The ABCs of Research, and How You Can Help

Edward C. Jones, MD, MA | Assistant Attending Orthopedic Surgeon
Chairman, Institutional Review Board
Assistant Professor of Orthopedic Surgery | Weill Cornell Medical College

Today enormous medical advances are benefiting millions of people around the world. Yet none of those steps forward could have been taken without one crucial cog in the wheel of health care: research.

Research is the engine that drives innovation and improvements in patient care, which lead to better outcomes. We owe a great deal of gratitude to the many people who have volunteered to participate in studies assessing new therapies and novel diagnostic methods, as well as research surveying quality of life, healthcare behaviors, and public health needs. The findings of these studies can help to change the standard of care for a particular illness, disorder, or injury, and lead investigators in new directions they would not have otherwise considered.

Types of Research

Investigations that take place in a laboratory and don't involve people are considered basic science research. They may explore cells, tissue, or animals. Those that have the potential to benefit human beings are called translational or "bench-to-bedside" research, because their findings may lead to studies in people.

Research that involves people is called clinical research. Types of clinical research include:

Clinical Trials

Clinical trials are classified as Phase I, Phase II, and Phase III. (See chart on page 4.) Among Phase II and III studies, the gold standard is the "randomized prospective clinical trial." This type of study compares two or more groups of patients who are randomly assigned to get different treatments or to follow different regimens to see which is better.

Even better is the "blinded" randomized study, in which the patients, the investigators, and sometimes both (a "double-blind" study, the most valid type) do not know which study treatment each patient is receiving until the clinical trial is over. This approach reduces the risk for bias and the "placebo effect" in patients. (The placebo effect occurs when someone who thinks they are receiving the study drug may actually report feeling better, even though they may be taking a sugar pill called a "placebo.")

An example of a randomized prospective study would be one that compared two groups of patients continued on page 4
Extraordinary advances in health care have occurred in laboratories, hospitals, and other medical institutions over the last century. Equally important is the way those advances make their way into communities to benefit individuals. But how do we know what a community needs? How do we come to understand their behaviors and beliefs? And how can we use that knowledge to improve public health?

Enter “community-based participatory research”: studies which assess the experiences, opinions, knowledge, and attitudes of the people in a community to clarify new research directions. The goals of community-based participatory research are to:
- Identify the healthcare needs of a community
- Determine what questions a study should set out to answer
- Conduct community assessments to answer those questions
- Determine how the findings of the study can be used to design initiatives that may improve the health of the community.

Roots in Anthropology
Community-based participatory research has evolved over the last several decades. It is a social science, with its roots in anthropology. Investigators initially observed communities to see what their health issues were — gathering information that would help them decide what topics to study, but without necessarily engaging the participation of community residents. Many studies began in an effort to better understand the multiple needs of the diverse populations of the United States. Today, members of a community may be actively engaged in the research by participating in focus groups, partaking in one-on-one interviews, and answering survey questions. (See page 3 for information on Hospital for Special Surgery’s community health needs assessment.)

For example, investigators may ask you about your health behaviors: Do you exercise? What is your diet like? Do you smoke, or consume alcohol? They may also evaluate how healthcare resources are used: Do you see your doctors regularly? Do you seek help to manage chronic pain, or tough it out? What illnesses do you suffer from? Along the way, researchers may learn how beliefs and behaviors related to ethnicity, race, gender, age, and family and social structure affect the way community members take care of themselves.

The Fruits of Partnership
Institutions such as Hospital for Special Surgery are key leaders in community research. But they cannot go it alone, and often partner continued on page 3
Community Research, cont’d from page 2
with community-based organizations that understand a group’s culture and behaviors and can help overcome barriers such as foreign language interpretation. Researchers may gather feedback from local organizations, city and state agencies, colleges and universities, public schools, the private sector, patients, and the broader community to identify a community’s needs, ascertain healthcare gaps, and inform new directions for efforts to improve public health.

For example, the HSS Asian Community Bone Health Initiative aims to improve the quality of life of at-risk older adult members of the New York City Asian community by helping them to stay active and better manage chronic bone and joint diseases through exercise classes and educational workshops. HSS partnered with many different organizations — including the New York City Department of Aging, local senior centers, the New York Public Library and the HSS-China Orthopedic Education Exchange — to learn more about musculoskeletal health and the needs of this growing population.

SNEAKER® (Super Nutrition Education for All Kids to Eat Right) provides culturally sensitive nutrition education to New York City children and their families residing in underserved communities. To develop this program, HSS reached out to public schools to identify the healthcare needs of children in the community.

Recognizing the value of community-based participatory research, HSS recently formed a Community Benefit and Community Service Committee of the Board of

continued on page 5
after surgery for a herniated spinal disk, with one group wearing a back brace after surgery and the other group proceeding directly to physical therapy (without a back brace). Researchers would compare the two groups to see if one fared better than the other by measuring “endpoints” — such as their level of mobility, pain, and strength — to conclude if one approach is better than the other.

Outcomes Research
Outcomes research is a form of clinical research in which investigators monitor patients for months or years after they have been treated to see how well they do. Participants periodically complete questionnaires that ask them about their level of functioning and quality of life. Such studies are very important for evaluating the long-term success of different types of treatments, such as joint replacements. HSS and other hospitals have created dedicated programs to gather outcomes data from patients and collect it into registries that doctors can access when they wish to predict how well a particular patient might do with a certain treatment.

Community-Based Participatory Research
Not all research in people assesses treatments. For example, community-based participatory research is conducted to identify the healthcare needs of large groups of people, often according to their ethnicity, gender, socioeconomic level, age, and so forth. These studies are designed to generate questions that, when answered, can be used to create programs that benefit the community. (To learn more, see page 2.)

A Word about Informed Consent
Before anyone can participate in a clinical trial, he or she must read and sign an informed consent document. This document outlines what the study is seeking to determine, why the patient is being presented with the opportunity to participate, and what the potential risks and benefits are. The informed consent document also tells participants just how much of their time is required, and how long the study will run. Some last just a few months, while others continue for years. To learn more about informed consent and questions you are encouraged to ask, see page 6.
Trustees. This committee will further strengthen the commitment of HSS to evaluating and improving community health.

Getting Involved

Community-based participatory research enables investigators to meet community members where they live, breathe, and function on a daily basis. If you are approached to participate in research in your community, you will be presented with an opportunity to make your healthcare needs known and to help your community through your participation.

The findings of community research could result in novel programs that benefit you and others in your community. Your participation is valued and appreciated!

More About Research

- ClinicalTrials.gov information on clinical trials
- Office for Human Research Protections
- National Institutes of Health: Clinical Research Trials and You
- Understanding Clinical Trials (HSS)
- HSS Research and Clinical Trials: Protecting People Who Volunteer to Participate
- Outcome Studies: The Way to Improved Care (HSS)

Should You Participate?

During the course of your medical care, you may be presented with the opportunity to participate in a clinical trial. The choice is entirely yours — your participation is strictly voluntary. Read the informed consent document thoroughly. Ask questions. You may find it helpful to discuss it with your family or your personal doctor. And remember that if you do enroll and you change your mind, you can withdraw from the study at any time.

If you do decide to participate... thank you. You may not only benefit yourself, but thousands of other patients in the future.
Informed consent is the process by which clinical study participants learn why a study is being done, what questions the investigators are seeking to answer, the potential risks and benefits of participating, and how much time someone will need to commit to partake in the study. Its purpose is to establish a clear line of communication between the study investigators, participants, and the participants’ families.

The informed consent process begins from the very first moment someone becomes aware of a study and continues throughout the investigation. Research staff members communicate face-to-face with potential study participants to talk about the details of the research and to answer any questions. In some cases, informed consent continues after a study is over, when research staff reach out to participants to update them on results or to inform them of a particular side effect they may experience later.

The History of Protection
Decades ago, not everyone participating in a clinical trial was adequately informed about a research study’s goals and possible risks. For example, in 1932, the Tuskegee Study began exploring the progression of untreated syphilis in black men who erroneously believed they were receiving medical treatment. Researchers told the men they were being treated for “bad blood,” a local term used to describe several ailments, including syphilis, anemia, and fatigue. In truth, the men did not receive the proper treatment needed to cure their illness. In exchange for taking part in the study, they did receive free medical exams, free meals, and burial insurance.

There were no federal informed consent requirements then, as there are now, and there was enormous public outcry when people learned that the men had been misled. Back then, informed consent was inconsistent, and the amount of information study participants received may have depended on their race, class, and gender.

In 1979, the U.S. Department of Health and Human Services issued the Belmont Report, creating the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. It was the first step in the development of a formal process which, to this day, protects all people participating in medical research. Informed consent evolved as a critical component of the clinical research process.
The Informed Consent Document

As part of the informed consent procedure, all participants in clinical research sign an informed consent document. This document outlines such details as why the study is being done, who is eligible to participate, what will be evaluated, potential risks and benefits, and what patients have to do during their participation. Informed consent documents must be approved by a hospital’s Institutional Review Board (IRB) before a study can begin enrolling patients. (See page 4 to learn more about IRBs.) A research staff member discusses the document and its contents with each study participant, and patients cannot enroll until they sign it.

What You Should Know

As you consider your participation in a clinical trial, know that:

- Your participation is voluntary.
- If you choose not to participate, you will not be penalized by receiving inferior care.
- If you choose to participate, you have the right to drop out of the study at any time.
- An investigational treatment may or may not work for you. If you’re not comfortable with this possibility, choose the standard course of care for your disorder.
- If you are presented with an informed consent document that does not contain a stamp indicating it has been approved by the institution’s IRB, do not sign it. Give it back to the research staff member and ask for an IRB-approved copy.
- You are entitled to ask questions of the research staff or express any concerns at any time before, during, or after the study.
- If you are completing a study questionnaire and don’t feel comfortable answering certain questions, you can skip them.

Finally, take your time. If you don’t feel ready to sign an informed consent document when it is first presented to you, take it home. Consider discussing it with your family or friends. If you need to sign it sooner than later (for example, before a scheduled surgery) and you are feeling stressed or uncertain, then you may decline and not worry about participating in the study.

Remember: when it comes to informed consent and clinical research, the choice is yours.

Questions to Ask About Participating in a Study

If you are considering participating in a study, here are some questions you may want to ask. Most of the answers should also be detailed in the informed consent document you will be asked to sign.

1. Why is this study being conducted?
2. Why am I being considered for it?
3. How did you get my name? (If the study staff contacted you first.)
4. What will I be required to do?
5. What are the possible risks or side effects?
6. What are the possible benefits for me?
7. If the study won’t benefit me, whom might it benefit?
8. How long will I need to participate?
9. How often do I have to come for a visit, and how long will these visits last? (Or, if the study involves periodic telephone interviews, how many will there be and how long will they each be?)
10. How will you contact me during the study?
11. Am I responsible for any costs? Will the study pay for any healthcare costs that are not covered by my insurance?
12. Will you pay me to participate in the study, or compensate me for my travel expenses?
13. If I change my mind and decide I no longer wish to participate, can I withdraw from the study at any time?
Researchers Assess Mobile Apps for Managing Chronic Pain

M. Cary Reid, MD, PhD | Associate Professor of Medicine | Weill Cornell Medical College
Irving Sherwood Wright Associate Professor in Geriatrics | Weill Cornell Medical College

Some 1.5 billion people around the world suffer from chronic pain, including more than 100 million Americans — more than the total number affected by diabetes, heart disease, and cancer combined. Moreover, those numbers are expected to increase. As the population ages, more people are expected to live with chronic pain due to arthritis, diabetes (which can cause nerve pain), and back pain.

The degree of pain that a person endures, however, is subjective. There are no mechanical diagnostic tools to measure pain, like x-rays or EKGs; doctors can only go by what patients tell them. A growing area of pain research involves mobile applications (apps) that can be used on Smart Phones and tablets to help patients and their doctors work together to manage pain. These tools could generate a more precise understanding of how a person is dealing with pain by giving them a way to report their pain level and other symptoms.

In the growing field known as “mHealth” (for Mobile Health), pain management apps may be useful for:

- Enabling patients to track their pain throughout the day, helping them to develop pain self-management skills by monitoring their symptoms over time and prompting them to call their doctors when pain and other symptoms increase above a certain level
- Delivering reminders to take pain medication
- Providing positive messages that encourage patients to exercise or socialize (activities that have been shown to be useful for managing pain)
- Educating patients about their condition, including the use of video tutorials for activities like exercise
- Passively monitoring how much a patient moves or how often he/she leaves the house (through GPS tracking technology)

The data that patients enter in these apps could be transmitted to their doctors’ offices, where it could be collected and analyzed. Software in the doctor’s office could “red flag” any data that signify a problem, which may prompt the doctor’s office to reach out to the patient to set up an appointment.

If this all sounds great, it is — in theory. There are many pain apps already available, but how effective are they? Have they been developed and evaluated scientifically? Many of the apps that are available suggest that use of the device can be used to relieve pain, but without citing any research performed to confirm this claim. Most of the apps were designed without the input of healthcare providers. Investigators also want to know how receptive patients and their healthcare providers are to using these tools. These are areas that are currently being explored.

Here’s what my fellow investigators and I have found so far: Older adults like the idea of mobile pain management tools. But they have a few suggestions as to how to make them better. A study of 41 adults ages 60 and older living with chronic pain reported that while only 5 percent had previously used mHealth tools, 85 percent were highly willing to try the devices. (Parker et al. BMC continued on page 9

There are no mechanical diagnostic tools to measure pain, like x-rays or EKGs; doctors can only go by what patients tell them.
They liked the idea of using the tools to facilitate connecting with their healthcare providers and monitoring for falls in the home, but they expressed a concern about cost, a desire for training to use the device, and the need for the tool to be easy to use by older individuals. For example, one participant reported, “It would be wonderful if [the mHealth device] was large enough where the actual numbers or words could [allow you to] read the dog-gone thing.”

In another study, we learned that healthcare providers are also amenable to the mHealth approach. We conducted focus groups with 25 primary care providers; participants in this study expressed substantial interest in trying mobile devices like Smart Phones to help care for their older patients with chronic non-cancer-related pain. (Levine M et al. Pain Med. 2014;15:206-13.) However, they did voice concerns about “information overload” (being inundated with data from their patients’ devices), lack of mobile device usability, liability issues, and costs.

In our most recent study, we identified and evaluated 184 mobile pain apps designed for use by consumers. We characterized the various components and functionalities of each app. Major functionalities of these pain apps included providing education about the causes and treatment of pain, giving instruction on specific exercises to manage pain, delivering information about alternative and complementary approaches to pain management, and self-monitoring and tracking of pain and other related symptoms. The results of this research are expected to be released in 2014.

The current literature demonstrates a growing interest in how mHealth technologies can be designed and implemented to revolutionize the way we care for patients living with chronic pain. Research in this area could potentially translate into better approaches to delivering pain care, and a better quality of life for patients.

In Other Pain Research News….

Researchers are studying pain medication use in older individuals. The Translational Research Institute on Pain in Later Life (TRIPLL) – in which Hospital for Special Surgery and Cornell University have leadership roles – is exploring the use of pain medications by older patients. Traditionally, misuse of pain medications has been lower among seniors than other groups. But patterns of medication misuse may change as Baby Boomers – who grew up in a culture where drugs were more often "explored" – enter their later years, and we may witness more misuse of pain relievers.

The government is funding research to explore ways to encourage patients to make positive behavior changes. Such changes include taking medications as prescribed, partaking in exercise as well as relaxing activities, and socializing (which distracts one’s focus from pain). The goal is to motivate people with chronic pain to become engaged in their care and to maintain their commitment to these positive behaviors.

Investigators are exploring the role of opioid drugs in the treatment of chronic pain. Opioids (narcotics such as oxycontin or morphine) are strong pain relievers commonly used to manage cancer pain and acute (short-term) pain, but their long-term use for chronic pain that is not due to cancer is not well defined. The concern is that patients will develop a dependence on these medications and increase their use. The number of deaths from opioid use is already approaching the number from car accidents. To address this trend, states are adopting prescription monitoring programs to track how often people are filling prescriptions and to see where they are obtaining their medications. There is also a growing interest in developing technologies to ensure that patients take these drugs only as prescribed – for example, by developing an electronic pill container that can only be opened at certain times during the day, to prevent the person from taking the medication more often than is intended.
Doctors and researchers know what to look for when interpreting the findings of medical and scientific studies. But consumers may not have that knowledge, and rely instead on what they hear and read in the media. It can be difficult to know what to believe, and to understand when it’s appropriate to apply the latest medical findings to your own life.

We’ve compiled some tools to help you make heads or tails out of what you’re reading in the newspaper and seeing on the news. If you hear about the findings of a new study that may affect your life, ask these questions:

1. **What was the study design?** The gold standard for medical research is the “randomized clinical trial”: a study which compares two or more groups of patients who are randomly assigned to get different treatments or to follow different diets or lifestyles to see which is better. Such head-to-head comparisons produce the most valid results. Other studies look back “retrospectively” at an intervention or compare a group that received an intervention with an unrelated group that may have different composition. These kinds of studies can be useful for creating ideas about whether something works, but do not prove effectiveness. (Learn more about study design on page 1.)

2. **How many people were in the study?** The findings of a large study (with hundreds or even thousands of participants) tend to be stronger than a study with fewer people.

3. **Have the findings been reproduced?** If ten studies came to one conclusion and one new rogue study reports just the opposite, you need to question that one study. If a finding can be replicated by other researchers, it is more likely to have merit.

4. **Is the finding biologically plausible?** From a biological standpoint, does it make sense? For example, it appears that a Mediterranean diet is linked to longer life and better health than a Western diet. Scientists also know about the biological benefits of olive oil and fish oils in the body. So it makes sense that the Mediterranean diet, high in vegetable oils and fish, could enhance health, and this has been reported by large-scale research studies.

5. **Was the study published in a peer-reviewed journal?** Publishing in medical journals such as the *New England Journal of Medicine* and the *Journal of the American Medical Association* is very competitive. Studies in such well-known journals and those which are heavily reviewed by others in the field before publication (“peer-reviewed”) hold more weight than those that are not.

6. **Where are the researchers from?** Is there a potential conflict of interest? Investigators from academic medical centers, research institutions, and federal and state organizations (such as the National Institutes of Health, or NIH) are less likely to have a bias than those from industry, particularly if the findings support the use of a potentially lucrative treatment. Ditto for the funding source: did the study funding come from an unbiased source, like the NIH, or from a pharmaceutical company or the food industry?

7. **How reputable is the news outlet?** Where did you read or hear about the study? Media outlets such as the *Wall Street Journal*, *New York Times*, and *WebMD* are more likely to produce accurate reporting than “Joe’s Cancer Blog.” If you heard about a study on the television news, consider looking up the topic on a reputable online news website to get the full story. Television news programs only have a small amount of time to dedicate to each story (often less than a minute or two), and won’t always be able to provide a full picture.
8. What other factors may account for an association? Association does not equal causality. Just because a certain lifestyle was found to be more common in people with a disease does not mean it caused the disease. For example, it was once thought that sleeping with the windows open caused malaria in Africa. But it was found that sleeping with the windows open enabled malaria-infected mosquitoes to enter people’s rooms and bite them while they were sleeping. Today people in Africa know to sleep with mosquito nets to protect themselves, after learning that the actual cause was the parasite in the mosquitoes — not the open windows.

9. How does the benefit of a recommended healthcare change compare with the risk? For example, a new herbal supplement is found to improve your heart health. But you have to take 12 pills a day, it causes indigestion, and it costs $100 a week. You have to look at the bigger picture to see whether taking this new supplement is worth the risks. It’s all about balancing risks and benefits.

10. What do the large medical groups think? Large groups of doctors, such as the Institute of Medicine of the National Academy of Sciences, will often evaluate the body of evidence related to an illness, a therapy, or a medical test and make recommendations based on their collective knowledge. See what they think, and give it weight. These guidelines can help you evaluate the latest research findings. Ultimately, the best advice is to discuss the findings of the latest research findings. Whether you can use the latest study results to stay healthy...

Programs and Resources

Hospital for Special Surgery offers a variety of wellness exercise classes designed to help you gain endurance, strength and flexibility. Meditation, relaxation and general wellness programs are also offered.

Better Balance for Older Adults: Unique exercises selected for individuals who would like to increase their balance control and decrease the risk of falls.

Yoga for Wellness: The slow, controlled physical movement of yoga can provide pain relief, relax stiff muscles, ease sore joints and help build strength.

Pilates: A series of specific movements designed to strengthen the powerhouse muscles of the abdomen, back and waist.

Yogalates: A popular form of exercise that blends the best of yoga and Pilates.

T’ai Chi Chih®: Simple, rhythmic movements that provide benefits such as improved balance, strength, flexibility and maintenance of bone mass.

Dance for Fitness and Fun: Studies have shown that dance maintains cardiovascular fitness, enhances emotional well-being, strengthens weight-bearing bones and slows loss of bone mass.

Restorative Yoga and Deep Relaxation: The gentle supported poses tailored to each individual’s condition aid in deep relaxation and rejuvenation.

For more information on the schedule, location and cost of these classes, visit www.hss.edu/pyped or call 212.606.1613. Additional programs and offerings can be found by visiting www.hss.edu/pyped.

Integrative Care Center (ICC): The ICC, located in mid-Manhattan and affiliated with Hospital for Special Surgery, offers alternative care services including Pilates, Acupuncture, Massage Therapy, Chiropractic Medicine and Pain Management. Please visit www.hss.edu/icc for more information or call 212.224.7900.

HSS Research/Clinical Trials
Please visit www.hss.edu/clinical-trials for more information about HSS clinical trials or sort active clinical trials by condition at www.hss.edu/clinical-trials-by-condition.

Other resources:
- Learn About Clinical Trials: http://clinicaltrials.gov/ct2/about-studies/learn
- Understanding Clinical Trials (HSS): http://www.hss.edu/clinical-trials.asp
- HSS Research and Clinical Trials: Protecting People Who Volunteer to Participate: http://www.hss.edu/conditions_clinical-research-trials-protecting-participants.asp
- Outcome Studies: The Way to Improved Care (HSS): http://www.hss.edu/conditions_outcome-studies-the-way-to-improved-care.asp

Online Webinars:
Check out our free HSS webinars at www.hss.edu/pyped-webinars. All webinars can also be accessed as podcasts at www.hss.edu/podcasts. Topics include:
- Runner’s Health and Marathon Training Programs
- Honoring Lupus Heroes
- Lupus Care: The Past, the Present and the Future
- Advances in Lupus Research: Spotlight on Treatment
- Family Caregivers and Health Care Team: A Challenging Partnership
- Osteoarthritis: Today’s Options for Osteoarthritis Management

A short video excerpt on "Meditation for Pain Management" is also available for patients via our YouTube playlist.

New issue of HealthConnection FastFacts available online!
Did you know there are more than 100 different types of arthritis? Arthritis is a condition affecting more than 46 million U.S. adults. There are two major types of arthritis: osteoarthritis (OA) and rheumatoid arthritis (RA). OA is the most common type of arthritis and RA is the most common type of inflammatory arthritis. The latest edition of this online health education newsletter, available at www.hss.edu/public-patient-education, explores the differences between OA and RA.
**Affiliated Offices:**
Hospital for Special Surgery offers premier health care services in your community. Contact our affiliated physician offices for more information.

**New York**
HSS Long Island  
516.222.8881  
HSS Queens  
718.591.7090

**Connecticut**
HSS Greenwich  
203.409.3000

**Florida**
HSS Spine & Sport  
www.hss.edu/spineandsport  
561.253.8737

---

**Community Benefit Report**
**Invested in Our Community – 2013 Report**

The HSS Community Benefit Report provides information about the Hospital’s contributions to the community in the areas of community programs and services, research and health professionals education. Visit [www.hss.edu/community](http://www.hss.edu/community) for more information and to download a copy of the 2013 Community Benefit Report and the 2014-16 HSS Community Service plan.

---

The Education & Academic Affair’s Public and Patient Education Department provides information to the general public and patients through a variety of health education programs. Professionals provide practical information to help prevent or manage orthopedic and rheumatological conditions. Programs are held at the hospital as well as in the community. The department is dedicated to providing education today, so that everyone can have a healthier tomorrow.

---

**Laura Robbins, DSW**  
Senior Vice President  
Education & Academic Affairs  
Associate Scientist, Research Division  
Designated Institutional Officer, GME

**Marcia Ennis**  
Director, Education Publications and Communications

**Sandra Goldsmith, MA, MS, RD**  
Director, Public and Patient Education

**Edward C. Jones, MD, MA**  
Assistant Attending Orthopedic Surgeon  
Medical Editor

**Robyn Wiesel, CHES**  
Manager, Public and Patient Education  
Design: Tracie Haner Valentino

HealthConnection is published by Education & Academic Affairs at Hospital for Special Surgery as a service to the general public and patients. For further information regarding material contained in this newsletter or inquiries on how to obtain additional copies, contact:

Public and Patient Education Department  
Education & Academic Affairs  
tel: 212.606.1057 | fax: 212.734.3833  
paped@hss.edu

---

**Printed on recycled paper**

All rights reserved.  
©2014 Hospital for Special Surgery
For more information, visit www.hss.edu. To make an appointment, call our Physician Referral Service at 800.796.0486.

Public and Patient Education Department
212.606.1057
www.hss.edu/pped

Research Division
212.774.7123
www.hss.edu/research
www.hss.edu/clinical-trials

Affiliated Offices:
Hospital for Special Surgery offers premier health care services in your community. Contact our affiliated physician offices for more information.

New York
HSS Long Island
516.222.8881
HSS Queens
718.591.7090

Connecticut
HSS Greenwich
203.409.3000

Florida
HSS Spine & Sport
www.hss.edu/spineandsport
561.253.8737

Sign up for our HSS.edu e-Newsletter at www.hss.edu/registration

Most major insurance plans are accepted.

Visit the HSS Online Store
Hospital for Special Surgery recently opened its online store, where high-quality branded gifts and products are available. Visit www.hss.edu/store and take a look at the wide array of items for sale.

Find Hospital for Special Surgery on the web at www.hss.edu

Follow us on:

Community Benefit Report
Invested in Our Community – 2013 Report

The HSS Community Benefit Report provides information about the Hospital’s contributions to the community in the areas of community programs and services, research and health professionals education. Visit www.hss.edu/community for more information and to download a copy of the 2013 Community Benefit Report and the 2014-16 HSS Community Service plan.

The Education & Academic Affair’s Public and Patient Education Department provides information to the general public and patients through a variety of health education programs. Professionals provide practical information to help prevent or manage orthopedic and rheumatological conditions. Programs are held at the hospital as well as in the community. The department is dedicated to providing education today, so that everyone can have a healthier tomorrow.

Laura Robbins, DSW
Senior Vice President
Education & Academic Affairs
Associate Scientist, Research Division
Designated Institutional Officer, GME

Marcia Ennis
Director, Education Publications and Communications

Sandra Goldsmith, MA, MS, RD
Director, Public and Patient Education

Robyn Wiesel, CHES
Manager, Public and Patient Education

Contributing Writer:
Rosie Foster, MA

Design: Tracie Haner Valentino

HealthConnection is published by Education & Academic Affairs at Hospital for Special Surgery as a service to the general public and patients. For further information regarding material contained in this newsletter or inquiries on how to obtain additional copies, contact:

Public and Patient Education Department
Education & Academic Affairs
tel: 212.606.1057 | fax: 212.794.3833
pped@hss.edu

All rights reserved. ©2014 Hospital for Special Surgery
Printed on recycled paper

Hospital for Special Surgery is an affiliate of NewYork-Presbyterian Healthcare System and Weill Cornell Medical College.