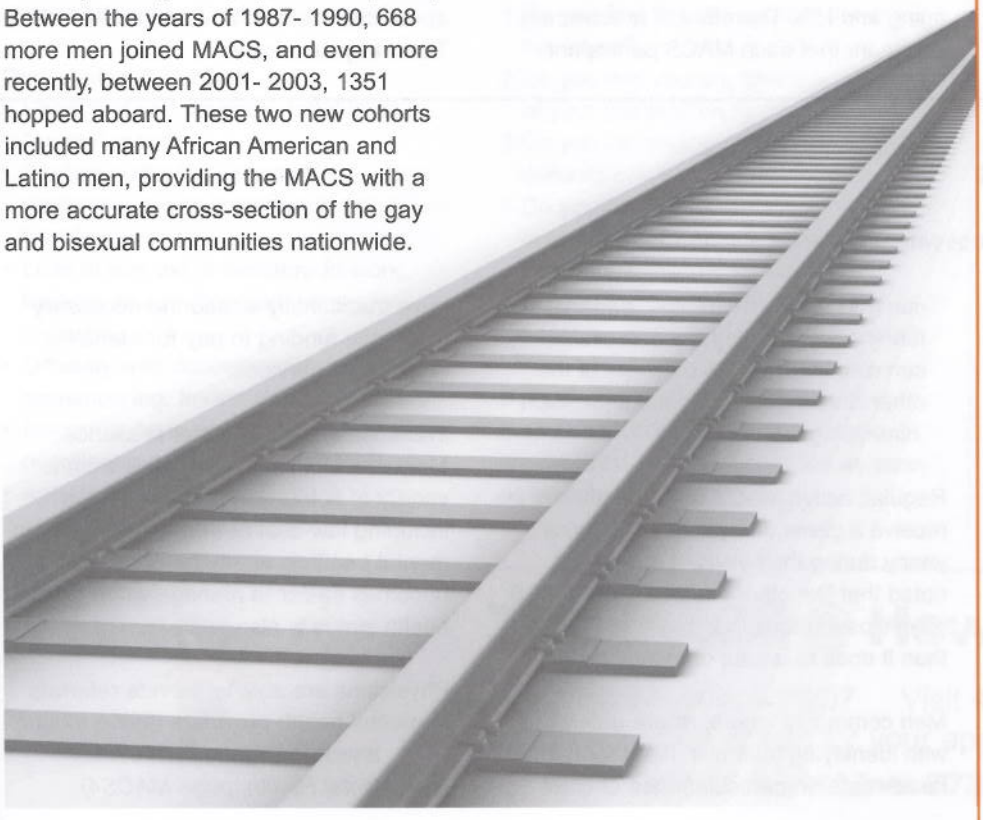
Michelle Johns, MACS Research Associate

In working daily on the MACS over the last two years, I am consistently impressed with the invested interest that each participant who walks through our doors has in the long term goals of the MACS. With both those that have been in the study since its conception ("original cohort"), and those who joined at the beginning of the new millennium ("new cohort"), I field many questions about the evolution of the MACS, and the state of well-being of the MACS population as a whole. How many were with us when we began, and how many are still coming after all these years?

The total number of MACS participants ever enrolled in the study from 1984 until today is an impressive 6973. Of course, not all of these men commenced their journey with the MACS at the same time. Our veteran participants joined with the study in 1984, when MACS recruited the initial 4954 gay or bisexual men to take part of this groundbreaking longitudinal study of the progression of HIV disease. Down the road, the MACS made racial diversity amongst its population a priority. Between the years of 1987- 1990, 668 more men joined MACS, and even more recently, between 2001- 2003, 1351 hopped aboard. These two new cohorts included many African American and Latino men, providing the MACS with a more accurate cross-section of the gay and bisexual communities nationwide.

Throughout the years, our ranks have shrunk. Some members of the MACS family were lost to HIV/AIDS, some died of other non-HIV causes, a small number have withdrawn from the study of their own accord, and still others have moved to parts of the world that make keeping up with the MACS difficult. Today, nationwide, we have 2703 active participants, and an additional 362 who are reachable, but have not come in for their last few visits. Over MACS' 24 years, nearly half of the original population is still with us – an astonishing 1445 seronegative men and 1258 seropositive men – who tenaciously come into their local MACS center twice yearly for physicals, blood work, and behavioral questionnaires.

This loyalty is what makes the MACS a groundbreaking research enterprise. Across the nation, employees of the MACS experience the same sight that I do: friendly, memorable faces with a personal commitment to the longevity of the MACS.



The MACS @ Howard Brown

The MACS Blood Draw

Fasting is essential to obtaining accurate readings for cholesterol, glucose, and triglyciderides. For optimal results, participants should fast a minimum of eight hours prior to their visit. Blood draws are typically performed at the start of each MACS visit. In appreciation for your time and loyalty to the MACS, we provide a beverage and filling snack.

MACS Labs: What is included?

During each MACS visit, participants are asked to donate 18-19 tubes of blood. Each draw tests for the following:

- Hemoglobin A1C (early detection of diabetes through monitoring of glucose),
- Chemistry "Chem" Panel (measures chemicals and nutritional elements in the blood specifically for the MACS),
- Complete Blood Count ("CBC" which monitors HIV infection by measuring the number of red blood cells, white blood cells and platelets, as well as CD4 and CD8 cell counts and percentages.
- HIV Testing (for HIV- participants)
- Cholesterol and Triglycerides (HDL, LDL)
- Urine screening for total protein with creatinine

Occasionally, the MACS runs other tests including Hepatitis Testing for B and C, including protime (PT). Participants are selected for these occasional tests based on their individual results.

Fast Facts!

- Approximately 65,000 individuals in North America, Western and Central Europe became infected with HIV in 2005.
- Throughout North America, Western and Central Europe, the number of people with HIV rose to 1.9 million in 2005.

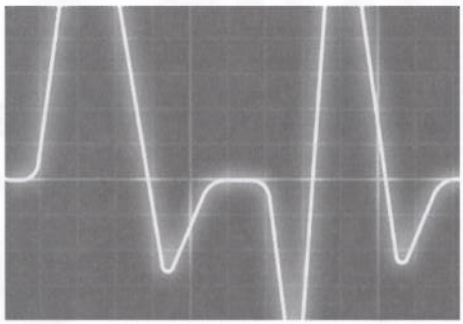
(see Howard Brown, page MACS4)

MACS Cardiovascular Study

John Phair, MD, MACS Principal Investigator

The initial results of the MACS Cardiovascular Study were presented at the International AIDS Conference held in Australia this past July. Dr. Kingsley of the Pittsburgh MACS reported on the prevalence and extent of coronary artery calcification in HIV infected and uninfected MACS participants. This calcification is the result of atherosclerosis, the cause of heart attacks and strokes. The goal was to determine if HIV infection and long term HAART use increased the risk and extent of calcification in coronary arteries. The results were adjusted for known risk factors such as age, serum lipids (including the good and bad cholesterol), body mass index (height/weight), and family history of coronary heart disease.

The study enrolled 332 HIV uninfected participants, 84 infected men not receiving HAART and 531 HAART users. All participants were at least 40 years old, and had no history of heart disease or stroke.



The study demonstrated that calcification was only marginally increased among long-term HAART users in comparison to HAART naïve men who had used HAART for less than 7 years. The extent of calcification was significantly reduced among HAART users in comparison to uninfected men. This effect on the extent of calcification was greatest amongst men not receiving lipid lowering therapy such as statins. The lower level of coronary artery calcification in HIV infected men may be partially due to the lengthy period of low density lipoprotein, the "bad" cholesterol seen in HIV infected individuals before HAART use. Alternatively, men with a higher risk of atherosclerosis, men with high cholesterols, and other serum fats may have selectively started on lipid lowering treatment that prevented or slowed progression of coronary atherosclerosis.

A report of the findings of the carotid ultra sound study will be presented shortly. The women's HIV study (WIHS) used the same protocol, allowing a comparison of the effect of gender, in addition to the usual factors associated with heart disease and stroke.

This fall the MACS will begin a follow-up cardiovascular study. Each participant will be asked to have a second carotid artery ultrasound and coronary artery CAT scan approximately three years after their first examination. This will allow assessment of progression of atherosclerosis in uninfected, infected HARRT users and HAART naïve men.

Kidney Functioning Within the MACS

Frank J. Palella, MD, Chicago MACS Coinvestigator

MACS investigators have become more interested in evaluating kidney function over time. This heightened interest has developed in response to the recognition that kidney disease has emerged as an important cause of illness among HAART-treated persons, particularly amongst those with co-existing diabetes or hypertension (high blood pressure), those whose HIV infection is poorly controlled, and those of advancing age.

It has long been known that African-Americans are disproportionately affected by kidney disease. Also, the increasingly common use of the antiretroviral tenofovir (Viread, a medication also found in the fixed-dose combination pills Truvada and Atripla), which is known to exert potentially adverse effects upon the kidney, has further underscored the need to monitor kidney functioning. Recently reported data from a large well-known French cohort of HIV-infected persons participating in the Aquitaine study identified several of these factors as being associated with a greater likelihood for occurrence of kidney disease, including more advanced age, higher plasma HIV RNA (viral load) levels, and lower CD4 lymphocyte counts. Recent data from the MACS evaluating kidney function also revealed age-related declines in kidney function over time, but failed to find an association between worsening kidney function and HIV status, prior AIDS diagnosis, HIV viral load, CD4 cell count levels or tenofovir use, except among persons who already had evidence of poorer kidney function.

Over the past year, the MACS has incorporated routine measurements of urine protein levels. This is being done to assess early signs of kidney disease, regardless of its cause. Preliminary data from the MACS has indicated that the presence of abnormal urine protein levels is associated with declines in kidney function over time.

Beginning this fall, the Chicago MACS will undertake an innovative research study in which a number of MACS participants will undergo precise direct measurements of kidney function. This will involve intravenous infusion of a harmless sugar-like substance called iohexol. Iohexol is filtered and eliminated through the

(see Kidney, page MACS4)

(Mental Health, from MACS1)

check-ups. Additionally, community mental health centers, and numerous social service agencies can provide assessment and counseling on a sliding scale basis. Bilingual staff is often available to meet the needs of specific communities. One such source is the phone line "311" which can provide a list of referrals, including sites like the Metropolitan Family Services, and Pilsen-Little Village CMHC.

Two of the most common mental health problems are depressive and anxiety disorders. While individuals respond differently to mental health issues, and will manifest mental health disorders differently, the following may be strong indicators of a pervasive affective problem:

- Consistently feeling irritated and frustrated
- Behaving violently
- Taking unnecessary, reckless risks
- Avoiding family and friends, and social activities that once were pleasurable
- Increasing consumption of alcohol and/or recreational drugs

A symptom checklist follows, as does a checklist for daily functioning:

Depressive Disorders
- Persistent sad, anxious, irritable or "empty" mood
- Feeling guilty or feelings of worthlessness, helplessness, or hopelessness
- Loss of interest or pleasure in work, hobbies or activities that were once enjoyable
- Difficulty with concentration, remembering, and/or decision-making
- Insomnia, early-morning awakening, or oversleeping
- Appetite and/or weight loss or overeating and weight gain
- Thoughts of death or suicide; suicide attempts

Mania
- Excessive happiness, hopefulness, and excitement
- Sudden changes from feeling joyful to irritated, angry, and hostile
- Restlessness, increased energy and less need for sleep
- Rapid talk, talkativeness

Racing thoughts
- Inflated self-esteem or grandiosity– unrealistic beliefs in one's ability, intelligence, and powers; may be delusional

Anxiety Disorders
- Chronic feelings of fear or fearfulness for no apparent reason
- Endless checking or rechecking actions
- Constant and unrealistic worry about everyday occurrences and activities.

If after reviewing these symptom checklists you have concerns, start by asking yourself a few questions to get an idea of your daily functioning:

1. Do you feel hopeful and upbeat about the future?
2. Do you feel you are taking good care of your physical health?
3. Do you fall asleep and wake up without difficulty?
4. Do you have at least two close friends or loved ones with whom you can talk and trust in important matters?
5. Do you feel like you are able to accomplish most of your daily goals?

If you feel concerned about your responses to the checklist, then you should consult with a physician as soon as possible.

(Kidney, from MACS3)

kidneys. The serial measurement of blood iohexol levels over a period of several hours will allow precise measurement of kidney functioning.

(Howard Brown, from MACS2)

- Antiretroviral therapies have helped to decrease the number of AIDS-related deaths to approximiately 30,000 per year throughout North America, Western and Central Europe.
- 2003 was the first year that the number of people living with HIV in the United States exceeded one million.

(Source: http://www.unaids.org/en/regions_countries/regions/nthamer_west_cent_europe.asp)

MACS Clinic Hours:
Mondays: 1 - 6 pm
Tuesdays: 9 - 11am
Wednesdays: 9 - 11 am

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Visit 47 ends 9/26/07 Visit 48 starts 10/01/07
Call ahead for your appointment!
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