Effective Healthcare

By Lawrence D. Dorr M.D.

Healthcare is a right. Kind of. Health is such a unique part of life. It is part of everyone’s life every day - if you stub a toe, have a cough, or get up with a sore back. We all want to feel good every day, but sometimes just assume it will happen. Smoking, too much alcohol, gaining excessive weight, even not going to a doctor for check-ups (preventive medicine) are common faults. We must all balance our needs and our desires, both in our lives and our discretionary expenses. Compassion dictates that every person deserves a chance to stay healthy despite many adverse personal habits. Common sense correctly expects the consequence of this compassion will dilute the quality of care delivered.

The problem with medical care is caused by health insurance more than a problem with healthcare and how to optimize access and coverage is the heart of today’s controversy. Universal coverage has been the goal of most U.S. Presidents since FDR. Politically it is a home run. Medically it changes American medicine as you know it today. But what’s right? In a country built on individual responsibility, being mandated to buy something, or do something not desired is governmental power many protest. Is a mandate necessary for healthcare? Is it necessary to protect society from people without insurance?

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That is a question I have heard many times from patients. The answer is “No, you do not have a plastic hip joint, but you may have plastic IN your hip”. The following is a simplified history of the development of plastic for use in human joints.

The British orthopaedic surgeon John Charnley (later Sir John Charnley, for his contributions to medicine), from whom I first learned total hip replacement, is the father of the use of plastic materials in human joints. He is credited with two major developments in joint replacement surgery; first, the use of “bone cement” in the manner in which it was later used worldwide; and second, the introduction of plastic bearings for use in human joints.

There are two major problems in the development of artificial joints. First, the ability to attach a foreign material to bone in a permanent manner which will allow weight-bearing and other activities. The second difficulty is the creation of a bearing surface which can be lasting and is tolerated by the human body. We know that bearings in our cars eventually wear out. We have to change the oil and replace the filters regularly to make them last longer. In our bodies, we cannot do that, and must rely on biologic processes to “keep the oil clean” and dispose of any wear particles generated from use. These factors have caused the failure of many, many designs of artificial devices.

Charnley was inventive, ingenious, and ceaselessly experimenting. In his attempts to develop an artificial hip, he initially used polytetrafluoroethylene (PTFE, known under the trade name Teflon in this country) in the 1950s. This material was known to be very slippery, and when rubbed against a stainless steel surface it exhibited very low friction in the laboratory. Charley characterized his joint replacements as “Low Friction Arthroplasty” (LFA). That plastic seemed to be an ideal material to use as a bearing surface. However, when implanted in humans as the socket of the ball and socket hip joint, it was found within perhaps 3 years to cause serious problems. The plastic actually wore rapidly, and patients developed huge areas of very abnormal tissue and lost large amounts of bone as a reaction to the wear particles. These patients required additional surgery; often removal of all the implants, leaving them with no hip joint and major disability. As a result of these failures, Charley abandoned the use of plastic materials in people, but continued his search in the laboratory.

In 1961 a salesman for a German firm brought him a sample of RCH 1000, their trade name for a type of polyethylene for industrial applications. In the laboratory, this material had somewhat more friction than PTFE, but wore much better, and otherwise its properties appeared to be excellent. After extensive testing, he decided to try polyethylene in humans, as the socket for the hip replacement.

Charnley first used polyethylene in November 1962. The modern era of hip joint replacement was thus fully launched. The results achieved in these patients was dramatically better than anything available previously (some would argue that metal/metal hip replacements being developed elsewhere were also quite successful). The patients were essentially free of pain, could walk long distances and returned to very normal lifestyles. However, as the years passed, abnormalities began to show in the x-rays in some patients. These were irregular areas of bone.

Stanford M. Noel, M.D.

“Do I have a plastic hip?” That is a question I have heard many times from patients. The answer is “No, you do not have a plastic hip joint, but you may have plastic IN your hip”. The following is a simplified history of the development of plastic for use in human joints.

Stanford M. Noel, M.D.
In the United States one of the most common reasons a patient sues an orthopaedic surgeon is because of leg length discrepancy after total hip replacement. Both parties will debate the magnitude of the discrepancy and the best method of measurement. The short and long term social and health consequences will be discussed. A patient who wants to have a limb length inequality corrected often has a difficult time finding an orthopaedic surgeon who is willing to do the revision hip replacement surgery.

All healthy adults are not perfectly symmetrical. Most individuals cannot detect a difference in lengths between 1 mm and 4 mm. A discrepancy of greater than 2.5 cm (1 inch) usually causes a limp that is obvious to the patient, the physical therapist and anyone who watches the patient walk. A small discrepancy is not expected to cause any problems. However, a large inequality of the lower extremities will cause pain and make it difficult for a patient to walk with a normal gait. Somewhere in between these examples an imaginary line is drawn that separates a good operation from one that should be revised.

Patients are frequently advised that a difference in limb lengths of 1.5 cm or less should be treated with a shoe insert. This approach does not work for all patients because some are satisfied with a shoe insert while others will not tolerate it. A patient who returns to construction work or farming may have no problem placing an insert inside one boot. A lady with a large wardrobe and shoe collection might not be happy altering every pair of pants or placing a shoe insert inside one of her expensive high heel shoes.

Revision total hip arthroplasty is not appropriate for every patient with a discrepancy greater than 1.5 cm. A 1.5 cm leg length discrepancy may go completely unnoticed in a patient who is seven feet tall and this patient does not need another operation. The same discrepancy in a five-foot tall patient will predictably lead to complaints about standing with a tilted pelvis, walking with a limp and low back pain. Sedentary people will generally tolerate uneven leg length better than fast walkers or patients who want to dance. Patients are affected differently by the same amount discrepancy and the decision to recommend revision surgery must take that into consideration.

The surgeon can advise the patient that there is a good prognosis for correcting the discrepancy and the correction is expected to solve the problems that it caused. The surgeon can express confidence that the surgical team has the skill and experience to safely and efficiently perform the operation. It is the patient who feels the pain and understands how the disability affects their life. For this reason, the patient must decide if the risk of anesthesia, revision surgery, and blood transfusions are worth the benefits of having equal leg lengths. In the best of circumstances it is the patient who decides which surgeon performs the revision operation.

At the Dorr Arthritis Institute preparation for revision surgery involves an experienced team of skilled individuals. Approximately 100 revision operations are done by our team every year. The surgeon needs help gathering medical records and coordinating vendors from implant and instruments companies. Every week a team of internal medicine physicians, anesthesiologist, surgeons meet with members of the operating room and hospital ward staff. The surgical strategy, backup plans and postoperative care are discussed. We believe that the best care for patients who need revision surgery includes this type of comprehensive team approach.

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to adhere to an every six hour schedule. When I got a lung infection and was in the hospital in Fort Dodge, Dr. Burns knew I cried every night when my parents left and each morning on rounds he brought me a new toy. He is one of my role models to become a doctor. Poor parents, no insurance, but great effective healthcare. That model is gone with urbanization, entitlements and regulations on doctors. Too bad.

Don’t expect me to write a solution for the health insurance dilemma. Insight into the best solution seems to be known only by newspaper columnists such as Hiltzik and Lopez in the L.A. Times. I will predict future doctors will feel less entitled to gain wealth – although it is discouraging that people will pay a veterinarian $5,000 cash for a hip replacement for their dog, yet a medical doctor performing a hip replacement for a human patient is paid $1,200 by Medicare and $2,000 by PPO insurance. I will predict patients will wish medicine was less entitled because, although they have access, they will have difficulty getting an appointment and more patients will likely die from infections and cancer (already the case in Europe) with fewer allowed hip and knee replacements or coronary artery surgery (also true in Europe). There will be doctors. This year there were 44,000 applicants for 19,000 medical school spots, hopefully because the emotional rewards for a medical career are incomparable.

I did write this because so many patients ask my opinion. I wish I had more insight but I do know a solution must cover catastrophic expenses, pre-existing conditions, and be portable. I can pledge our Institute will always provide effective patient care as we do now. Great operations, great nursing, PA care, office care, and even our security and housekeeping people care. Our policy is born from that of ol’ Doc Burns – we will try to make the right arrangement with every patient, and those with no insurance we will try to accommodate with Operation Walk. It is all that we can do in this healthcare environment and will do until the economics don’t work.
When I married my husband, Dr. E. Gordon Dickie 46 years ago, he gave me a great gift, besides our daughter, Laura, the gift of teaching me how to ski.

To be in Aspen’s gorgeous pristine mountains with lush snow to ski is heaven. We have skied as a couple for forty-six years and are still doing it. Skiing has given me the incentive with the great exercise of the sport to do many things in life, as it has my husband. It’s healthy and spiritual, truly God’s country.

When my hips started to decline, I was lucky enough to find Dr. Dorr to get a left hip replacement in 1997, and the right hip replacement in 2010. I have been lucky enough to ski in 2012 with a great deal of confidence and in unusual snow conditions. Every time I go up in the chair lift, I cry and thank God that I am able to do this glorious sport with my husband.

Walking and swimming prepared me for the slopes. I loved singing for Dr. Dorr at the 15th anniversary of Operation Walk in October 2011.

Thank you again Dr. Dorr.
Mary Ann Dickie Carmel, California.

Contrary to previous information
Dr. Lawrence Dorr is still and will remain, contracted to PPO insurance companies.
Meet The Staff

I completed my education at L.A. County College of Nursing, class of 2001. I had the distinct pleasure of joining the AI team in 2002 while at Centinela Hospital. I enjoy very much being part of the team; and feel fortunate because we are not only a team but a family. We persevere to enhance mutual respect for the expertise of all members of the team, Doctors, Nurses, Therapists, and Nursing Aids. I come to work each day with a smile because this is where I want to be. I appreciate the opportunity to have participated on Operation Walk Guatemala and looking forward to Op-Walk Tanzania this June.

When not working, I enjoy spending time with my family.

Jose Coria R.N.

On the day of surgery in the controlled environment of the operating room, the discrepancy is measured independently by the surgeon and the physician assistant. The surgeon considers these measurements, along with all of the information gathered previously and a final determination of the target amount of correction is made.

The least complicated operations are those that change only the ball or liner that fits inside the cup or acetabular component. The ball and liner are designed for exchange and these operations do not involve removing implants that are attached directly to bone. Operations that involve removing a well fixed acetabular component or femoral stem are more difficult and generally require a specialized team, with experience using revision tools and implants. Vendors from more than one company are usually present because the team must be prepared for any situation encountered when performing surgery on a previously operated hip.

After the old components have been removed, during the reconstruction phase of the operation, computer navigation allows the surgeon to evaluate the change in limb length. In addition to the computer, a special caliper, and palpation of bony landmarks and soft tissue tension provide additional methods of assessing the change in limb length. After the incision is closed the limb lengths are checked again on the operating room table and postoperative x-rays are obtained. As a rule, the patient will not go to the recovery room if the limb lengths are not correct. If any further adjustments are needed it is our policy to make them at this time. This protocol assures the patient that the limb lengths will be correct when the patient arrives in the recovery room.

The ultimate goal of total hip replacement is to create a perfect symmetrical reconstruction. Today a surgeon is not required to make every patient perfectly even. However, it is fair and correct for a patient to expect a hip replacement that does not cause any problems because of unequal limb lengths. The combination of a knowledgeable team of specialist and state-of-the-art technology makes accurate and predictable total hip replacement possible. Our goal is to move forward to a future where revision hip replacement for leg length discrepancy is a thing of the past.

“Like” Operation Walk On Facebook
Follow our Operation Walk team on their mission to Tanzania June 6 to 12, 2012
Total Knee Arthroplasty and Leg Length
BY PAUL K. GILBERT M.D.

Paul K. Gilbert M.D.

A common question related to knee replacement is what happens to the leg length. People are inherently asymmetric. My legs are almost three quarters of an inch different in length. No injury here, just genetics and maybe some effect of development.

On top of this asymmetry gets added arthritis. Arthritis is the lack of cartilage in the joint due to multiple etiologies, but the most common is osteoarthritis or simple wear and tear. That wear occurs just like the tread on your tires and like those tires, is not always even. The result of this is either bowed legs or knock knees depending on which side of the joint wears. Osteophytes (bone spurs), scar tissue and contractures result in the inability to fully extend the knee or bend.

These angular deformities shorten the limb. This is often not really noticed because it happens very gradually and the body adapts. There may also be other deformities contributing, like back deterioration, that complicate the perception.

Then you have a knee replacement. This surgery not only resurfaces the joint, but we remove spurs, release scar tissue, release contractures, correct deformity and increase the range of motion. The net effect of this is to sometimes lengthen the leg a bit. This is usually to the pre-arthritic length.

What the surgeon can’t do is control this. The assumption is that if you put in a thicker or thinner implant, you can adjust the length of the leg. The reality is that since we save medial and lateral ligaments (inside and outside ligaments), the thickness of the implant is determined by those ligaments. Too thick an insert, your ligaments are too tight and you have a stiff knee. Too thin an insert and you have laxity and an unstable knee. Part of the art of this surgery is balancing the ligaments for the better kinematics of the joint. Leg length is really out of our hands.

The good news is that usually we are improving the overall body mechanics and over time the body will adjust accordingly. The human body is amazing in its ability to adapt and adjust, given time. In some instances, it’s like learning to walk again and eliminating bad habits. The final result may take some getting used to, but in the long run, is a great improvement.

Plastic Hip Joints
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loss, sometimes around the socket or sometimes down in the femur, resulting is loosening of the prosthesis after ten or fifteen years, and requiring revision surgery. During the 1970s in the United States, this was (erroneously) referred to as “cement disease”. These implants were fixed in place with “bone cement” and it was thought that this acrylic material was responsible for the bone loss. Others thought perhaps the patients had some very indolent infection. Both of these possible causes could in fact be responsible for problems in some patients.

It was ultimately determined that most of the problems related to bone loss (“osteolysis”) were the result of the body’s reaction to the microscopic pieces of plastic wear debris produced by use of the joint.

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Please come join us at one of our upcoming Tuesday night seminars. Experts from the Dorr Arthritis Institute Medical Associates at Good Samaritan Hospital will discuss some of today’s most advanced hip and knee replacement techniques. During this free seminar, you will learn how new computer and robotic precision guided surgery is offering patients a less invasive and longer lasting option for joint replacement.

Registration 6:00 to 6:30 pm
Program begins at 6:30
For more information call 1(213) 977-2511

June 26, 2012
Manhattan Beach Marriott
1400 Parkview Avenue
Manhattan Beach, CA 90266

September 11, 2012
Torrance Marriott
3635 Fashion Way
Torrance, CA 90503

Please RSVP to 1 (800) GS Cares
1 (800) 472-2737
Seating is Limited

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