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Heart Tests Have Key Role in Pre-Transplant Evaluation

Lowering the Risk of Heart Problems Improves Transplant Success

by **William Bry, M.D., Barry Levin, M.D. and Laura Miyashita**

A successful kidney transplant not only means improved kidney function, but also a better quality of life for patients. Because experience has shown that heart disease is a major risk faced by transplant patients, California Pacific's Kidney Team works with patients before transplantation to lower the risk of heart problems.

"Unfortunately, many of the causes of kidney failure, such as diabetes and hypertension, can also contribute to heart disease," explains William Bry, M.D., surgical director for California Pacific Medical Center's Kidney & Pancreas Transplant Program. "A thorough evaluation of one's heart function can identify if a patient is at risk for heart disease and help us address it accordingly," he adds.

Common Heart Tests

To identify the nature of one's heart disease, the Kidney Team may require any or all of the following tests:

Echocardiogram (also called echo or echocardiography) is a type of ultrasound test that uses sound waves to produce an image of the heart. It takes



about 15 minutes and shows doctors how well one's heart chambers fill with blood and pump it to the rest of the body. An echocardiogram also helps evaluate heart size and valve function, and measures the amount of blood pumped out of the heart with each beat.

EKG (also called electrocardiogram) measures the electrical signals that control the rhythm of your heartbeat. In this procedure, electrodes are attached to the skin on the chest, arms and legs, where they monitor the heart's electrical activity. This activity

HEART TESTS, continued next page

Pre-Transplant Team Oversees Wait List and Living Donor Program

by Laura Miyashita

To help improve the living donor transplant process, California Pacific's Kidney Team now has a specialized nurse and coordinator working with living donor candidates. This team pre-screens all potential living donors by phone and obtains their medical history. "Based on this information, we determine if a living donor is a potential candidate and if so, schedule a medical evaluation and coordinate necessary tests," explains Shelly Beasley, R.N., MSN, ANP-C. The new team gives potential living donors—and transplant candidates with close friends and family members interested in living donation—a single point of contact for all questions and scheduling.

Based in San Francisco, Nurse Shelly Beasley and Living Donation Coordinator Bernadine Hall-Evans also help educate both patients and the general public about living donor issues. Beasley joined California Pacific in late 2002, following a position as pre-transplant coordinator at University of South Carolina. Her teammate, Bernadine Hall-Evans has worked with California Pacific's Kidney Team for two years. "Working with the living donor program allows me to participate in the unique process of giving from one person to another," says Hall-Evans. "It is truly a wonderful privilege."



California Pacific's Pre-Transplant Team includes: (l to r) Bernadine Hall-Evans, Krista Pollock, R.N. and Shelly Beasley, R.N.

Another new addition to California Pacific's Kidney Team is Krista Pollock, R.N. Krista lists all patients awaiting kidney transplantation on the United Network for Organ Sharing (UNOS) waiting list and oversees pre-transplant evaluations for patients in the San Francisco area. Pollock has worked with the kidney-pancreas transplant population at California Pacific and UCSF for almost 15 years. In addition to her role overseeing California Pacific's kidney transplant wait list, Krista will also serve as a liaison with dialysis units and patients in the San Francisco area.

To pursue a transplant evaluation or speak with one of our pre-transplant nurse coordinators, please call (415) 600-1080. ☎

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is shown as line tracings on paper, which physicians analyze to view blood flow, inflammation, heart rhythm problems and signs of heart injury.

Stress Test (different types include exercise treadmill, stress echo and persantine thallium) measures one's heart function when it has to work harder than normal, such as during intense exercise. A stress test may be performed with the use of echocardiography or nuclear medicine techniques. A positive test may indicate that your heart has inadequate blood flow when it has to work harder than normal. Inadequate blood flow can lead to a heart attack.

If any of the above tests indicate possible heart problems, the Kidney Team will work with you and your local doctor to determine if a coronary angiogram (dye study of the coronary arteries), angioplasty (opening of constricted arteries with a catheter) or cardiac surgery is necessary. Once the

heart problem has been addressed, you will likely be able to receive a transplant.

Post-Transplant Heart Care

Once you have your transplant, prevention of heart disease remains critical. By controlling your blood pressure, cholesterol and weight so they remain in a safe range, you can help increase your transplant success. Following a "heart healthy" diet that is low in saturated fats and sodium will help control your risk factors. Smoking pre- and post-transplant is discouraged for a number of health reasons.

The Kidney Team will work with you and your health care providers to ensure that your risk of complications before, during and after kidney transplantation is as low as possible. You also need to be involved in this team by following through on recommended tests and maintaining a healthy lifestyle. ☎

Patient Profile: Dave Phelps

Kidney-Pancreas Transplant Gives Father of Two Renewed Energy

by *Laura Miyashita*

As a 7th and 8th grade math and computer science teacher, Dave Phelps needs all the energy he can get to keep up with his active students. “When I was on dialysis, I was tired night and day; it was really hard to keep up,” remembers Dave, a 49-year Grass Valley resident.

Dave developed diabetes at age 21, which took its toll on his kidney over the next 20 years. “In 2000, dialysis became necessary and my nephrologist told me to consider transplant as an option,” he explains. When he went on dialysis, Dave kept his teaching job to help care for his wife and young daughters. And although his dialysis team at Gambro Grass Valley was “incredible,” Dave still ended his treatments feeling drained and sick.

In his pursuit of a transplant, Dave underwent an evaluation at one Northern California transplant program, where he was instructed to have a heart test that could possibly further diminish his kidney function. “Knowing this particular test could jeopardize my job and salary, and affect my ability to take care of my family, I put off seeing the cardiologist for two years,” says Dave. When he eventually explained his situation to the cardiologist, the doctor suggested that Dave contact California Pacific Medical Center’s Transplant Program. “Within a few months, I saw California Pacific’s Kidney Team in Fairfield and immediately, both my wife and I felt that’s where we should go,” says Dave.



Dave Phelps is back to teaching 7th and 8th grade math and computer science with “renewed energy,” following his kidney-pancreas transplant in December 2002.

In order to get on California Pacific’s transplant waiting list, Dave underwent heart tests and other exams that assured doctors he was healthy enough to undergo surgery.

“Throughout my experience, the Kidney Team made me feel like I was someone rather than a number, and I always felt comfortable that they’d take good care of me,” remembers Dave.

On December 19, 2002, Dave’s pager went off during class, alerting him that a kidney and pancreas were available. He quickly traveled to San Francisco with his wife and children, and his surgery began that evening. “Throughout my hospital stay, the care was tremendous. Everyone was so responsive and reassuring,” says Dave. While he was hospitalized, his

wife and daughters became more familiar with the city and grew to love San Francisco.

Now, several months post-transplant, Dave says, “I am able to be a better dad and husband.” His renewed energy and health allow him to teach full time and coach his daughters in basketball and softball. He adds, “Throughout this incredible life-changing process, I have doctors, nurses, hospital and dialysis staffs, friends, my community and family to thank for their support and prayers. But, it must be said that this never would have happened without the extremely generous gift that a donor gives to another. I will be eternally grateful and will make every effort to preserve this gift.” ☞

Disease Recurrence After Kidney Transplantation

Discuss Your Risk and Avoidance Measures with Transplant Team

by Steven Katznelson, M.D.

Kidney transplantation has been shown to improve most patients' quality of life and to prolong life span. While almost all types of end-stage kidney disease are indications for transplantation, the most common causes include diabetes, glomerulonephritis (of which there are many types) and hypertension. (see chart)

Following transplantation, it is possible for some types of kidney disease to recur in the new organ. One study reports that the overall recurrence rate is about 3.4% over a five-year period of follow-up. While disease recurrence doesn't usually cause a transplant's failure, patients and physicians should still watch for possible indicators:

- Presence of protein in the urine
- Elevation in the serum creatinine level

In some cases, adjusting medications or introducing new treatments can help prolong a transplant's function when disease recurrence occurs. The following details various types of kidney disease and chances of recurrence post-transplant.

Diabetes

Diabetes is the most common kidney disease for which patients receive a transplant and can recur in the transplanted kidney. One study suggests that most diabetic patients who undergo kidney transplantation will have microscopic evidence (in a kidney biopsy specimen) of disease recurrence. Despite this, diabetes causes transplant failure in only 5–10% of

cases. Ways to prevent this recurrence include maintaining excellent blood sugar control and, where appropriate, receiving a pancreas transplant.

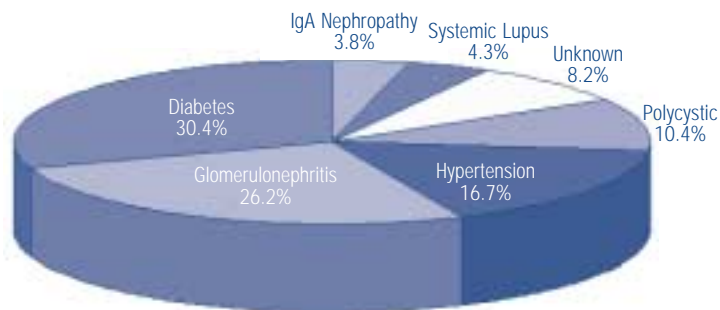
Focal and Segmental Glomerulosclerosis (FSGS)

FSGS is a fairly common cause of end-stage kidney disease and has a recurrence rate of about 25–40%. A fraction of patients with FSGS recurrence will ultimately lose their transplant. Recurrence of FSGS may be more common among patients with a rapid course to end-stage kidney disease and in patients who acquired the disease in their youth. Patients who have already lost a previous transplant to recurrent FSGS have a very high risk of recurrence in subsequent transplants.

IgA Nephropathy

As with diabetes, microscopic evidence of IgA nephropathy recurrence is fairly common. New data suggests that the rate of transplant loss from recurrent IgA nephropathy may range from 10% to 25%. Patients with recurrent IgA nephropathy may benefit from taking fish oil (omega-3 fatty acids) supplements.

Diagnostic Indication for Kidney Transplant



Hypertension

Patients who lost their original kidney function to hypertension—and patients with post-transplant hypertension—are at risk for transplant failure. Because of this, blood pressure monitoring is essential as well as medication adjustment by your physician when necessary.

Polycystic Kidney Disease (PKD)

Polycystic kidney disease is a fairly common cause of end-stage kidney failure. Luckily, PKD does not recur in the transplanted kidney because it is a chromosomal defect that affects the recipient's genes but not the genes of the transplanted kidney!

Other Types of Glomerulonephritis

The various types of glomerulonephritis have different risks of recurrence in the transplanted kidney. For example, membranous glomerulonephritis recurs in about 5–10% of patients. Membranoproliferative glomerulonephritis Type I recurs in about 20 to 30% of transplants whereas Type II recurs more commonly.

continued next page

Weighty Issues: Losing Those Extra Pounds Makes Transplant Surgery Safer

by William Bry, M.D. and Laura Miyashita

If you are overweight, losing some of those extra pounds prior to transplant will help improve your chance of success. Patients with a “normal” body mass index (BMI) experience an easier, safer surgery as well as reduced risks of wound infection, delayed wound healing and other complications such as blood clots. Additionally, diabetes, cholesterol and blood pressure are all easier to manage when one is near his or her ideal weight. “At pre-transplant evaluation, we review one’s weight and may prescribe weight loss before we put a patient on ‘active status’ on the transplant waiting list,” explains William Bry, M.D., surgical director for California Pacific’s Kidney & Pancreas Transplant Program.

California Pacific’s Kidney Team relies on the Body Mass Index (BMI) to determine if weight loss is necessary. This formula, which can be found online at <http://www.nhlbisupport.com/bmi/bmicalc.htm> compares one’s height to weight ratio. For transplant consideration, patients must have a BMI of less than 33 (a “normal” BMI is less than 24). If one’s weight is too high at evaluation, the Kidney Team will encourage a patient to work with the dietitian at his/her dialysis

DISEASE RECURRENCE, continued from page 4

Although recurrent disease isn’t one of the most common causes of transplant loss, patients should be aware of this risk and ask their Kidney Team about ways to best avoid or treat possible problems. ☞

unit to lose those extra pounds. Once a BMI of less than 33 is achieved, a patient can become active on the waiting list.

In cases of living donor transplants, both the donor and recipient should have a BMI of less than 33 (ideally 24 or lower). This enables surgeons to use minimally invasive laparoscopic surgery to remove the kidney, which results in a quicker recovery and smaller incisions. If a donor has excess body weight, laparoscopic surgery may be more difficult and the surgeons may have to resort to open surgery for kidney removal.

Among the tools patients use for losing weight include:

- Diet modification (low fat, cholesterol and salt; smaller portions)

- Weight loss programs such as Weight Watchers®
- Exercise
- Nutrition counseling

Not only does a weight management plan help one prepare for transplant, it also helps following surgery when anti-rejection medications can cause weight gain. “With fewer dietary restrictions, a better appetite and the medication Prednisone, many patients gain weight after transplant,” explains Bry. He adds, “By knowing in advance which foods are most healthy and those that contribute to high cholesterol and blood pressure, patients can better control their weight post-transplant.” ☞

Body Mass Index Ranges

BMI (kg/m ²)	Normal (BMI 18.5 – 24.9)		Overweight (BMI 25 – 29.9)		Obese (BMI 30+)
	19	24	25	29	30
Height (in.)	Weight (pounds)				
58	91	115	119	138	143
59	94	119	124	143	148
60	97	123	128	148	153
61	100	127	132	153	158
62	104	131	136	158	164
63	107	135	141	163	169
64	110	140	145	169	174
65	114	144	150	174	180
66	118	148	155	179	186
67	121	153	159	185	191
68	125	158	164	190	197
69	128	162	169	196	203
70	132	167	174	202	207
71	136	172	179	208	215
72	140	177	184	213	221
73	144	182	189	219	227
74	148	186	194	225	233

To calculate your BMI online, visit <http://www.nhlbisupport.com/bmi/bmicalc.htm>.

What Transplant Costs Do Medicare and Medi-Cal Pay?

by Laura Miyashita and Rose-Ann Barca

Understanding your insurance coverage can be tricky, but is a necessary part of the transplant process. At California Pacific, a financial coordinator works with each patient to review their coverage and, if necessary, to research additional insurance options.

The first step in pursuing a kidney transplant is an evaluation with our Kidney Team. Medi-Cal covers this evaluation in full while Medicare patients receive 80% coverage after one's annual \$100 deductible is paid. For both programs, authorizations and clearances are needed in advance of an evaluation, which our financial coordinator arranges. After transplant evaluation, coverage differs between Medicare, a federal insurance program, and Medicaid, a state-funded program with benefits that vary from state to state.

Medicare

While Medicare covers most of one's transplant surgery and immunosuppressive medications, additional insurance coverage is usually necessary. "With just Medicare alone and no supplemental insurance coverage, patients are responsible for 20% of hospital costs and about \$1,500 monthly for post-transplant medications," explains Rose-Ann Barca, financial coordinator for California Pacific's Kidney & Pancreas Transplant Program.

Luckily, most patients qualify for supplemental coverage such as MediGap, a spouse's insurance, Medi-Cal or a major risk plan. As patients move towards the top of the transplant waiting list, Barca reviews their coverage



At California Pacific, a financial coordinator works with each patient to review their coverage and, if necessary, to research additional insurance options.

and sends a letter explaining any financial responsibilities for surgery and projected costs of post-transplant medication. Patients must sign and date the letter, acknowledging their understanding of all costs. Following this "financial clearance" step, patients are given the green light to receive a transplant.

"I urge patients to never let their insurance lapse and to sign up with an HMO if that's what their employer offers," explains Barca. An HMO will supplement Medicare coverage for patients on dialysis and offers generous prescription benefits. Because of the high costs of post-transplant medications, a plan that offers prescription coverage is extremely valuable.

California Medicaid

State Medicaid coverage (in California, known as Medi-Cal) is determined based on one's financial status. Because of California's budget crisis, Medi-Cal benefits have become more stringent, in some cases necessitating a "share of cost" for patients with higher earnings.

"The majority of our Medi-Cal patients don't have a 'share of cost,' meaning that Medi-Cal covers all transplant services, including surgery and all post-transplant medications," says Barca. If a patient has a Medi-Cal share of cost higher than \$200 a month, Barca will notify him/her in writing prior to transplant and the patient signs a form agreeing to meet

this monthly share of cost. As Barca explains, “We want all patients to have a successful, long-lasting transplant and post-transplant medications play a key role in this success. Patients have to acknowledge that they can afford the medication cost and show responsibility that they will pay this monthly.”

One important aspect of Medi-Cal coverage is a precertification requirement called “Treatment Authorization Request” or TAR. This specifies that every Medi-Cal patient obtain medical clearance proving he/she is a good transplant candidate. This clearance is effective for one-year only and requires a patient to undergo an evaluation and new tests, if necessary. In cases with a living donor, both the recipient and donor must obtain TARs.

Nevada Medicaid

“In general, Nevada Medicaid is not as liberal as in California,” says Barca. This discrepancy is due in part to the fact that Nevada has no state tax and thus not as many funds available. Of the three Medicaid plans Nevada offers, only straight Nevada Medicaid (not QMB or SLMB plans) pays for transplant medications and secondary costs related to surgery.

Pancreas Transplant Coverage

For patients with Medicare needing a kidney-pancreas transplant, Medicare covers both combined kidney-pancreas surgery and pancreas after kidney surgery at 80% of hospital costs. Currently, California Pacific is not a Medi-Cal approved center for pancreas transplant surgery, so patients with *only* Medi-Cal coverage who need pancreas transplants are referred to other programs for this surgery. ☞

Transplant Coverage Highlights

Transplant Coverage:	Medicare Federal insurance program	Medi-Cal (CA) State insurance program	Medi-Cal (NV) State insurance (straight Medi-Cal, not QMB or SLMB plans)
Evaluation	Yes	Yes	Yes*
Surgery	80% of hospital costs (supplemental coverage suggested)	Yes*	Yes*
Living Donor Surgery	Yes	Yes*	Yes*
Medications	80% of immunosuppressives for 44 months post-transplant	Yes*	Yes*

** Some Medi-Cal patients have a “share of cost” for which they are responsible. This share of cost depends on one’s income. If you have a “share of cost,” you are responsible for paying this monthly amount before Medi-Cal covers the rest of your costs.*

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To receive your free copy of the **Transplant Information Kit**, please call toll free **1-800-711-4757**.

www.transplantlife.com


and




Angela Bogetti-Dumlao, R.N., FNP
Nurse Practitioner

New Modesto Outreach Clinic Opens

by *Laura Miyashita*

California Pacific's Kidney Team has relocated to a new clinic in Modesto, located at:

1635 Tully Road
Modesto, CA 95350
Tel. (209) 832-0725 – Angela Bogetti-Dumlao, R.N., FNP
Tel. (209) 401-8996 – Robert Fuller, R.N.



Robert Fuller, R.N.
Kidney Transplant Outreach
Coordinator

This new clinic will continue offering pre-transplant evaluations, education sessions and post-transplant follow-up clinics to individuals in the Modesto area. Spanish clinics are also available at this site as needed.

Transplant Coordinators Angela Bogetti-Dumlao, R.N., FNP and Robert Fuller, R.N. staff the Modesto clinic, providing transplant education and nursing care to patients and living donors. They also serve as liaisons to area dialysis units. For more information, please contact Angela or Robert at the above numbers. ☞



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