Paging Dr. Right!
Tips for Doc Shopping

Exercise for the Mobility Impaired

Stem Cell Transplants: A Possible PIDD Cure?

Insurance Specialty Tier Legislation: An Update

Communicating with Chronically Ill Kids
Important Safety Information for GAMUNEX-C

Gamunex-C, Immune Globulin Injection (Human), 10% Caprylate/Chromatography Purified, is indicated for the treatment of primary humoral immunodeficiency disease (PI), idiopathic thrombocytopenic purpura (ITP), and chronic inflammatory demyelinating polyneuropathy (CIDP).

Renal dysfunction, acute renal failure, osmotic nephrosis, and death may occur with immune globulin intravenous (IGIV) products in predisposed patients. Patients predisposed to renal dysfunction include those with any degree of pre-existing renal insufficiency, diabetes mellitus, age greater than 65, volume depletion, sepsis, paraproteinemia, or patients receiving known nephrotoxic drugs. Renal dysfunction and acute renal failure occur more commonly in patients receiving IGIV products containing sucrose. Gamunex-C does not contain sucrose. For patients at risk of renal dysfunction or failure, administer Gamunex-C at the minimum concentration available and the minimum infusion rate practicable.

Gamunex-C is contraindicated in individuals with acute severe hypersensitivity reactions to Immune Globulin (Human). It is contraindicated in IgA deficient patients with antibodies against IgA and history of hypersensitivity.

Gamunex-C is not approved for subcutaneous use in patients with ITP or CIDP. Due to the potential risk of hematoma formation, Gamunex-C should not be administered subcutaneously in patients with ITP.

Hyperproteinemia, increased serum viscosity, and hyponatremia may occur in patients receiving IGIV therapy. Thrombotic events have been reported in association with IGIV. Patients at risk for thrombotic events may include those with a history of atherosclerosis, multiple cardiovascular risk factors, advanced age, impaired cardiac output, coagulation disorders, prolonged periods of immobilization and/or known or suspected hyperviscosity.

There have been reports of noncardiogenic pulmonary edema [Transfusion-Related Lung Injury (TRALI)], hemolytic anemia, and aseptic meningitis in patients administered with IGIV.

The high dose regimen (1g/kg x 1-2 days) is not recommended for individuals with expanded fluid volumes or where fluid volume may be a concern.

Gamunex-C is made from human plasma. Because this product is made from human plasma, it may carry a risk of transmitting infectious agents, e.g., viruses, and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent.

After infusion of IgG, the transitory rise of the various passively transferred antibodies in the patient's blood may yield positive serological testing results, with the potential for misleading interpretation.

In clinical studies, the most common adverse reactions with Gamunex-C were headache, fever, chills, hypertension, rash, nausea, and asthenia (in CIDP); headache, cough, injection site reaction, nausea, pharyngitis, and urticaria with intravenous use (in PI) and infusion site reactions, headache, fatigue, arthralgia and pyrexia with subcutaneous use (in PI); and headache, vomiting, fever, nausea, back pain, and rash (in ITP). The most serious adverse reactions in clinical studies were pulmonary embolism (PE) in one subject with a history of PE (in CIDP), an exacerbation of autoimmune pure red cell aplasia in one subject (in PI), and myocarditis in one subject that occurred 50 days post-study drug infusion and was not considered drug related (in ITP).


You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Please see adjacent page for brief summary of GAMUNEX-C full Prescribing Information.

PROOF is everywhere you look

GAMUNEX-C is the IG therapy supported by robust clinical trials

Proven efficacy in more FDA-approved indications (CIDP, PI, and ITP)* than any other liquid IG

Evidence based. Patient proven.
GAMUNEX®-C
Immune Globulin Injection (Human) 10% Caprylate/Chromatography Purified

HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use GAMUNEX®-C safely and effectively. See full prescribing information for GAMUNEX-C.

GAMUNEX-C, [Immune Globulin Injection (Human) 10% Caprylate/Chromatography Purified]
Initial U.S. Approval: 2003

WARNING: ACUTE RENAL DYSFUNCTION and FAILURE
See full prescribing information for complete boxed warning.
- Renal dysfunction, acute renal failure, osmotic nephrosis, and death may occur with immune globulin intravenous (IGIV) products in predisposed patients.
- Renal dysfunction and acute renal failure occur more commonly in patients receiving IGIV products containing sucrose. GAMUNEX-C does not contain sucrose.
- For patients at risk of renal dysfunction or failure, administer GAMUNEX-C at the minimum concentration available and the minimum infusion rate practicable.

-------------------------INDICATIONS AND USAGE-------------------------
GAMUNEX-C is an immune globulin injection (human) 10% liquid indicated for treatment of:
- Primary Humoral Immunodeficiency (PI)
- Idiopathic Thrombocytopenic Purpura (ITP)
- Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)

----------------------------CONTRAINDICATIONS----------------------------
- Anaphylactic or severe systemic reactions to human immunoglobulin
- IgA deficient patients with antibodies against IgA and a history of hypersensitivity

-------------------------WARNINGS AND PRECAUTIONS-------------------------
- IgA deficient patients with antibodies against IgA are at greater risk of developing severe hypersensitivity and anaphylactic reactions. Have epinephrine available immediately to treat any acute severe hypersensitivity reactions.
- Monitor renal function, including blood urea nitrogen, serum creatinine, and urine output in patients at risk of developing acute renal failure.
- GAMUNEX-C is not approved for subcutaneous use in ITP patients. Due to a potential risk of hematoma formation, do not administer GAMUNEX-C subcutaneously in patients with ITP.
- Hyperproteinemia, with resultant changes in serum viscosity and electrolyte imbalances may occur in patients receiving IGIV therapy.
- Thrombotic events have occurred in patients receiving IGIV therapy. Monitor patients with known risk factors for thrombotic events; consider baseline assessment of blood viscosity for those at risk of hyperviscosity.
- Aseptic Meningitis Syndrome (AMS) has been reported with GAMUNEX-C and other IGIV treatments, especially with high doses or rapid infusion.
- Hemolytic anemia can develop subsequent to IGIV therapy due to enhanced RBC sequestration. Monitor patients for hemolysis and hemolytic anemia.
- Monitor patients for pulmonary adverse reactions (transfusion-related acute lung injury [TRALI]).
- Volume overload
- GAMUNEX-C is made from human plasma and may contain infectious agents, e.g., viruses and, theoretically, the Creutzfeldt-Jakob disease agent.
- Passive transfer of antibodies may confound serologic testing.

------------------------------ADVERSE REACTIONS----------------------------
- PI – The most common adverse reactions (≥5%) with intravenous use of GAMUNEX-C were headache, cough, injection site reaction, nausea, pharyngitis and urticaria. The most common adverse reactions (≥5%) with subcutaneous use of GAMUNEX-C were infusion site reactions, headache, fatigue, arthralgia and pyrexia.
- ITP – The most common adverse reactions during clinical trials (reported in ≥5% of subjects) were headache, vomiting, fever, nausea, back pain and rash.
- CIDP – The most common adverse reactions during clinical trials (reported in ≥5% of subjects) were headache, fever, chills, hypertension, rash, nausea and asthenia.

To report SUSPECTED ADVERSE REACTIONS, contact Talecris Biotherapeutics, Inc. at 1-800-520-2807 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

------------------------------DRUG INTERACTIONS----------------------------
- The passive transfer of antibodies may transiently interfere with the response to live viral vaccines, such as measles, mumps and rubella. Passive transfer of antibodies may confound serologic testing.

------------------------------USE IN SPECIFIC POPULATIONS----------------------------
- Pregnancy: no human or animal data. Use only if clearly needed.
- Geriatric: In patients over 65 years of age do not exceed the recommended dose, and infuse GAMUNEX-C at the minimum infusion rate practicable.

Talecris Biotherapeutics, Inc.
Research Triangle Park, NC 27709 USA
U.S. License No. 1716
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About IG Living
IG Living is the only magazine dedicated to bringing comprehensive healthcare information, immune globulin information, community and reimbursement news, and resources for successful living directly to immune globulin consumers and their healthcare providers.

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Blue Skies and the Meaning of Life: Communicating with Chronically Ill Kids
“To do right by our kids, we must prepare ourselves to answer both the ‘how’ and the ‘why.’”

Exercise for the Mobility Impaired
“Just about any exercise can be adapted to allow for someone with impaired mobility to participate.”

How an Antibody Deficiency Diagnosis Is Made: Case 1
“Most patients’ CVID will progressively evolve over a period of years.”

An Update on Specialty Tier Legislation
“Several states are considering legislation that will regulate specialty tiers to ensure patient access to needed medication.”

Choosing an Immune Globulin Product
“While many practitioners still consider all IG products to be clinically equivalent, they are not pharmaceutically equivalent.”

Paging Dr. Right
“With the right tools and techniques in place, finding a new doctor need not be an exercise in frustration and disappointment.”

The Important Decisions
“Sometimes we have to make important decisions in our lives that might not be the most pleasant.”
Dear Readers:

In this issue of IG Living, we have chosen some of your comments that you have posted on our blog page. These comments are in response to the blog postings reflected in the titles of the responses below. We hope that these comments will provide some insight, give you an occasional laugh and encourage all of our readers to read our weekly blog posts at www.IGLiving.com/BlogEngine.

10 Tips from 10 Years Sick
By Toni Bernard (posted June 16, 2011)

This is the first time I have ever commented on something on the Internet, but I have been struggling with finding a diagnosis and have started taking IVIG treatments, and I really need to talk to somebody who understands and is willing to share. Thank you for your forthrightness and honesty. Thank you for your tips. I am anxious to read your book.

— Ann Hendon

A Caregiver’s Guide to Surviving Chronic Illness
By Kris McFalls (posted June 2, 2011)

I wish everyone in my family, city, state, country [and] world would read this [blog] at least once. I know that my family “gets it” on an intellectual level, but that is never enough to carry you through the really hard part of being “different.” It’s the worst on a good day, but in order to enjoy it as a good day, one needs to forget [others’] reactions altogether. If they are not reacting as we see appropriate, it’s one thing to bring them up to speed. But, in general, I only burden them with details when it is necessary.

None of them forget that I am sick, but some of them don’t really understand how bad it can be until it happens…. I know that they care and that they love me, but I know that they will never be perfect. I can handle that now…. It used to bother me, but [it] truly does not anymore….

— Susan Watkins

Confiscate Your Moments
By Carla Schick (posted May 5, 2011)

Actually, having PIDD is one thing that has truly changed my life. I have learned to appreciate the small or little things in life. My sense of humor has helped me through many days…. Although it is hard when I am very sick and in bed for weeks at a time … I try to remember the days that lie ahead that bring me joy, like spending time with friends and family — especially my granddaughter when she beats me at Chutes and Ladders (mind you, she is only 5 and wins without me letting her win just about every time). And some of the funny moments that my husband and I have when after being in bed for two weeks and he comes home and asks if I could possibly do a load of whites because he is out of underwear. We laugh and say that we know it is getting really bad when he has to start wearing his underwear inside out because he has no clean ones. I thank God that I have a husband [who] truly loves me and understands what I deal with; that, I am grateful for every day. I know that he is always there for me. How can I not be thankful for this life that I have been dealt? I have also met some of the most kind, caring people that I would have never met had I not been diagnosed; we have a community of people that are always there to help when we are down. I am thankful always.

— Susan, Rhode Island

Name That Disease
By Kris McFalls (posted March 3, 2011)

Kris, your humor is spot on! Thanks for nicknaming my “friends,” bringing a smile to my face and a much-needed laugh to my day. This is also a welcome reminder of how lightening up my thinking helps me to feel better.

— Janet Kaye

Your feedback, opinions, suggestions and anything else you’d like to share are important! Email us at editor@IGLiving.com or visit www.IGLiving.com and go to the Be Heard/Feedback page to send your comments.
Faces of IG Living

There are many faces in the IG Living community, representing hundreds of immune-mediated diseases and countless medical and lifestyle issues. IG Living’s magazine, website, Facebook page and blog are the ways in which our community can connect with one another. Be a part of the community by interacting with us. Your comments could lead you to others who share similar issues, and vice versa. Monday through Friday, we pose a new question on the IG Living Facebook page. Here is what some of our faces of IG Living are saying in response.

IG Living
“...The worth of a book is to be measured by what you can carry away from it.” —James Bryce. What book, fiction or nonfiction, has influenced your life recently?

Molly McIntyre
Just finished The Art of Racing in the Rain. Awesome book that has many ways of looking at the roadblocks that life throws at you and having the attitude of winning and surpassing life’s way of tripping us up. The book is written from the perspective of a very special family dog. Also, if you have been blessed by one of those special human-like dogs in your life, you will enjoy it tremendously. Having many obstacles right now, I recognize that it really helped me look at things a bit differently, as well as appreciate the dog I have now and the special dog I was blessed with and is now over the rainbow bridge waiting for me … or in his own adventure as a human? All I can say is this book is awesome.

Susan Kosak
Definitely preventive medicine, patient education programs, better prescription coverage. Also some nurse and physician education programs so some of them don’t look at “zebras” as though we are faking an illness, as we often don’t present the same way as most people.

IG Living
Sometimes when you are ill, cyberspace friends may be your only source of support. How has connecting online helped you cope with chronic illness?

Lydia Durham Turner
I believe the pharmaceutical companies need to quit spending so much money promoting their different drugs. Think of all the commercials you see for each new medication. Certain medications automatically enroll you in promos where they send you guides and “record keepers,” etc. Things that, at my house, usually end up in the trash! When I started a new IG product, I received an insane amount of things not needed that had to cost them a ton of money to produce. Such items as pens, ice packs (one small one when I have four different sites I could use it on if I actually did use it), bags that aren’t even useful to store supplies in, umpteen numbers of fliers, etc. Maybe if they cut back on all their “stuff,” we, the patients, and the companies could save a lot of $! Just one of my thoughts.

Dale Manning Cook
Sometimes you wonder if anyone else has some of the symptoms you have or if it is just all in your head. Online people validate that you are not crazy [and] that they also suffer from the same symptoms. Doctors really don’t know all the symptoms because they are not living with the disease every day.

Nancy Eve Dalin
My PIDD support group is the only place that a joke about rate tubing is appreciated! I used to think I was a hypochondriac, but with a diagnosis and the support of fellow PIDDers, I now realize that I’m not alone. It’s been a life-altering experience for me.
Discovering the Unknown

Dr. Carl Sagan, a famous American writer and scientist, once said: “Somewhere, something incredible is waiting to be known.” That something incredible is being discovered each and every day through the formal and informal research that goes on in every facet of society.

Research is not just about investigating something, albeit that’s a crucial part. Conducting an investigation only serves a purpose if the findings are documented and shared. That’s what so much of the content in every issue of IG Living is about. By documenting and sharing what is being found out through scientific and personal research, we can make positive changes for individuals and the healthcare system as a whole.

Much scientific research is currently being conducted about stem cell transplants. Patients with nonmalignant illnesses, such as primary immune deficiencies (PIDDs), have long hoped for a cure for their disease, rather than just a treatment. And, while transplants have been performed for many years in some of the rarer PIDDs, such as severe combined immune deficiency and Wiskott-Aldrich syndrome, there is hope that as cases of successful transplants in patients with the more common PIDDs, such as common variable immune deficiency (CVID), are documented that transplants will become more accepted by both physicians and insurance companies as a viable medical procedure.

In this issue’s article, Stem Cell Transplants for PIDDs, we look at the current state of stem cell transplantation, how it’s performed, and even provide some documentation about successful outcomes for CVID patients — those who have rarely before been considered for a transplant procedure.

There also is a lot of personal research that contributes just as importantly. What is learned through patients’ and physicians’ own research and then communicated can make a big difference in patients’ treatment and lifestyles. In our article, Paging Dr. Right, patients and physicians share their insights into how to locate the “right” doctor. The article also explores doctor rating systems, which are becoming more popular and list such details as training, experience, certification and disciplinary history, along with patient satisfaction ratings.

In June, I attended the Immune Deficiency Foundation’s annual conference in Phoenix, Ariz., at which a great deal of exposure was given to the U.S. Immunodeficiency Network (USIDNET). This registry was created to improve the medical community’s knowledge of the various PIDDs and their effective treatments in order to promote collaborative research to benefit patients affected by these diseases. For more information about how to participate in this research, go to www.usidnet.org.

Research on every level is essential for discovering something incredible. Not only can all of us do our part to participate in research, but it is hoped that we will all benefit in some way from what is discovered.

To your health,

Ronale Tucker Rhodes, MS, Editor
As we discussed in the previous issue, recurrent infections of the respiratory tract are suggestive of an antibody deficiency. Other factors, such as gastroesophageal reflux, may actually be the problem, or may be making the situation worse. An antibody deficiency may exist as a quantitative deficiency of IgG (the serum IgA and/or IgM also may be deficient), along with a deficiency in the ability to make antibodies in response to immunization with a vaccine (functional antibody deficiency). Alternatively, the immunoglobulin serum levels may be normal, or near normal, but with a functional antibody deficiency. We will begin with a case presentation of the former.

Case 1: Quantitative IgG Deficiency and Functional Antibody Deficiency

A 15-year-old young woman was referred for the evaluation of chronic/recurrent pneumonias. Indeed, she required nearly constant antibiotic usage, and she had reduced lung function due to all the damage from the pneumonias. She was currently diagnosed with a “variant” cystic fibrosis to explain her disease symptoms and problems, and to direct her treatment.

As a young infant, she appeared to be fine. After a few months of age, she began to have seizures with fevers. She was placed on phenytoin, and her seizures came under control. By approximately 2 years of age, she was noted to have enlarged lymph nodes throughout her body, and her spleen was enlarged. This is a known side effect of phenytoin, which was discontinued, but she was further evaluated to verify no other cause for the enlarged lymph nodes, such as an unusual infection or leukemia. She was noted to have an undetectable IgA serum level, and she was diagnosed with selective IgA deficiency. Over the next few years, the frequency and severity of respiratory infections increased.

By approximately 6 years of age, she was re-evaluated, and she was noted to have low IgG2 serum levels. Therefore, her diagnosis was amended to an IgG2 subclass deficiency with IgA deficiency. Despite this, due to the severity of the lung disease, she was diagnosed with variant cystic fibrosis, and was treated accordingly. At approximately 10 years of age, evaluation of her immunoglobulin levels was repeated, and her IgG1 and IgG3 subclasses also were somewhat on the low side. Her IgG2 serum level was very low, and her IgA remained undetectable.

Pre- and post-immunization studies with pneumococcal vaccine were performed, and the values were reported as poor, but she continued to be diagnosed with variant cystic fibrosis. Her referral evaluation at 15 years of age demonstrated low IgG, IgM and IgA serum levels. She had less than 1.3 mcg/mL titer to all pneumococcal serotypes tested, both on the pre- and post-immunization evaluations. Her anti-diphtheria and anti-tetanus antibody titers were not protective. Her new diagnosis was common variable immune deficiency (CVID). Her symptoms improved after beginning intravenous immune globulin (IVIG) treatment, but unfortunately, she was still plagued with chronic lung disease.

This case illustrates several features of CVID. Most patients’ CVID will progressively evolve over a period of years. Selective IgA deficiency may first be present, followed by IgG subclass deficiencies and, ultimately, quantitatively low IgG, IgA and IgM serum levels. Most informative, though, is the functional antibody deficiency. This patient’s total IgG level was low at both her 6-year-old and 10-year-old evaluation, coupled with poor pneumococcal titer values at 10 years of age, which indicates she should have been diagnosed with CVID much earlier. Moreover, definitive treatment with IVIG should have begun much earlier.

In the next issue, we will continue with case presentations and explanations of how an antibody deficiency is diagnosed.

TERRY HARVILLE, MD, PhD, is medical director of the Special Immunology Laboratory at the University of Arkansas for Medical Sciences, and a consultant for immunodeficiencies, autoimmunities and transplantation.

Editor’s Note: This Immunology 101 column, introduced in the April-May 2010 issue of IG Living, is intended to be a basic course in immunology.
An Update on Specialty Tier Legislation
By Kris McFalls

According to reports published by Medco Health Solutions and Express Scripts, the number of specialty drugs is expected to grow more than 25 percent per year, both in increased utilization and increased unit cost. In response to these rapidly increasing costs, payers are shifting some of the costs of specialty drugs from the medical benefit to the prescription benefit under specialty tiers. In fact, 41 percent of plans have already taken this step, says a 2010 report titled Leading Trends in Rx Management by Medco.

Medicare Leads by Example

Specialty drugs are used to treat complex and chronic diseases. In many cases, there are no generic or bioequivalent alternatives. Specialty tier pricing was first introduced with Medicare Part D plans. And as is common, private payer plans tend to follow the lead set by Medicare. One big difference between Medicare and private insurance, however, is that Medicare Part D plans have a catastrophic level that when met, out-of-pocket expenses (OOP) then are minimal. While some private plans do have a maximum OOP or maximum dollar limit per prescription, many do not. Thus, patients can be left with unlimited and, in many cases, an unmanageable liability.

Switching from Copay to Coinsurance

As currently defined by Medicare, specialty drugs are classified as those that cost more than $600 per month. Traditionally, specialty drugs were covered under a prescription plan that placed them in one of three tiers with a fixed-dollar copay. Now, however, these drugs fall into specialty tiers that impose a cost-sharing formula known as coinsurance. Because coinsurance means patients typically are charged 25 percent to 33 percent of the total cost, many patients are unable to afford their medications using this formula.

Patients with diseases such as multiple sclerosis, cancer and rheumatoid arthritis already are impacted by specialty tier coinsurance. In addition, many immune globulin (IG) patients utilizing their Medicare Part D benefit to treat neurological and autoimmune diseases also have been impacted. And patient advocacy groups fear that all payers will eventually move all IG products, regardless of what they are used to treat, to the specialty tier formula.

According to one major insurance prescription calculator, the average price of a monthly, 40 gram dose of intravenous IG (IVIG) at the member-discounted price is $4,835. Therefore, a specialty tier coinsurance of 30 percent would cost the patient $1,450 per month (see Specialty Drug Formulary Examples). The U.S. Census Bureau lists the annual median household income at $50,221. So, if an average-income IG patient were forced to pay a 30 percent coinsurance with no OOP maximum, the yearly total would equal 35 percent of their annual income for a total of $17,400.

Advocacy Efforts

In response to constituent complaints, several states are considering legislation that will regulate specialty tiers to ensure patient access to needed medication. Advocates for legislation argue that insurance is supposed to spread the risk in an equitable fashion among all insured. Yet, specialty tiers don’t do this; instead, they unfairly target those with chronic illness, forcing many to choose between basic...
necessities and their medications.

Insurance industry advocates argue that the use of specialty drugs has risen dramatically and having a tiered system helps them control the costs of premiums for all. In a statement to ABC News in San Francisco, Patrick Johnston, CEO of the California Association of Health Plans, placed part of the responsibility on the drug manufacturers. “What the cost is of a given drug starts with the manufacturer,” says Johnston. “We ought to look there, and then both the health plan employers, labor trusts, health plans, and government entities, utilize copayments and coinsurance as important tools to encourage enrollees to select cost-effective alternatives and to control the overall cost of prescription coverage.”

**Legislation**

New York was the first state to pass legislation that bans specialty tiers. Lawmakers cited research that showed cost-sharing policies create negative health outcomes due to decreased utilization of drugs and subsequent increased hospitalizations.

Several other states also are considering similar legislation that will ban specialty tiers and/or cap the patient’s OOP liability. California, Connecticut, Delaware, Hawaii, Maryland, Massachusetts, New Mexico, Rhode Island, Vermont and Washington all have introduced legislation. Illinois, Indiana, Nebraska, Pennsylvania, Virginia and Wisconsin are considering introducing legislation.

The Affordable Care Act will eventually assist Medicare patients using Part D plans by eliminating the doughnut hole by the year 2014. It does not, however, specifically address the issue of specialty tier OOP expenses for other insurance plans. Additionally, state legislation, even if passed in all 50 states, will not apply to self-funded plans that are governed by the Employment Retirement Income Security Act (ERISA). Federal legislation will be needed to address ERISA-governed plans.

**The Impact of Specialty Drugs**

With hundreds of specialty drugs in the pipeline holding the hopes and future for patients and industry alike, the impact of these drugs will no doubt continue to shape the political and medical landscape for years to come.

**Kris McFallS** is the patient advocate and a staff writer for IG Living magazine.

**Sources**


Legislation

**Premiums Reduced for Federal Pre-Existing Insurance Plan**

As of July 1, individuals who enroll in the federal Pre-Existing Condition Insurance Plan (PCIP) pay 40 percent less in 18 states, and eligibility standards have been eased in 23 states and the District of Columbia. The PCIP was created under the Affordable Care Act and serves as a bridge to 2014 when insurers will no longer be allowed to deny coverage to people with any pre-existing condition such as cancer, diabetes and asthma. In 23 states and the District of Columbia, the PCIP is federally administered, whereas the remaining states operate their own PCIP programs using federal funds provided by the Affordable Care Act.

People applying for coverage in the federally administered PCIPs will simply need to provide a letter from a doctor, physician assistant or nurse practitioner dated within the past 12 months stating that they have or, at any time in the past, had a medical condition, disability or illness. Applicants will no longer have to wait on an insurance company to send them a denial letter. This system was made available to children under age 19 in February, and it is being extended to all applicants regardless of age. However, applicants will still need to meet other eligibility criteria, including that they are U.S. citizens or residing in the U.S. legally and that they have been without health coverage for six months.

The 27 states running their own programs have been informed of the opportunity to modify their current PCIP programs. And, in the fall, the U.S. Department of Health and Human Services will begin paying agents and brokers for successfully connecting eligible people with the PCIP program in an effort to help reach those who are eligible but unenrolled.

A chart showing changes to PCIP premiums in the states with federally administered PCIP programs can be accessed at www.HealthCare.gov/news/factsheets/pcip05312011a.html.

FDA Approval

**Baxter Receives FDA Approval for Gammagard**

Baxter International has received U.S. Food and Drug Administration approval for subcutaneous administration of Gammagard Liquid 10% (immune globulin infusion [human]) for patients with primary immunodeficiency. According to Richard Schiff, Baxter’s gammaglobulin trials medical director, “Building upon years of strong clinical data of Gammagard Liquid, our subcutaneous clinical trial in patients with PI demonstrated efficacy consistent with that seen in other clinical studies of intravenous and subcutaneous immune globulin.” Gammagard Liquid is indicated as replacement therapy for primary humoral immunodeficiency in adult and pediatric patients 2 years of age and older.

**Did You Know?**

The Plasma Protein Therapeutics Association posts the latest news about intravenous immune globulin on its website at www.ivig-ppta.com.

FDA Approval

**Kedrion Launches FDA-Approved Gammaked in U.S. Market**

The U.S. Food and Drug Administration has approved Kedrion Biopharma’s Gammaked, a 10 percent liquid, ready-to-use sterile solution of human immune globulin, for the U.S. market. Gammaked is approved for intravenous administration for primary immunodeficiency, idiopathic thrombocytopenic purpura and chronic inflammatory demyelinating polyneuropathy, and for subcutaneous administration to treat primary immunodeficiency. It is supplied in 1-, 2.5-, 5-, 10- and 20-gram single-use bottles.

Kedrion has entered into an agreement with Grifols SA to manufacture Gammaked for the next seven years. And, as part of its ongoing expansion in the U.S., Kedrion began distribution of Gammaked on August 2 through designated channel partners.
Did You Know

**Research**

**IVIG Relieves Neuropathy in Patients with Sjögren’s**

Intravenous immune globulin (IVIG) may offer some relief for patients with sensorimotor neuropathy or nonataxic sensory neuropathy associated with Sjögren’s syndrome. A study conducted at Hôpital de Bicêtre in France assessed the effects and tolerability of IVIG treatment in a small retrospective study of 19 Sjögren’s syndrome patients with neuropathy. Ten of the patients received 2 g/kg of IVIG for five days a month and nine received it two days a month for seven months. All five patients with sensorimotor neuropathy, four with nonataxic sensory neuropathy and the sole patient with conduction block improved or stabilized with IVIG therapy. In contrast, only two of the nine patients with ataxic neuropathy improved and four worsened. The disease remained stable in the other three patients. The nine patients who experienced dramatic improvement showed response after only two infusions. After four to 12 months of treatment, five patients were able to have their IVIG infusions spaced every two or three months. And, 10 of the 13 patients who required corticosteroids were able to reduce their prednisone dosage from an average of 15 mg per day before IVIG to 10 mg per day after IVIG. The study was published online in the May 16 edition of *Arthritis Care & Research*.

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**Research**

**Top-Line Results for Phase III Study of HyQ in PIDD Patients**

A Phase III study of HyQ, an investigational facilitated subcutaneous immune globulin (SCIG) product for use in patients with primary immunodeficiency (PIDD), has produced top-line results. In the open-label study by Baxter International Inc. and Halozyme Therapeutics Inc., 89 patients with PIDD were enrolled in 15 centers in the U.S. and Canada to evaluate the effectiveness of HyQ in the prevention of infections and to measure other secondary endpoints, including tolerability. Patients were infused with a three-week or four-week dose of 10% HyQ in a single infusion site. Results showed that the acute serious bacterial infection rate was .025 per patient per year, which is below the required efficacy threshold of 1.0. The tolerability assessment showed that the most frequently reported adverse reactions were infusion site reactions (20 percent), headache (3 percent), fatigue (1 percent) and fever (1 percent).

The data from this trial confirm the interim results presented in late 2010 and support the recent submission of a biologics license application to the U.S. Food and Drug Administration. The trial also established a foundation for the HyQ extension study that will further evaluate HyQ administration in patients through March 2012. In addition to the recent regulatory submission in the U.S., Baxter expects to file in Europe and Canada, and will present results from the Phase III study by the end of 2011.

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**Donation**

**CSL Behring Donates Factor VIII to WFH**

In July, CSL Behring donated more than one million international units (IUs) of von Willebrand factor (WFVIIIFactor VIII (VIIIF)) replacement medication to patients through the World Federation of Hemophilia (WFH). The donation, which is commercially valued at $1.3 million, is part of the commitment CSL has made to WFH to donate two million IUs of VIIIF each year for three years to support WFH’s progress in improving the diagnosis and treatment of bleeding disorders in developing countries through its Global Alliance for Progress (GAP) program.

“CSL Behring is pleased and proud to support the World Federation of Hemophilia as a long-standing contributor to GAP,” said Paul Perreault, president of CSL. “WFH is committed to improving the lives of patients with bleeding disorders like von Willebrand disease in areas of the world where the needs are greatest.”

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October-November 2011  www.IGLiving.com  IG Living!
Sanofi has appointed Greg Irace, currently president and CEO of Sanofi’s U.S. operations, to the newly created role of senior vice president, global services, and Anne C. Whitaker as president, North America, Pharmaceuticals. Sanofi-aventis SA has invested $2.1 million in Hadasit Bio Holdings Ltd. portfolio company Kahr Medical Ltd., and Hadasit Bio has invested $1 million in the company, giving Hadasit Bio 65 percent ownership in the company and sanofi-aventis will have 18 percent ownership with first rights to negotiate to buy Kahr’s leading product. Kahr develops protein-based drugs for autoimmune diseases and cancer.

On April 15, in time for World Hemophilia Day, CSL Behring announced the winners of the CSL Behring Prof. Heimburger Award 2011, which inspires young medical doctors to get involved in hemophilia research. The winners are Anne Angelillo-Scherrer, Jan Emmerechts, Mindy Simpson, Chee Wee Tan and Janine Eliza van Loon.

Dynavax Technologies Corp. has received a $6 million milestone payment from partner Glaxo SmithKline after it started a Phase I clinical trial on DV1179, a potential lupus drug.

Since the U.S. Food and Drug Administration (FDA) approval of CSL Behring’s Hizentra production facility in Bern, Switzerland, production of Hizentra has more than doubled. In March, CSL Behring received FDA approval for further expansion of its Privigen manufacturing capacity.

The National Psoriasis Foundation has awarded $750,000 in research grants to the nation’s leading scientists studying psoriasis, a chronic disease of the immune system. Recipients of seven of the grants are Bing-Jian Feng, PhD; Sam Hwang, MD, PhD; Chuanju Liu, PhD; Alicia Mathers, MD; Lorena Riol-Blanco, PhD; Stefan Stoll, PhD; and Patrick Zeeuwjen, PhD. The foundation also awarded each of two scientists a two-year $200,000 Translational Research Grant to focus on moving scientific discoveries from laboratory, clinical or population-based studies into applications with a clear benefit to patients. These recipients are Antonio Costanza, MD, and Peter Marinovich, MD.

Symphogen, a private biopharmaceutical company developing antibody therapeutics to treat cancer, infectious and autoimmune diseases, has named Ivan D. Horak, MD, FACP, as its chief scientific/medical officer, and Gayle M. Mills as its chief business officer.

Immune Design, a developer of new vaccine technology, has hired Carlos Paya, the former president of Ireland-based Elan, as its new CEO.

Safety

Medication Error Common During Cold and Flu Season

According to doctors and pharmacists, the most common — and one of the most dangerous — medication errors people can make is accidentally overdosing on acetaminophen (Tylenol) or ibuprofen (Advil, Motrin) by taking both the painkiller and an over-the-counter cold and flu remedy that also contains it. Cold and flu remedies that contain acetaminophen include Comtrex (325 mg), Nyquil (500 mg), Dayquil (325 mg) Dristan cold (325 mg), Contact (500 mg) and Alka Seltzer Plus (250 mg). Nurofen is the cold and flu remedy that contains ibuprofen (200 mg).

Since acetaminophen is used in a lot of combo products, it’s easy for consumers to take a regular dose of it for a headache or aches and pains and then double dose by taking a cold remedy as well. Therefore, it is recommended that individuals watch out for any product labeled “multi-symptom” and always read the ingredients.
Celiac Genes Identified in Immune System

A United Kingdom-led international study, which was published in the Feb. 28 online issue of the journal Nature Genetics, has identified four types of genetic disturbance in the immune system that lead to celiac disease, bringing to 40 the total number of known inherited factors that increase a person’s risk of developing the disease.

Researchers performed a second-generation genome-wide association study that included 4,533 people with celiac disease and 10,750 people who did not have the disease. They also genotyped more than 130 sequences of DNA (single-nucleotide polymorphisms, or SNPs) in a separate group of 4,918 people with the disease and 5,684 controls. By comparing what they found in the genomes of people with the disease to those of people without the disease, the researchers concluded there is robust evidence of SNP variants in 13 new regions of the genome, most of which contained genes with immune functions and four having key roles in thymic T-cell selection. They also found evidence to suggest there is a shared risk between the gene linked to celiac disease and many other common chronic diseases involving the immune system.

It is hoped that the findings will help to improve diagnostic tools and treatments for celiac disease, as well as give new clues about related autoimmune diseases, such as type 1 diabetes.
**Insurance**

**Healthcare Reform Rule Bans Unreasonable Premium Increases**

In May, the Department of Health and Human Services (HHS) issued a final regulation to ensure that large health insurance premium increases will be thoroughly reviewed and consumers will have access to clear information about those increases. Effective September 1, the rule requires independent experts to scrutinize any proposed increase of 10 percent or more for most individual and small group health insurance plans. States will have the primary responsibility for reviewing rate increases, and HHS will serve in a backup role in states that don’t have the resources or authority to review rates. HHS has awarded $44 million in Affordable Care Act grants to states to help strengthen their oversight capabilities. An additional $200 million will continue to be available to states under the Act.

The final regulation also requires that as of September 2012, the 10 percent threshold will be replaced by state-specific thresholds that reflect the insurance and healthcare cost trends in each state. HHS will work with states to develop those thresholds. The rule also requires insurance companies to provide consumers with easy-to-understand information about the reasons for large rate increases and post the justification for those hikes on their websites, as well as on the HHS Affordable Care Act website (www.healthcare.gov).

Publication of the final rule comes as health insurance companies have reported some of their highest profits in years. One cause for these profits is that actual medical costs are growing more slowly than insurance companies projected when they set their 2011 rates last year. However, many of the rates consumers and small employers pay today don’t reflect these lower costs.

“Effective rate review works; it does so by protecting consumers from unreasonable rate increases and bringing needed transparency to the marketplace,” said HHS Secretary Kathleen Sebelius. “During the past year, we have worked closely with states to strengthen their ability to review, revise or reject unreasonable rate hikes. This final rule helps build on that partnership to protect consumers.”

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**Clinical Trial**

**PANDAS IVIG Clinical Trial Open to Patients**

The National Institute of Mental Health and Yale Child Study Center are recruiting children for a pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) intravenous immune globulin (IVIG) clinical treatment study. The study will look at whether children with PANDAS improve with IVIG treatment.

Children who may be able to participate in the study include those who are 4 to 12 years old with sudden repetitive or obsessive thoughts and behaviors after a strep infection. At the start of the study, some children will randomly receive IVIG and some will randomly receive a placebo. After the first six weeks, all families can choose to receive IVIG treatment. All children participating in the study will have to take antibiotics to protect against possible future strep infections. The study is free. For more information, contact Megan Smith at (203) 737-5588 or meg.smith@yale.edu.
Research

Novel Therapy Improves Immune Function in Teen

Researchers at the Children’s Hospital of Philadelphia used an alternative cell-signaling pathway to significantly improve immune function in a 13-year-old boy with Wiskott-Aldrich syndrome, an inherited immune deficiency disorder. The study provides a proof-of-principle that immunotherapy, which harnesses elements of the body’s immune system, may be used to treat this rare and often deadly disorder.

“If this encouraging initial result holds up in further clinical studies, we may have a treatment option for patients with Wiskott-Aldrich syndrome,” said pediatric immunologist Jordan S. Orange, MD, PhD, who holds the newly established Jeffrey Modell Endowed Chair in pediatric immunology research at Children’s Hospital. The study appeared in the April 2011 edition of the Journal of Clinical Investigation.

Study Shows Why Humira Fails to Work for Some

A new study revealed that close to one-third of patients taking the arthritis drug Humira developed an immune system reaction to it that rendered it ineffective. The study, which was published in the April 13 issue of the Journal of the American Medical Association, followed 272 patients taking Humira for about three years. Twenty-eight percent of those patients developed immune system antibodies against the drug, two-thirds of whom developed those antibodies within the first 28 weeks of treatment. These patients’ immune systems recognized the drug as a foreign substance and developed antibodies to fight the drug and remove it from the body.

Potential New Drug for MS Therapy

Biogen Idec’s anti-LINGO-1 antibody, called BIIB033, is an investigational drug that has the potential to reverse the symptoms of multiple sclerosis (MS) by regenerating nerves. People with MS have an overactive immune system that eats away at the protective coating surrounding nerve fibers known as myelin, leading to disability. The first in-human clinical trials of BIIB033 have been shown to regenerate myelin, suggesting that the drug may be able to reverse some of the damage inflicted by MS and, thus, reverse disability progression, potentially offering an entirely new approach to treating MS. The Phase I clinical trial is investigating the safety and tolerability of BIIB033 in 64 healthy adult volunteers.

FDA Approves New SCIG Needle Sets

RMS Medical Products Inc. has received approval from the U.S. Food and Drug Administration to market its new Hlgh Flo RMS Subcutaneous Needle Sets in the U.S. The needle sets, intended for the delivery of medication to subcutaneous tissue, use custom-designed, approximately 26-gauge needles that have a smaller outside diameter than commonly used 24-gauge needles, which results in faster flow rates. When used in multi-needle sets, such as for subcutaneous immune globulin (SCIG) infusions, the sets distribute equal volumes of the drug to all needles. They are available in single, double, triple and quad configurations, and produce a low residual Y connector, which allows up to eight needles to be used for a single infusion. Needle lengths currently available are 6 mm, 9 mm and 12 mm.

The needle sets have previously been approved and are available for use by patients in Canada and Europe.
Research

Study Shows SCID Babies Can Have Improved Survival

Babies with severe combined immunodeficiency (SCID) who are diagnosed at birth and who receive a hematopoietic stem cell transplant (HSCT), which is the transplantation of blood-forming stems cells, have significantly improved survival, according to a study published in Blood, the journal of the American Society of Hematology.

Investigators conducted a retrospective cohort study by comparing the outcomes of 60 babies diagnosed at or before birth between 1982 and 2010 with the outcomes of their relatives who also had the disorder, using information gathered from databases from Great Ormond Street Hospital NHS Trust and Newcastle General Hospital in London, U.K. Study results showed that in comparison with the family member with SCID, babies diagnosed at birth had a significantly decreased number of infections (89 percent versus 17 percent, respectively). Patients in the early diagnosed group also were transplanted earlier and had a dramatically improved survival outcome following HSCT, regardless of donor match, conditioning regimen (chemotherapy or radiation given immediately prior to a transplant to help eliminate the patient's disease and to suppress immune reactions) or type of SCID.

Seventeen (35.4 percent) of the 48 family members with SCID died before HSCT, and among the 31 of them who underwent HSCT, 12 patients (38.7 percent) died after the procedure. In comparison, only one patient in the early diagnosed group died before HSCT and five patients died after HSCT. The transplant survival rate of the early diagnosed group was 91.5 percent ($p<.001$) compared with 61.3 percent ($p<.001$) of their relatives with SCID.

“This is the first study that shows formal comparative data to demonstrate that newborn diagnosis can improve survival in SCID patients, regardless of the type of donor or conditioning regimen used,” said H. Bobby Gaspar, MD, PhD, senior author of the study and professor of pediatrics and immunology at University College London (UCL) Institute of Child Health in London.

“There is currently no newborn screening for SCID in the U.K.; the U.S. is the only country that has started screening for SCID.” As of this writing, there are six states and one territory in the U.S. that have added SCID to its newborn screening panel, and seven other states have voted to recommend SCID to their newborn screening panels.

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Research

Marker Identified for Treating Chronic Granulomatous Disease

Federal researchers have identified a marker that will help determine which patients with chronic granulomatous disease (CGD) need to be treated most aggressively, possibly with bone marrow transplants. In a test of immune cells from blood samples of 287 people with the condition, they found that they were able to group people together based on the amount of superoxide made by immune cells and then figure out which groups lived the longest or shortest. “By precisely measuring superoxide production, we observed that even tiny residual amounts, at levels below what doctors paid attention to in the past, had a significant impact on patient survival,” said Dr. John Gallin, senior author of the report and director of the Clinical Center at the U.S. National Institutes of Health.

CGD affects an estimated 1,200 people in the U.S. and 25,000 people worldwide. The inherited disease causes people to become especially vulnerable to infections caused by certain germs and fungi, leading to abscesses in various organs.
Hizentra is contraindicated in patients with hyperprolinemia because it contains the stabilizer L-proline (see Description [11]).

5 Warnings and Precautions

5.1 Hypersensitivity

Severe hypersensitivity reactions may occur to human immune globulin or components of Hizentra, such as polysorbate 80. In case of hypersensitivity, discontinue the Hizentra infusion immediately and institute appropriate treatment.

Individuals with IgA deficiency can develop anti-IgA antibodies and anaphylactic reactions (including anaphylaxis and shock) after administration of blood components containing IgA. Patients with known antibodies to IgA may have a greater risk of developing potentially severe hypersensitivity and anaphylactic reactions with administration of Hizentra. Hizentra contains ≤50 mg/mL IgA (see Description [11]).

5.2 Reactions Reported to Occur With IgIV Treatment

The following reactions have been reported to occur with IgIV treatment and may occur with IgG treatment.

Renal Dysfunction/Failure
Renal dysfunction/failure, osmotic nephropathy, and death may occur with use of human immune globulin products. Ensure that patients are not volume depleated and assess renal function, including measurement of blood urea nitrogen (BUN) and serum creatinine, before the initial infusion of Hizentra and at appropriate intervals thereafter.

Periodic monitoring of renal function and urine output is particularly important in patients judged to have a potential increased risk of developing acute renal failure. If renal function deteriorates, consider discontinuing Hizentra. For patients judged to be at risk of developing renal dysfunction because of pre-existing renal insufficiency or predisposition to acute renal failure (such as those with diabetes mellitus or hypovolemia, those who are overweight or use concomitant nephrotoxic medicinal products, or those who are over 65 years of age), administer Hizentra at the minimum rate practicable.

Thrombotic Events
Thrombotic events may occur with use of human immune globulin products. Patients at increased risk may include those with a history of atherosclerosis, multiple cardiovascular risk factors, advanced age, impaired cardiac output, hypercoagulable disorders, prolonged periods of immobilization, and/or known or suspected hyperviscosity. Because of the potentially increased risk of thrombosis, consider baseline assessment of blood viscosity in patients at risk for hyperviscosity, including those with cryoglobulins, fasting chylomicronemia, markedly high triglycerides (triglycerides), or monoclonal gammapathies. For patients judged to be at risk of developing thrombotic events, administer Hizentra at the minimum rate practicable.

Aseptic Meningitis Syndrome (AMS)
AMS may occur with use of human immune globulin products. The syndrome usually begins within several hours to 2 days following IgIV treatment. AMS is characterized by signs and symptoms including severe headache, nuchal rigidity, drowsiness, fever, photophobia, painful eye movements, nausea, and vomiting. Cerebrospinal fluid (CSF) studies frequently show pleocytosis up to several thousand cells per cubic millimeter, predominantly from the granulocytic series, with elevated protein levels up to several hundred mg/dL. AMS may occur more frequently in association with high doses (2 g/kg) and/or rapid infusion of IGIV.

Conduct a thorough neurological examination, including CSF studies, to rule out other causes of meningitis in patients exhibiting signs and symptoms of AMS. Discontinuation of IGIV treatment has resulted in remission of AMS within several days without sequelae.

Hemolysis
Hizentra can contain blood group antibodies that may act as hemolysins and induce in vivo coating of red blood cells (RBCs) with immunoglobulin, causing a positive direct antiglobulin (Coombs’) test result and hemolysis. Delayed hemolytic anemia can develop subsequent to immune globulin therapy due to enhanced RBC sequestration, and acute hemolysis, consistent with intravascular hemolysis, has been reported. Monitor recipients of Hizentra for clinical signs and symptoms of hemolysis. If these are present after a Hizentra infusion, perform appropriate confirmatory laboratory testing. If transfusion is indicated for patients who develop hemolysis with clinically compromising anemia after receiving Hizentra, perform adequate cross-matching to avoid exacerbating on-going hemolysis.

Transfusion-Related Acute Lung Injury (TRALI)
Noncardiogenic pulmonary edema may occur in patients administered human immune globulin products. TRALI is characterized by severe respiratory distress, pulmonary edema, hypoxemia, normal left ventricular function, and fever. Typically, it occurs within 1 to 6 hours following transfusion. Patients with TRALI may be managed using oxygen therapy with adequate ventilatory support.

Report all infections that are possibly transmitted by Hizentra to CSL Behring Pharmacovigilance at 1-866-915-6958.

6 Adverse Reactions

The most common adverse reactions (ARs) observed in ≤50% of study subjects receiving Hizentra, were local reactions (i.e., swelling, redness, heat, pain, and itching at the injection site), headache, vomiting, pain, and fatigue.

6.1 Clinical Trials Experience

Because clinical studies are conducted under widely varying conditions, AR rates observed in clinical studies of a product cannot be directly compared to rates in the clinical studies of another product and may not reflect the rates observed in clinical practice. The safety of Hizentra was evaluated in a clinical study for 15 months in subjects with PI who had been treated previously with IGIV every 3 or 4 weeks. The safety analyses included 49 subjects in the intention-to-treat (ITT) population. The ITT population consisted of all subjects who received at least one dose of Hizentra (see Clinical Studies [14]).

Subjects were treated with Hizentra at weekly doses ranging from 66 to 331 mg/kg body weight during the wash-in/wash-out period and from 72 to 379 mg/kg during the efficacy period. The 49 subjects received a total of 2264 weekly infusions of Hizentra.

No deaths or serious ARs occurred during the study. Two subjects withdrew from the study due to ARs. One subject experienced a severe injection-site reaction one day after the third weekly infusion, and the other subject experienced moderate myositis. Both reactions were judged to be “at least possibly related” to the administration of Hizentra.

Table 2 summarizes the most frequent adverse events (AEs) (experienced by at least 4 subjects), irrespective of causality. Included are all AEs and those considered temporally associated with the Hizentra infusion, i.e., occurring during or within 72 hours after the end of an infusion. Local reactions were the most frequent AEs observed, with injection-site reactions (i.e., swelling, redness, heat, pain, and itching at the site of injection) comprising 98% of local reactions.

Table 2: Incidence of Subjects With Adverse Events (AEs)* (Experienced by 4 or More Subjects) and Rate per Infusion, Irrespective of Causality (ITT Population)

<table>
<thead>
<tr>
<th>AE (≥4 Subjects)</th>
<th>All AEs*</th>
<th>AEs* Occurring During or Within 72 Hours of Infusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (% of Subjects (n=49)</td>
<td>Number (Rate) of AEs (n=2264 Infusions)</td>
</tr>
<tr>
<td>Local reactions1</td>
<td>49 (100)</td>
<td>1340 (0.592)</td>
</tr>
</tbody>
</table>
Because postmarketing reporting of adverse reactions is voluntary and from a population of uncertain size, it is not always possible to reliably estimate the frequency of these reactions or establish a causal relationship to product exposure.

6.2 Postmarketing Experience

Table 2: (Continued)

<table>
<thead>
<tr>
<th>AE (≥4 Subjects)</th>
<th>All AEs*</th>
<th>AEs* Occurring During or Within 72 Hours of Infusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (%) of Subjects (n=49)</td>
<td>Number (%) of AEs (n=2264 Infusions)</td>
</tr>
<tr>
<td>Other AEs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>13 (26.5)</td>
<td>40 (0.018)</td>
</tr>
<tr>
<td>Cough</td>
<td>8 (16.3)</td>
<td>9 (0.004)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>7 (14.3)</td>
<td>8 (0.004)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>6 (12.2)</td>
<td>6 (0.003)</td>
</tr>
<tr>
<td>Back pain</td>
<td>5 (10.2)</td>
<td>11 (0.005)</td>
</tr>
<tr>
<td>Nausea</td>
<td>5 (10.2)</td>
<td>5 (0.002)</td>
</tr>
<tr>
<td>Abdominal pain, upper</td>
<td>5 (10.2)</td>
<td>5 (0.002)</td>
</tr>
<tr>
<td>Rash</td>
<td>5 (10.2)</td>
<td>7 (0.003)</td>
</tr>
<tr>
<td>Pain in extremity</td>
<td>4 (8.2)</td>
<td>7 (0.003)</td>
</tr>
<tr>
<td>Migraine</td>
<td>4 (8.2)</td>
<td>5 (0.002)</td>
</tr>
<tr>
<td>Pain</td>
<td>4 (8.2)</td>
<td>5 (0.002)</td>
</tr>
<tr>
<td>Epistaxis</td>
<td>4 (8.2)</td>
<td>6 (0.003)</td>
</tr>
<tr>
<td>Pharyngolaryngeal pain</td>
<td>4 (8.2)</td>
<td>6 (0.003)</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>4 (8.2)</td>
<td>5 (0.002)</td>
</tr>
</tbody>
</table>
* Excluding infections.
† Rate of AEs per infusion.
‡ Includes injection-site reactions as well as bruising, scabbing, pain, irritation, cysts, eczema, and nodules at the injection site.

The ratio of infusions with temporally associated AEs, including local reactions, to all infusions was 1338 to 2264 (59.1%; upper 95% confidence limit of 62.4%). Excluding local reactions, the corresponding ratio was 173 to 2264 (7.6%; upper 95% confidence limit of 8.9%).

Table 3 summarizes the most frequent ARs (i.e., those AEs considered by the investigators to be “at least possibly related” to Hizentra administration) experienced by at least 2 subjects.

Table 3: Incidence of Subjects With Adverse Reactions ( Experienced by 2 or More Subjects) to Hizentra and Rate per Infusion (ITT Population)

<table>
<thead>
<tr>
<th>Adverse Reaction (≥2 Subjects)</th>
<th>Number (%) of Subjects (n=49)</th>
<th>Number (%) of AEs (n=2264 Infusions)</th>
<th>Number (%) of Subjects (n=49)</th>
<th>Number (%) of AEs (n=2264 Infusions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local reactions†</td>
<td>49 (100)</td>
<td>1338 (0.591)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other AEs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>12 (24.5)</td>
<td>36 (0.016)</td>
<td>10 (20.4)</td>
<td>20 (0.009)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>3 (6.1)</td>
<td>3 (0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Pain</td>
<td>3 (6.1)</td>
<td>4 (0.002)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>3 (6.1)</td>
<td>3 (0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Constipation</td>
<td>2 (4.1)</td>
<td>3 (0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Back pain</td>
<td>2 (4.1)</td>
<td>3 (0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Migraine</td>
<td>2 (4.1)</td>
<td>3 (0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Abdominal pain, upper</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Nausea</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Rash</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
<td>2 (4.1)</td>
<td>2 (&lt;0.001)</td>
</tr>
</tbody>
</table>
* Excluding infections.
† Rate of AEs per infusion.
‡ Includes injection-site reactions as well as bruising, scabbing, pain, irritation, cysts, eczema, and nodules at the injection site.

Table 4 summarizes injection-site reactions based on investigator assessments 15 to 45 minutes after the end of the 683 infusions administered during regularly scheduled visits (every 4 weeks).

Table 4: Investigator Assessments* of Injection-Site Reactions by Infusion

<table>
<thead>
<tr>
<th>Injection-Site Reaction</th>
<th>Number† (Rate‡) of Reactions (n=683 Infusions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edema/induration</td>
<td>467 (0.68)</td>
</tr>
<tr>
<td>Erythema</td>
<td>346 (0.50)</td>
</tr>
<tr>
<td>Local heat</td>
<td>108 (0.16)</td>
</tr>
<tr>
<td>Local pain</td>
<td>88 (0.13)</td>
</tr>
<tr>
<td>Itching</td>
<td>64 (0.09)</td>
</tr>
</tbody>
</table>
* Excluding infections.
† Rate of AEs per infusion.
‡ Number of injection-site reactions per infusion.

Most local reactions were either mild (93.4%) or moderate (6.3%) in intensity.

6.3 Postmarketing Experience

The passive transfer of antibodies with immunoglobulin administration may interfere with the response to live virus vaccines such as measles, mumps, rubella, and varicella (see Patient Counseling Information [17]).

7 DRUG INTERACTIONS

7.1 Live Virus Vaccines

The passive transfer of antibodies with immunoglobulin administration may interfere with the response to live virus vaccines such as measles, mumps, rubella, and varicella (see Patient Counseling Information [17]).

7.2 Serological Testing

The passive transfer of antibodies with immunoglobulin administration may interfere with the response to live virus vaccines such as measles, mumps, rubella, and varicella (see Patient Counseling Information [17]).
Vivaglobin® Immune Globulin Subcutaneous (Human) is indicated for the treatment of patients with primary immune deficiency (PID).

**Indications and Usage**

Vivaglobin® Immune Globulin Subcutaneous (Human), is indicated for the treatment of patients with primary immune deficiency (PID).

**Contraindications**

As with all immune globulin products, Vivaglobin® Immune Globulin Subcutaneous (Human) is contraindicated in individuals with a history of anaphylactic or severe systemic response to immune globulin preparations and in persons with selective immunoglobulin A (IgA) deficiency (serum IgA < 0.05 g/L) who have known antibody against IgA.

**Warnings**

Patients who receive immune globulin therapy for the first time, who are switched from another brand of immune globulin, or who have not received immune globulin therapy within the preceding eight weeks may be at risk for developing reactions (including fever, chills, nausea, and vomiting). On rare occasions, these reactions may lead to shock. Such patients should be monitored for these reactions in a clinical setting during the initial administration of Vivaglobin® Immune Globulin Subcutaneous (Human).

If anaphylactogenic or anaphylactoid reactions are suspected, discontinue administration immediately. Treat any acute anaphylactoid reactions as medically appropriate.

Vivaglobin® is made from human plasma. Products made from human plasma may contain infectious agents, such as viruses, that can cause disease. Because Vivaglobin® is made from human blood, it may carry a risk of transmitting infectious agents, e.g., viruses, and theoretically, the CJD agent. The risk that such plasma-derived products will transmit an infectious agent has been reduced by screening plasma donors for prior exposure to certain viruses, by testing for the presence of certain current virus infections, and by inactivating or/and removing certain viruses during manufacture (see DESCRIPTION section for virus inactivation and reduction measures). Strengthened procedures utilized at plasma collection centers, plasma-testing laboratories and fractionation facilities are designed to reduce the risk of virus transmission. The primary virus reduction steps of the Vivaglobin® manufacturing process are pasteurization (heat treatment of the aqueous solution at 60°C for 10 hours) and ethanol - fatty alcohol / pH precipitation. Additional purification procedures used in the manufacture of Vivaglobin® also potentially provide virus reduction. Despite these measures, such products may still potentially contain human pathogenic agents, including those not yet known or identified. Thus, the risk of transmission of infectious agents cannot be totally eliminated. Any infections thought by a physician to have been possibly transmitted by this product should be reported by the physician or other health-care provider to CSL Behring at 1-800-542-4848 (in the US and Canada). The physician should discuss the risks and benefits of this product with the patient.

During clinical trials, no cases of infection due to hepatitis A, B, C or virus, parvovirus B19, or HIV were reported with the use of Vivaglobin®.

**Precautions**

General: Administer Vivaglobin® Immune Globulin Subcutaneous (Human), subcutaneously. Do not administer this product intravenously. The recommended infusion rate and amount per injection site remain unchanged. The recommended rate of administration should be followed. When initiating therapy with Vivaglobin®, patients should be monitored for any adverse events during and after the infusion.

**Laboratory Tests** - After injection of immunoglobulins, the transitory rise of the various passively transferred antibodies in the patient's blood may yield positive serological testing results, with the potential for misleading interpretation. Positive transmission of antibodies to erythrocyte antigens, e.g., A, B, D may cause a positive direct or indirect antiglobulin (Coombs') test.

**Drug Interactions** - Immune globulin administration can transiently impair the efficacy of live attenuated virus vaccines such as measles, mumps, and rubella. The immunizing physician should be informed of recent therapy with Vivaglobin® Immune Globulin Subcutaneous (Human), so that appropriate precautions can be taken.

Vivaglobin® should not be mixed with other medicinal products.

**Pregnancy Category C** - Animal reproduction studies have not been conducted with Vivaglobin® Immune Globulin Subcutaneous (Human). It is also not known whether Vivaglobin® can cause fetal harm when administered to a pregnant woman, or can affect reproduction capacity. Vivaglobin® should be given to a pregnant woman only if clearly needed.

**Pediatric Use** - Adenovirus - In clinical studies, Vivaglobin® Immune Globulin Subcutaneous (Human) was evaluated in 6 children and 4 adolescents in the US and Canada study and in 16 children and 6 adolescents in the non-IND Europe and Brazil clinical study. There were no apparent differences in the safety and efficacy profiles as compared to adult subjects.

**Geriatric Use** - Vivaglobin® Immune Globulin Subcutaneous (Human) was not studied in pediatric subjects under two years of age.

**Contraindications**

Patients who have received a previous allergic reaction to any component of the product should not receive Vivaglobin®. As with all immune globulin preparations, it is contraindicated in individuals with a history of anaphylactic or severe systemic reaction to immune globulin preparations.

**Adverse Reactions**

In the non-IND Europe and Brazil clinical study, the safety of Immune Globulin Subcutaneous (Human), Vivaglobin® was evaluated for 10 months in 60 subjects with PID. The adverse events and their rates reported in this study were similar to those reported in the US and Canada study, with two notable exceptions for the related adverse events. These events were 59 episodes of headache (1.6%) and 2 episodes of fever (0.1%) in the US and Canada study and no episodes of headache and 18 episodes of fever (0.8%) in the Europe and Brazil study.

**Local Injection Site Reactions** - Injection site reactions consisting of mostly mild or moderate swelling, redness and itching, have been observed with the use of Vivaglobin®. No serious local site reactions were observed. The majority of injection site reactions resolved within four days. Additionally, the number of subjects reporting local injection site reactions decreased substantially after repeated use (see Figure 1).

**Drug Interactions** - Immune globulin administration can transiently impair the efficacy of live attenuated virus vaccines such as measles, mumps, and rubella. The immunizing physician should be informed of recent therapy with Vivaglobin® Immune Globulin Subcutaneous (Human), so that appropriate precautions can be taken.

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**Geriatric Use** - The clinical study of Vivaglobin® Immune Globulin Subcutaneous (Human), did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects.

**Adverse Reactions**

In clinical studies, administration of Vivaglobin® Immune Globulin Subcutaneous (Human), has been shown to be safe and well tolerated in both adult and pediatric subjects. Reactions similar to those reported with administration of other immune globulin products may also occur with Vivaglobin®. Rare, immediate anaphylactoid and hypersensitivity reactions may occur. In exceptional cases, sensitization to IgA may result in an anaphylactic reaction (see Contraindications).

**Miscellaneous**

Vivaglobin® Immune Globulin Subcutaneous (Human), is supplied in single-use vials containing 160 mg IgG per mL. The following dosage forms are available:

- NDC 0053-7596-25 Box of ten 20 mL vials
- NDC 0053-7596-03 Box of ten 3 mL vials

**Storage**

Store in the refrigerator at 2-8°C (36-46°F). Vivaglobin® Immune Globulin Subcutaneous (Human), is stable for the period indicated by the expiration date on its label. Do not freeze. Keep vials in storage box until use.

Based on April 2009 revision.
If you live with primary immunodeficiency disease (PIDD)…

Make the leap to Hizentra

Important Safety Information

Hizentra and Vivaglobin are indicated for the treatment of patients with primary immunodeficiency (PI).

If you have a history of anaphylactic or severe systemic response to immune globulin preparations or selective immunoglobulin A deficiency, check with your physician as neither Vivaglobin nor Hizentra should be used. If your physician suspects you are having anaphylactic or anaphylactoid reactions, treatment will be discontinued. Because Hizentra contains the stabilizer L-proline, you cannot be treated with Hizentra if you have hyperprolinemia.

Hizentra and Vivaglobin are derived from human plasma. The risk of transmission of infectious agents, including viruses and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent, cannot be completely eliminated.

In separate clinical trials for Hizentra and Vivaglobin, the most frequent adverse event was injection-site reaction, consisting of mild or moderate swelling, redness, and itching. With Vivaglobin, no serious local site reactions were observed, and reactions tended to decrease substantially after repeated use. Other adverse events with Vivaglobin, irrespective of causality, included headache, gastrointestinal disorder, fever, nausea, sore throat, and rash.

Adverse reactions to Hizentra, observed in 5% or more of clinical trial subjects, were local injection-site reactions, headache, vomiting, pain, and fatigue.

Hizentra is manufactured by CSL Behring AG and distributed by CSL Behring LLC.

Hizentra is a trademark of CSL Behring AG.

Vivaglobin is manufactured by CSL Behring GmbH and distributed by CSL Behring LLC.

Vivaglobin is a registered trademark of CSL Behring GmbH.

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Your physician will monitor for reactions associated with IV Ig treatment that might occur with Hizentra, including renal dysfunction/failure, thrombotic events, aseptic meningitis syndrome (AMS), hemolysis, and transfusion-related acute lung injury (TRALI).

Patients receiving Ig therapy for the first time, receiving a new product, or not having received Ig therapy within the preceding eight weeks may be at risk for developing reactions, including fever, chills, nausea, and vomiting. On rare occasions, these reactions may lead to shock.

Ig administration could impair the effect of live virus vaccines, such as measles, mumps and rubella. Before getting any vaccination, inform your doctor that you are being treated with Hizentra or Vivaglobin.

In their clinical studies, Hizentra and Vivaglobin were effective in pediatric patients without specific pediatric dose adjustments. With either treatment, no overall differences in safety or efficacy have been observed in patients over 65 or in pediatric patients.

Please see brief summary of full Prescribing Information for Hizentra and Vivaglobin, including Patient Product Information, on previous pages.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

*In a clinical study, the median length of a weekly infusion ranged from 1.6 to 2 hours.

Ready-to-use Sub-Q Ig therapy

- Room temperature storage—no refrigeration required
- Hizentra can be infused in approximately 2 hours*
- From the maker of Vivaglobin®, Immune Globulin Subcutaneous (Human)
Research

Combined Therapy Improves Response Rate in Autoimmune Cytopenias

When giving a combined treatment of rituximab with alemtuzumab, patients with steroid-refractory autoimmune cytopenias had an overall response rate of 100 percent and a complete response rate of 58 percent, according to a new study. In the study, 11 patients with immune thrombocytopenic purpura (ITP) and eight with steroid-refractory autoimmune hemolytic anemia, who had previously received treatment with at least one line of therapy or followed a chronic relapsing course, were assigned to 10 mg alemtuzumab on days one through three, plus four weekly doses of 100 mg IV rituximab. Five patients with ITP had complete response and six had partial response. Six patients with autoimmune hemolytic anemia had complete response and two others had partial response, but both of the partial responders and three of the complete responders relapsed. Median duration of complete response for both diseases was 46 weeks.

Research

Iacocca Foundation Invests in Autoimmune Research

The Iacocca Family Foundation, established by former Chrysler Chairman Lee Iacocca, has invested in Kineta, a Seattle biotech company, to develop a new drug called ShK-186. The drug, to be created with a toxin from a Caribbean Sea anemone, is hoped to stop autoimmune diseases, including diabetes and multiple sclerosis.

The foundation is not releasing the amount of its investment, but says the deal with Kineta is structured like a program-related investment and is less than $1 million. In 2008, the foundation made a $3 million equity investment in Silicon Valley biotech company Bayhill Therapeutics for work on type 1 diabetes. Iacocca lost his first wife to diabetes.

Research

Patients with MS at Risk for Thyroid Disease

Patients with multiple sclerosis (MS) are vulnerable to a variety of other autoimmune disorders, including thyroid abnormalities, according to researchers who studied 200 patients with MS and 200 control patients. In the study, thyroid-stimulating hormone and thyroid autoantibody were tested against peroxidase before and after immune modulatory therapy. Researchers found significant differences in thyroid autoantibody levels between patients with MS and control subjects. Only two patients had positive thyroid autoantibodies after immune-modulating therapy. Investigators, then, recommend that clinicians examine MS patients for autoimmune thyroid disease.

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SCID Added to National Newborn Screening Standards

Secretary of Health and Human Services Kathleen Sebelius announced the addition of severe combined immunodeficiency (SCID) — commonly known as bubble boy disease — to the core panel of 29 genetic disorders, as part of her recommendations to adopt the national Recommended Uniform Screening Panel. SCID is the first nominated condition to be added to the core panel of disorders.

SCID, a primary immunodeficiency disease, occurs in infants who lack T lymphocytes, the white blood cells that help resist infections due to a wide array of viruses, bacteria and fungi. Babies with SCID appear healthy at birth, but without early treatment, most often by bone marrow transplant from a healthy donor, these infants cannot survive. “Although this recommendation has been in development for two years,” says Dr. Amy Brower, parent, researcher and former Secretary of the Advisory Committee on Heritable Disorders in Newborns and Children, “it may take several more years to implement screening in all 50 states and U.S. territories. We must work to quickly implement the widespread adoption of testing and treatment in all of the states.”

In June, the Wisconsin State Laboratory of Hygiene at the University of Wisconsin-Madison identified the first baby with SCID as part of its newborn screening program. According to preliminary data from the Children’s Hospital of Wisconsin, a single baby with a late SCID diagnosis costs an average of $2.2 million. Medical care for one baby with an early SCID diagnosis costs $250,000. Testing the 70,000 babies born annually in Wisconsin for SCID as part of the routine newborn screening panel costs approximately $350,000 ($4 to $5 per test). According to Dr. Charles D. Brokopp, director of the Wisconsin State Laboratory of Hygiene, “The savings from one positive diagnosis pays for testing of all babies for the entire year.”

Cephalosporins Safe to Replace Penicillin

New study results show that patients who reported a history of anaphylaxis to penicillin can safely take cephalosporins. Cephalosporins, which are the most frequently prescribed class of antibiotics, are related to penicillin in their structure, uses and effects. In the study conducted at the Mayo Clinic, 178 patients were skin tested for penicillin allergy, 10 of whom had unclear results, 12 had positive skin tests and 156 had negative skin tests. Eighty of the 156 patients who had negative skin tests to penicillin later received a cephalosporin for surgery, and only one of those had a possible mild adverse drug reaction. The study was presented at the 2010 Annual Meeting of the American Academy of Allergy, Asthma and Immunology.

PANDAS Launches “Got Strep?” Campaign

The PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections) Foundation has launched its “Got Strep?” campaign designed to alert caregivers and physicians to the nontraditional ways that strep can present itself. Early intervention of strep can prevent an autoimmune response that can cause mental and behavioral disorders in children, including obsessive-compulsive disorder and Tourette’s syndrome. The campaign will distribute 50,000 “Got Strep?” cards, which list the many manifestations of strep beyond the usual sore throat and fever. Distribution efforts by volunteers assembled by the PANDAS Foundation began in January 2010 and are targeting physicians, clinics, schools, daycare centers and parent organizations.

The case for strep-induced mental illness is reported in the article From Throat to Mind, which appears in the January/February 2010 issue of Scientific American MIND. Top researchers believe that many cases may be linked to common pediatric strep.

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Paging Dr. Right!

From ditching an existing doctor to seeking a specialist, doc shopping can be daunting. To succeed, patients need resilience, patience, tenacity — and access to a good computer.

By Trudie Mitschang
She came highly recommended. In fact, so many women wanted Dr. “Perfect” to deliver their babies, her waiting room constantly overflowed with anxious mothers-to-be. But whether it was my pregnancy-induced mood swings or some difficult-to-pinpoint personality clash, this popular physician left me cold — and often irritated. I didn’t like her tone of voice, her clammy hands or her rushed treatment style. So, at five months pregnant, I went against the grain and switched doctors — a decision that resulted in some sleepless nights, myriad insurance claims problems and, ultimately, a new OB/GYN whose bedside manner and communication style I loved.

While my story had a positive outcome, switching docs is not always smooth or easy. And for the chronically ill, the whole process can be even more challenging. One rule of thumb for patients to remember as they embark upon a physician search is that they — the patients — are in the driver’s seat. “What I tell folks regarding any doctor is to remember that you are the customer,” says Cathy Chappell Edminster, an IG Living reader whose young son has a chronic illness. “That doesn’t mean you can be demanding or unreasonable, but if the doctor or the staff doesn’t treat you with respect or is unwilling to speak in terms you can understand, then speak up. If that doesn’t work, then find a new doctor.”

**Knowing Where to Start**

There are many reasons people look for a new physician: A relocation, job change or new insurance plan can prompt a move. Certainly a recent diagnosis can be the catalyst for seeking a specialist. In other instances, doctor and patient may simply grow apart; you age, your needs change and it’s time to move on. Whatever the reason, with the right tools and techniques in place, finding a new doctor need not be an exercise in frustration and disappointment.

The first step in searching for a new doctor often involves perusing a printed or online directory of doctors trained in the specialty you seek. If you begin online, these searches can be limited by ZIP code, languages spoken, insurance plans and hospital affiliation. But, according to John Connolly, president of Castle Connolly Medical and former president of the New York Medical College, finding a doctor’s name on a list is only the beginning of a successful search. “The most important thing is to have the attitude of a consumer or a shopper — do not just look on a list or in the phone book,” he says. “Hopefully, a physician is someone you will have a relationship with for years; the better the relationship, the better the care will be.”¹

When choosing a doctor for primary care, Connolly advises patients to be especially diligent, since a good relationship with an experienced primary care physician (PCP) can be a great asset to a patient’s overall health. The PCP is the doctor who will potentially know you the best and perform annual physicals and screenings. This is also the person responsible for writing referrals and coordinating care, which is why a personality or philosophical clash here can be disastrous in the long term. A primary care doctor can also be a medical multi-tasker to help you streamline office visits; many women who have a good working relationship with their PCP often choose to have that doctor act as their gynecologist as well.

**More and more patients are shopping for doctors the way some might seek a long-term relationship.**

According to Connolly, patients should look for the same things he does when interviewing potential candidates: board certification and ties to a good hospital. Organizations like the American Board of Medical Specialties (abms.org) and the Joint Commission on Accreditation of Healthcare Organizations (jointcommission.org) offer a wealth of information and make great places to start. “Board certification is absolutely critical,” Connolly says. “Without it, you don’t know if the physician has had proper training in that field of specialty.”

This point is important, since many patients don’t realize that current laws allow a licensed physician to put out a shingle for any specialty they choose, even with no specialized training.¹ Board-certified doctors, on the other hand, have been trained in a specific specialty and have undergone additional schooling. For patients with special healthcare needs, such as a chronic illness, the ABMS can be an invaluable resource for finding qualified care.

The other thing to look for when analyzing a potential doctor’s qualifications is their hospital affiliation. Access to a reputable hospital is essential when faced with a serious illness or emergency. Connolly says some patients have even been known to choose a hospital first, then a doctor, based on factors like proximity and reputation.
Speed Dating for Doctors

Imagine the following classified ad: “CIP (chronically ill patient) seeks Doc. Must be a compassionate listener with exceptional bedside manner. Stellar credentials required. Only seasoned professionals need reply.”

Sound crazy? The fact is, more and more patients are shopping for doctors the way some might seek a long-term relationship. And for those with chronic disease, the stakes can be even higher than for those seeking a marriage commitment. For many, breaking up with a doctor can be messy, painful and even detrimental to their health, which is why so many patients stay with providers with whom they are dissatisfied. Perhaps a hypothetical website like “Match MD” is an idea whose time has come. For a few hospitals in Texas, it’s a concept with merit.

In March 2011, Texas Health Presbyterian Hospital hosted the first in a series of “Doc Shop” evenings as a way to allow potential patients to find the doctor that best fits their needs. The event was set up like a speed dating event. Doctors from the community gathered in a room and prospective patients had about three minutes to have a face-to-face conversation with them one at a time. When a buzzer went off, the participants rotated to the next doctor.2

Texas Health Presbyterian is not the first hospital in the country to bring dating techniques into the medical setting. Texas Health Harris Methodist Hospital Hurst-Euless-Bedford (HEB) has hosted similar events since September 2009. According to Mandy Forbus, senior marketing specialist for Texas Health HEB, Doc Shop was originally geared toward women to help them meet and interview OB/GYNs. But the concept is catching on and can be applicable to anyone seeking a new healthcare provider. “It’s so impersonal to pick a healthcare provider at random off your insurance company’s list or based off a friend’s referral, only to show up and wish you’d been able to pick a doctor who better suited your personality needs,” Forbus said in a press release about the event. “With a Doc Shop, it allows potential patients to meet with potential physicians so they can pick the best match. If you like your doctor, you’re more likely to make/keep appointments and take better care of yourself and your family. Plus, feeling comfortable enough to ask difficult or personal questions only strengthens the patient-physician relationship, which could span a lifetime. Overall, it is a win-win for community members and physicians.”

A Look at Doctor Rating Systems

We review movies, restaurants and consumer goods online, so the reasoning goes, why not doctors? A growing number of websites offer rating systems and reviews for doctors, a trend many physicians are uncomfortable with.

In an article that appeared in USA Today, Nancy Nielson, past president of the American Medical Association (AMA), notes that while doctors care what patients think, anonymous online ratings and rants can ruin reputations and destroy trust. But, the creators of such sites defend their content, saying access to reviews and other rating criteria is helpful and even essential. With so many sites popping up, it’s easy for patients to find out almost everything about a physician’s credentials and personality quirks without ever scheduling an office consultation.3

Popular rating sites like Vitals.com include details on training, experience, certification and disciplinary history, along with patient satisfaction ratings. At HealthGrades.com, consumer ratings (on factors ranging from office cleanliness to a physician’s listening skills) are used to compile ratings, and unlike some sites, HealthGrades does not include free-form comments. Plus, physicians can pay a fee to edit their profiles and upload video files. Another site, RateMDs.com, offers a top-10 list of doctors by specialty and ZIP code for at-a-glance research. And DrScore.com allows patients to input satisfaction ratings for their own doctor and search the site for ratings of other physicians. Physicians can view summaries of their ratings through the site, or receive more detailed reports that allow them to potentially respond to criticism and improve service.
Still, critics say the very nature of a ratings website brings out the disgruntled and dissatisfied, creating a somewhat biased platform. Most of the major review sites respond to that concern by stressing that their sites are careful to block multiple negative (or positive) postings from the same source. And, they say, the bottom line is that we live in an age in which consumers seek information from many different sources before making major decisions. The sites just make relevant facts and opinions more accessible.

Meeting a Match

What happens after compiling a short list of potential physicians? The next step, experts say, is to schedule a consultation and come armed with questions that can help patients make an informed decision.

The AMA stresses that, like any relationship, the one between doctor and patient is based on open communication. In the guide Choosing Your Physician, the AMA advises that it is the right of the patient to request information on a doctor’s training and to even ask seemingly personal questions, like the physician’s feelings on issues such as living wills and patient confidentiality.

Personality counts, too, and that’s where online ratings and reviews can’t help; that’s why a face-to-face meeting is so important. Other factors to consider are whether the doctor has evening and weekend hours, whether the office accepts same-day appointments for urgent care, whether waiting times are reasonable and whether the doctor is a sole practitioner or part of a group practice. The bottom line, of course, is whether the patient feels comfortable with the doctor they have selected; only they know if it’s a good fit. “People need to find a doctor who sees the relationship as a partnership. This means the doctor has to be a good listener and has to be willing to consider treatment options that you suggest and experiment with different approaches to your illness,” says Toni Bernhard, author of How to Be Sick: A Buddhist-Inspired Guide for the Chronically Ill and Their Caregivers. “The doctor also has to be comfortable working with a patient that he or she may not be able to ‘fix.’ I wish they taught prospective doctors in medical school that they need not feel they have to have all the answers, because some medical problems can’t be cleared up by just writing a prescription.”

Bernhard, who lives with chronic illness, is an advocate for patient empowerment, and she believes patient satisfaction should be prioritized when it comes to selecting a physician: “If your doctor isn’t willing to work with you and instead just insists that you do whatever he or she tells you to do, I’d find another doctor.”

In an excerpt from her book The Empowered Patient, senior medical correspondent for CNN’s Health, Medical and Wellness unit Elizabeth Cohen stresses that it is imperative to find a practitioner who takes you and your health problems seriously. Cohen’s mother is in end-stage kidney failure today because an internist misdiagnosed her symptoms and refused to order the blood tests that would have identified adrenal problems. He told her the symptoms she described were due to stress, and that she simply needed to “slow down.” The experience prompted Cohen to become a patient advocate, and her book offers specific guidelines for finding the illusive “DR. RIGHT.”

“DR. RIGHT won’t attribute your problems to being ‘all in your head,’” she says. “DR. RIGHT won’t tell you that if you ‘just relax’ your symptoms will go away. If my mother had found DR. RIGHT from the very beginning, things probably would have turned out very differently. The lesson to learn from my mother’s experience is that a doctor who blames you for your illness is DR. WRONG.”

TRUDIE MITSHCANG, is a staff writer for IG Living magazine.

References
Exercise for the Mobility Impaired

By Matt Hansen, DPT, MPT, BSPTS

No matter what physical limitations patients may have, some form of exercise can be performed. The key is to focus on what patients can do, rather than on what they can’t.
Merriam-Webster medically defines mobility as “capable of moving or being moved about readily” (www.merriam-webster.com/medical/mobility). Its definition for exercise is “bodily exertion for the sake of developing and maintaining physical fitness” (www.merriam-webster.com/dictionary/exercise).

According to these definitions, anyone — mobile or not — can exercise, because exercise is not dependent upon mobility; it is only dependent upon exertion. Even so, most patients do not experience complete paralysis, and they possess at least some degree of mobility. Perhaps they walk with an assistive device such as a cane or walker. Maybe they use their arms and hands to push a manual wheelchair or drive a power chair. Assistive technology is amazing, and wheelchairs can even be adapted so that a patient can drive themselves from point A to point B by slightly moving their head or sipping and puffing on a straw-like tube. Although leg or arm movement may not be preserved in such cases, maintaining and strengthening the muscles that are involved in mobility (e.g., neck muscles, diaphragm and accessory muscles of respiration) are extremely important.

The key to exercise for the mobility impaired is for patients to capitalize on what movement they have while trying to improve areas of weakness. Think for a moment about the animal kingdom: Barnacles and other sea invertebrates don’t ever move their entire bodies once they are anchored in place, but they certainly move what they need to when it’s time to eat or reproduce; elephants can’t jump, but they have a long reach. Several species of birds could get depressed about their inability to fly, but instead, they make the most of their strengths: penguins swim, ostriches run and turkeys … well, turkeys taste good!

The point is: Patients should be helped to focus on what they can do or are beginning to do, and not on what abilities they have lost. Just about any exercise can be adapted to allow for someone with impaired mobility to participate. It may take some practice and a little bit of imagination to modify some activities; however, by learning and applying the following concepts, patients with impaired mobility will likely be surprised by how much they really can do.

Assistive Devices
No one would ever make the claim that Lance Armstrong isn’t an athlete because he uses a bike, so why would anyone question whether someone who uses an assistive device can exercise? Unfortunately, many people, including patients themselves, believe in the fallacy that someone who uses a cane, a walker, crutches or a wheelchair is disabled and incapable of exercising. The term “disabled” suggests that a person is not able to do anything; however, that’s hardly ever the case.

The truth is a person typically uses much more energy to walk a given distance when they rely on an assistive device than someone who doesn’t use one. A physically unimpaired person may have to run around the block to burn the same amount of calories or get their heart and respiratory rates up to the same level as someone using an assistive device could do by walking from the bedroom to the bathroom.

Just about any exercise can be adapted to allow for someone with impaired mobility to participate.

If a patient uses an assistive device, they certainly shouldn’t be discouraged and think that they are unable to exercise because they can’t go very far or very fast; they simply may not need to! Assuming that a doctor or physical therapist hasn’t limited the amount of walking (or pushing in a wheelchair) that a patient can do due to poor body mechanics, concerns for safety or overuse injury, or other complicating health conditions, the key is to do what they safely can do without exhausting themselves, and then try to do a little more the next time, always adhering to the same two rules: 1) safety first, and 2) avoid overexhaustion and/or debilitating pain. Maybe a patient starts out by walking 10 feet at a time, then 15, then 20, then 30, etc. That’s all right. Remember Merriam-Webster’s definition of exercise? If someone is performing “bodily exertion for the sake of developing and maintaining physical fitness,” they are exercising — whether that person is Lance Armstrong or the former First Lady Barbara Bush (now an 86-year-old woman with Graves’ disease).

Gravity-Reduced or Partner-Assisted Exercise
Gravity has a considerable effect on movement. It keeps most people from being able to slam-dunk a basketball, but it also prevents us all from floating away. Whenever a
Some patients aren’t able to move the weight of their own limbs, regardless of the position, but again, that doesn’t mean that they aren’t able to exercise. The great thing about assisted exercise is that the person providing the support can adjust their involvement so that it’s just enough for the patient to perform the task.

If a partner isn’t available on a given day, a patient can perform isometric exercises (i.e., contracting the muscle without moving the body part). Most people have probably done this at some time or another — maybe as a teenager posing in front of the bathroom mirror and “flexing” your muscles like Arnold Schwarzenegger (I hope that I’m not the only one!). Those exercises can actually be beneficial. Choose a muscle to target, take a deep breath and contract the muscle for seven seconds as you slowly exhale through pursed lips. Rest for seven seconds and repeat three to five times.

**Swimming is frequently recommended as an exercise for those who have difficulty moving on land.**

Swimming is frequently recommended as an exercise for those who have difficulty moving on land, or at least moving pain-free, because of the physical properties of water. As you stand or float in a pool, your body weight presses down on the water and the water presses back, pushing you up. This characteristic is known as buoyancy. Buoyancy decreases the effects of gravity and can reduce perceived body weight by as much as 90 percent when immersed up to the neck in water. It challenges a patient to maintain body position and can also be used to assist or resist exercise. Actions that move toward the surface of the water (e.g., lifting the knee to walk or march in place) are made easier by buoyancy, while actions that move away from the surface of the water (e.g., extending the elbow) are made more difficult. Buoyancy can be increased further by using a life jacket, pool “noodle,” kickboard or other tool.

Water also creates resistance. Water molecules are attracted to each other (a property known as cohesion) and form weak bonds that can easily be broken and re-formed again. Cohesion contributes to water’s viscosity (i.e., resistance to flow), so that the body experiences opposition as it moves through it. The faster a body part moves through water and the greater the surface area of the body part in contact with the water, the more resistance is experienced. You can feel this the next time you are in the pool by submerging your arm and moving it slowly through the water, and then repeating the action while moving it quickly. Now move the arm through the
water again with the fingers together and the hand held parallel to the surface of the water; then do it at the same speed with the hand held perpendicular to the water’s surface. You’ll feel more resistance during the instances when the arm is being moved quickly through the water and when the hand is perpendicular to the water surface. These characteristics of water can be used to make an exercise pool session just about as difficult or as easy as you like.

**Bicycling**

Bicycling is another great aerobic and strengthening exercise that reduces strain on joints and connective tissue. If a patient isn’t able to ride a bike on the road, there is no need to worry — there are plenty of stationary options to choose from to meet various needs. For example, a patient may choose to ride a standard stationary exercise bike, a spinning cycle, a reclined bike (which is generally considered to be less stressful on the back and positions the legs out in front of the patient instead of underneath them), an elliptical bike (which works the arms and the legs at the same time), an upper-extremity ergometer (i.e., hand bike), or even a motor-assisted bike.

**Focus on what we can do every day instead of what we can’t — or at least imagine that we can’t — do.**

...or at least imagine that we can’t — do. Nobody has to go about it alone. Patients can form a plan with their doctor and/or physical therapist, ask their personal support network to get on board with them and get moving!

MATTHEW DAVID HANSEN, DPT, MPT, BSPTS, is a practicing physical therapist in Utah, and president of a healthcare consulting and fitness product company, SOMA Health, LLC. The company’s latest product, the Freedom2Move exercise program and video series, was inspired by an IG Living Readers Teleconference. Matt completed his formal education at the University of Utah in Salt Lake City.
By Ronale Tucker Rhodes, MS

Better gene sampling and newer transplant regimens are making stem cell transplantation possible for a host of disease states that previously were rarely considered for this procedure.

On April 4, a group of physicians at the 37th annual meeting of the European Group for Blood and Marrow Transplantation in Paris, France, reported that they believe hematopoietic stem cell transplants (HSCTs) are feasible in patients with common variable immune deficiency (CVID) and that it can result in an improvement of the immunodeficiency. Their conclusion was a result of a cohort of four CVID patients who underwent HSCTs with peripheral stem cell grafts. All four of the patients presented with a host of other medical issues, in addition to CVID. In all, no graft failure occurred. Two of the patients had normal values for T and NK cells two years after HSCT, while only one patient showed normal B cell subsets resulting in independence of IG substitution.
One patient died three months after HSCT due to infectious problems.1

Transplants are controversial for patients with CVID, one of the more common primary immunodeficiencies (PIDDs), because there are no published data that prove they are effective. In contrast, transplants are very common in a lot of the genetic immune deficiencies, such as severe combined immunodeficiency (SCID) and Wiskott-Aldrich syndrome (WAS). But that is slowly starting to change. Not only are transplants becoming more and more successful in curing genetic immune deficiencies, but better gene sampling and newer transplant regimens are now making transplants possible for other immune and autoimmune disease patients.

How Transplants Work

There are two forms of stem cell transplants: autologous and allogeneic. In an autologous transplant, patients receive stem cells from their own blood. In an allogeneic transplant, the stem cells come from a donor, which can be a sibling, family member or unrelated individual. Since immune-deficient patients have abnormal function of B cells and T cells, the very cells that are being replaced by a transplant, an allogeneic stem cell transplant is the only option.

The first successful allogeneic HSCTs in PIDD patients occurred in 1968 when three patients received grafts from human leukocyte antigen (HLA)-matched siblings — two with SCID and one with WAS. Since then, significant progress has been made in correcting PIDDs due to four factors: 1) the ability to phenotype and quantitate hematopoietic stem cells, 2) the advent of high-resolution tissue typing, 3) the availability of closely matched unrelated donor bone marrow, peripheral blood stem cells and cord blood and 4) the application of reduced-intensity conditioning regimens pre-transplant. In addition, the genetic basis of many PIDDs is now being identified, allowing for earlier transplantation that provides a much greater success rate.2

With HSCT, a patient’s cells are replaced with the donor’s. Donor cells are collected in one of three ways: bone marrow, peripheral blood and cord blood. In a bone marrow transplant, stem cells are collected through a surgical procedure conducted in a hospital. This procedure involves inserting a needle into the donor’s hip bone to remove the stem cells from the marrow. A peripheral blood or cord blood stem cell transplant is conducted in an outpatient setting. In the peripheral blood cell transplant, a donor is given medicine to increase the number of stem cells in the bloodstream. Then, much like a blood transfusion, blood is collected from the donor, stem cells are separated from the blood and collected, and the blood is returned to the donor.3 In a cord blood stem cell transplant, umbilical cord blood is collected from the umbilical cord
and placenta after a baby is born. Donated cord blood, which is rich in blood-forming cells, is tested, frozen and stored at a cord blood bank for future use. In all three procedures, most patients receive a preparatory regimen of doses of chemotherapy, radiation or both to destroy their existing immune system. While high doses of chemotherapy were once the norm, some patients today are getting lower doses, known as reduced-intensity (nonmyeloablative), or “mini,” transplant. After the preparatory regimen, the donated stem cells are injected into the patient through a tube that goes into a vein in the chest, and the stem cells find their own way to the marrow space.

According to Troy Torgerson, MD, PhD, attending physician at Seattle Children’s Hospital, who specializes in the clinical care of patients with immune deficiency and autoimmune disorders and who coordinates care for patients treated by HSCTs, the determination of how cells are collected really depends upon what the patient’s needs are, and there are different advantages to using one or another. In addition, he says, it depends on the site where the transplant is being conducted, as some facilities do only certain types of transplants.

**Donor Matching**

The closer the tissue type match between the patient and the donor, the better the chance of the transplant being a success. Donors are matched to patients through a process called HLA matching. HLAs are proteins found on the surface of most cells, and make up a person’s tissue type. Each person has a number of pairs of HLA antigens that are inherited from their parents. The best match is when all of the major HLA antigens are the same — a six out of six match. However, for bone marrow and peripheral blood stem cell transplants, sometimes a donor with a single mismatched antigen is used — a five out of six match. For cord blood transplants, a perfect HLA match isn’t as crucial, and even a sample with a couple of mismatched proteins may be OK.

Related donors have had better success rates. “In general, the order of preference from lowest to highest risk is a matched sibling [matched related donor] is the best, followed by a matched unrelated [donor],” says Dr. Torgerson. “Next in line is a cord blood transplant, which works very well in a lot of patients. With cord blood, you can be a little more flexible in matching. And, then, the worst is a half-match [haploidentical donor].” Today, an HSCT from an HLA-matched sibling donor offers a 90 percent chance of a cure for certain PIDD patients, such as those with SCID, WAS and other prematurely lethal X-linked immunodeficiencies. And, in some conditions, the availability of closely matched unrelated donors (adult marrow or umbilical cord blood) can provide similar results. For patients with genetically determined immune/inflammatory disorders such as hemophagocytic lymphohistiocytosis (HLH) and other disorders of immune homeostasis, the results with HSCT are less favorable, with five-year disease-free survival rates closer to 60 percent to 70 percent.

**The closer the tissue type match between the patient and the donor, the better the chance of the transplant being a success.**

In the past, SCID patients typically received either haploidentical or cord blood transplants because there was a rush to transplant since the children had infections and the parents were readily available, says Dr. Torgerson. But now that SCID tests are done routinely at birth in many states, early diagnosis while the child still has protection from the mother’s antibodies allows a wait of a month or two so a well-matched donor can be located. One of the problems with haploidentical donors, explains Dr. Torgerson, is that some patients lose their grafts later in life and they have to be retransplanted.

In a study of 89 children with SCID who received transplants at Duke University Medical Center in North Carolina between 1982 and 1998, only 12 had a matched related donor, while the others had a partly matched related donor. All 12 of the children with a matched related donor were alive, while only 60 of the 77 children with a partly matched donor were alive. In another European multicenter study of 475 children with SCID who received a transplant between 1968 and 1999, 153 had a matched related donor, 11 had an unrelated donor and 294 had a partly matched related donor. The three-year survival rate was 77 percent for those with a matched donor (either related or unrelated), while it was only 54 percent for those who had a partly matched related donor.
Because there are thousands of different combinations of possible HLA types, an exact match is hard to come by. Finding a donor usually begins with siblings who have a one out of four chance of being a perfect match. If a good match is not found in a sibling, the search moves to other relatives, such as parents, half-siblings, and extended family. Then, the search widens to the general public. Bone marrow registries serve as matchmakers between patients and volunteer donors. The largest registry in the United States is the National Marrow Donor Program, which lists the tissue types of approximately nine million possible donors and nearly 145,000 cord blood units. The Caitlin Raymond International Registry is another agency that has access to millions of international records. Each year, the chances of finding a matched unrelated donor improve, and today, about half of white people who need stem cell transplants can find a perfect match, while this drops to about one out of 10 people in other ethnic groups due to their diverse HLA types.

Because of the ability to better identify a donor match, as well as the improved pre-transplant treatment that mostly destroys the immune system, the chance of problems is much lower than before. However, there can be complications. First, if the donor is not a good match, it’s possible that the patient’s immune system will recognize the new stem cells as foreign and destroy them. This is known as graft rejection. Another problem occurs when the donor stem cells make their own immune cells and the new cells see the patient’s cells as foreign and turn against their new home. This is known as graft-versus-host disease. “[A] bone marrow [transplant] is typically associated with lower graft versus host disease rates than [a] peripheral [blood transplant],” says Dr. Torgerson. “But, peripheral allows us to isolate more cells and give a higher cell dose.”

Transplant Candidates

“Transplant is a big deal,” says Dr. Torgerson. “I tell families that a bone marrow transplant is the surest way for your child to be dead by Christmas. But it’s also the surest way for your child to be alive 20 years from now.” In short, it’s a balancing act. And, it all comes down to the individual patient.

There are three factors that determine whether a transplant is viable for a patient. First is whether the benefits outweigh the risks. “In a CVID patient, one of the things we look at is they’re living into the 50s and beyond,” explains Dr. Torgerson. “Do we want to risk killing them in their 20s with a bone marrow transplant?” But, some of these patients also present with a lot of comorbidities, and Dr. Torgerson recommends transplanting these patients because they are not going to live healthy lives and they are likely to be heavy users of the medical system. What’s needed is a set of predictors to see which patients are going to be high risk versus low risk with just treatment, says Dr. Torgerson. For instance, X-linked agammaglobulinemia patients just don’t experience as many comorbidities, so they do better with just treatment.

Second is whether the insurance company will pay for a transplant. The problem is that there is a lack of literature that shows that a transplant will work. “When there’s no literature, insurance companies don’t want to pay for it,” explains Dr. Torgerson. “The last one I did took just over a year to get the insurance to cover it, and many hours of my life. The patient eventually got it by going to the press.” Yet, while expense is a factor, many insurance companies are starting to realize that for patients who have a host of other autoimmune diseases that need to be treated with IVIG, as well as a whole lot of other drugs, the cost of the transplant might be cheaper in the end.

Third is whether this is a genetic defect. It’s known that patients with a genetic defect are not going to do well, and many die by the time they are 20 years old. So, in those cases, a transplant makes sense. But, CVID patients don’t have a genetic defect, at least any that are the cause of the disease. “So, you watch the patients and as they get down the road, now they’ve got lung disease and gut disease and type 1 diabetes,” says Dr. Torgerson, “so now, we have to think about transplanting these patients. It’s based on clinical picture."

The problem is that there is a lack of literature that shows that a transplant will work.

Dr. Torgerson believes that we are at the point now where transplants should be considered for patients who have a host of comorbidities, such as the more severe CVID patients. He estimates that about 20 percent of CVID patients have autoimmune disorders. And, based on his patient cohort at Seattle Children’s Hospital, just more than
5 percent of his patients would “fall into the category that they would have so many problems that a transplant would be a reasonable thing to think about.”

**The Future of Transplantation**

Many PIDD patients are hanging their hopes on a transplant to cure them. But not all PIDD patients are transplant candidates. “As good as medicine is now, I am still humbled,” says Dr. Torgerson. “Sometimes, we get a little cavalier that it’s ‘just’ a transplant.” Regardless, the number of transplants has increased quite a lot for two reasons, says Dr. Torgerson: “safer transplant regimens and finding genetic disorders in disease where we hadn’t really thought about them before.”

Many studies to determine who are good transplant candidates are going around in different centers around the world. Dr. Torgerson’s center has a study for transplant in nonmalignant diseases, like immunodeficiencies. His facility has developed an integrated transplant program that operates like a tumor board format.

**The future of HSCT looks very promising, especially for PIDD patients, because of increased successes and, now, genome sequencing.**

A patient being considered for transplant who has a nonmalignant disease meets with the providers on the board, which include a neurologist and two transplant infectious disease doctors. The board examines the patient’s records and decides whether transplant is advisable, which regimen should be used and which kind of donor should be used. A protocol and document are then developed, which go into the patient’s chart. When it comes time for the transplant, the immunologists step into a consultive role and the transplant specialists take over. If all goes well after the transplant, the patient’s care transitions back to the immunologists and the transplant specialists take on the consultive role.

The future of HSCT looks very promising, especially for PIDD patients, because of increased successes and, now, genome sequencing. “There’s going to be an explosion of identification of new gene defects that will allow us to put a genetic label to predict in a more definitive way how they’re going to do in the future,” explains Dr. Torgerson: “It’s going to do two things: 1) help to identify new gene defects that we hadn’t known before, and in some disorders like CVID, it’s going to give us some answers, 2) help to expand the phenotypes. Maybe five to 10 years from now, people are going to show up in a clinic with their genome on a disk, and they’re going to ask the doctors: ‘Is there anything there that could cause the symptoms I’m having?”

**A New Beginning for Many**

“There will never be a transplant that is 100 percent safe,” says Dr. Torgerson. “But we are approaching the point at which the balance of the risk-to-benefit ratio might tip in favor and become safe enough even for disorders like CVID. The risk-to-benefit ratio will be equivalent, especially as we do more transplants and we see how successful they are.”

RONALE TUCKER RHODES, MS, is the editor of IG Living magazine.

**References**

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Kate: My COBRA health insurance is going to run out soon. I’m still going through the Social Security Disability Insurance (SSDI) process, and if I’m not approved for benefits by that time, it looks like I’m out of options. From what I understand, to qualify for the high-risk pool in Virginia, an individual must be without insurance for six months, yet I’m trying to avoid that. What are my options?

Kris: Kate, you may still have a couple of options available to you. First, if you can be declared disabled, you may qualify to extend your COBRA benefits. COBRA can be extended under certain circumstances known as qualifying events, one of which is becoming disabled. You must be declared disabled by the Social Security Administration (SSA) within 60 days of your last day of employment. Keep in mind that does not mean you have a disability determination within 60 days. It just means the disability application and determination must list your onset of disability within 60 days of your last day of employment.

If declared disabled, you will eventually qualify for Medicare. However, there is a two-year waiting period before you can access Medicare benefits. The two-year wait begins the day of disability onset as determined by SSA. Therefore, having an extension to COBRA becomes even more imperative. It is important to note, though, that beneficiaries qualifying for a COBRA extension due to disability can be charged up to 150 percent of the cost of the plan. More answers about COBRA can be found at http://www.dol.gov/ebsa/faqs/faq_consumer_cobra.HTML.

Your second option is to convert your current group health plan to an individual health plan, known as a conversion plan. Conversion plans, which are generally regulated by the state, do not have to have the same coverage as your current plan, and they may cost more. However, you cannot be denied coverage because of a pre-existing condition. A conversion plan is not available if a COBRA plan is terminated early. A beneficiary must first maximize all COBRA opportunities. To learn more about your rights to conversion plans, check your state insurance commissioner’s website.

Last, according to your state insurance commissioner’s website, Virginia does not have a high-risk plan of its own for those with a pre-existing condition. They have chosen, instead, to have beneficiaries participate in the national high-risk plan, which indeed does require a person be without insurance for six months before applying for the plan. It is possible for uninsured patients to have the cost of immune globulin (IG) treatments paid for through manufacturer loyalty programs for a short time. But, it is important for patients to sign up for those programs prior to actually needing them. The following manufacturers provide loyalty programs:

- Grifols (Flebogamma 5% and 10%): http://www.grifolspatientcare.com
- Grifols (Gamunex-C): https://www.gamunexconnexions.com

It is possible for uninsured patients to have the cost of immune globulin (IG) treatments paid for through manufacturer loyalty programs for a short time.

Kris McFalls has two adult sons with chronic diseases treated with IG. She is formerly a physical therapist assistant, and currently is IG Living’s full-time patient advocate.
The ImPORTant Decisions

By Stacy Oliver

**OH, INFUSION TIME!** That miraculous time of relief that comes with “magic juice” (as I like to call IG). But that means getting stuck with a needle. It’s when my veins play that silly little game of hide-and-seek with the needle to get the IV in. Like Shakespeare said: “To be or not to be, that is the question.” In this case, it’s whether my veins will be cooperative and let there be an IV attached to me.

I am a hard stick. My veins either collapse or are too squiggly to get a draw. Let me state: My home nurse is a master vein tapper; I would put money on her in Las Vegas against other nurses to insert an IV painlessly and efficiently. But one fateful day, it took over an hour to get an IV in me. After two years of IVs placed in my hands, she said it was time to get a port, an implantable medical device installed beneath the skin to provide access for infusion treatments.

My neurologist directed me to a specific surgeon, so off I went. I made my appointment and wasn’t thinking much about the situation until I actually talked to the doctor. Then I realized someone was going to make an incision in my chest and poke a major vein with something the size of a meat thermometer. Uh, what was I thinking? I left the surgeon’s office with the reality that I was really going under the knife. The ride home with my husband was not pretty, with me freaking out and crying.

Surgery day finally came around. I’ll never forget the anesthesiologist telling me what a great decision this was and how I was getting the Cadillac of ports. “You’ll get 3,000 sticks out of it; this is a great investment.” Gee, forget the stock market, this is the way to go for long-term return on investment.

The surgery went just fine. I spent the next few days feeling very sore and as if someone had strapped a 20-pound weight across my chest. I could bathe (which is always a bonus), iced my chest and rested. In a week, I was back to see the surgeon, feeling good and ready for him to remove the bandage. As he admired my very bruised chest, he uttered the words patients dream of hearing: “That’s beautiful; I did a great job.”

My first infusion using the port followed a few weeks later and, let me tell you, it was one of the best decisions I ever made in my life. My nurse tapped me like a keg, easily putting in my IV. I was stunned at how effortless and painless it was. Not having to worry whether my veins will cooperate, my infusions are now stress free. I’m actually quite proud of my port and will not hesitate to show it off. Most people say they can’t even see it and then I have them tap on it. I love the “Oooooo’s” of wonderment.

Sometimes we have to make imPORTant decisions in our lives that might not be the most pleasant. This is especially true for those of us who have a chronic illness. To celebrate my one-year anniversary with my port, I’m making a T-shirt that reads “Little Miss ImPORTant.” In fact, I’ll toast to me and my port with a glass of port, too. Cheers!

STACY OLIVER was diagnosed in 2008 with multifocal motor neuropathy (MMN). She is the assistant director of the Center for the Writing Arts at Northwestern University, a jewelry and accessory artist (www.dancingstones jewelry.com), and she is working on her secret super hero identity as Neuropathy Girl.
All parents make sacrifices for their children. But when the child has a disease like common variable immune deficiency (CVID), the stakes for everyone get a lot higher and decisions about balancing career and family can be even more emotionally charged. For Maree McRae, a hit singer-songwriter whose debut album made its mark on Gavin’s National Top 40 Americana chart, the decision to take a break from her burgeoning music career in the wake of her son’s diagnosis helped her put her priorities — and life itself — into perspective.

**Trudie:** You had a successful debut album, “I Won’t Settle for Less,” and an offer to go on the road and tour when you were faced with a tough decision. Tell us about that.

**Maree:** I had to decide within a year after my album came out to not sign with a record label and go on tour. I really couldn’t leave my 16-year-old son, and he was not well enough to go with me. He had been chronically ill since he was 2, but at that time, he was still undiagnosed. I realized that no one else could know his medical issues like I knew them. It’s a tremendous responsibility being a parent, a good parent I should say, and having a child with a debilitating illness that no one could identify was the worst thing imaginable.

**Trudie:** Since the diagnosis, what have you learned about CVID?

**Maree:** The World Health Organization recognizes more than 120 primary immune deficiency diseases, and CVID is becoming more common. The amazing thing for me was how very little the internal medicine doctors are actually trained in this area. If they were, it would be extremely helpful for identifying patients earlier and for more accurate diagnoses.

**Trudie:** What are the challenges you’ve faced as a family living with CVID?

**Maree:** My son has to go in every three to four weeks for intravenous immune globulin (IVIG), and each infusion takes about five hours. That’s a lot for a teenager to deal with. A kid should be out having fun, not having to worry about always being sick. But, hey, life isn’t perfect. As a family, we’ve endured 16 years of emergency room visits and horrible heartbreak watching him be sick for so long. It’s an awful thing to watch our loved ones suffer, especially a young child.

**Trudie:** As an artist, you like telling stories with your music. Tell us about

“I had to walk away from a dream, but I had my heart and time to give to my son.”
your second album, “Urgency,” especially the title track.

*Maree:* “Urgency” was written in the hospital parking lot the day of my son’s diagnosis. Since then, my music has changed to be completely heart-driven writing, no fluff. I focus on appreciating every moment that we are given and expressing that we are never given a guarantee of another day of life. That is huge and, of course, comes across in the expression of my music, and particularly on this album.

*Trudie:* How have fans connected with that song?

*Maree:* With every show, people are tapping into the meaning of “Urgency” and not just as it relates to CVID, but also sharing their own experiences with me and their stories of chronic illness.

*Trudie:* Have you been involved with any advocacy groups or fundraisers?

*Maree:* “Urgency” was given out at a silent auction at the world meeting of the Immune Deficiency Foundation (IDF). I hope it helps another family going through the same thing we’ve experienced. Also, last year I played at an IDF conference in San Francisco, and I was amazed at the number of parents who told me they had my song “Who Knows” on their iPods. One woman said she has to travel for work and leave her child at home and she always has that song to keep her heart company on the plane. It brought tears to my eyes to be playing for all the patients, particularly the parents of ill children. As parents, we all want to be our child’s protector and caretaker, but sometimes the helplessness you feel is overwhelming when you can’t do anything to heal them.

*Trudie:* What other advocacy groups are you involved with?

*Maree:* I intend to become more involved with an outstanding nonprofit organization called Advocacy for Patients with Chronic Illness. It offers a wealth of information and support for anyone dealing with long-term illness. My songs “Breeze” and “Urgency” were both used in separate medical videos, one on Parkinson’s disease and another featuring a very sick child in California who has immune complications.

*Trudie:* Has your singing career helped you raise awareness about CVID?

*Maree:* After the release of “Urgency,” I began donating 15 percent of my sales to patient support organizations. I would love to use my singing as a platform and go to seminars and speak to people. But I do feel at every show where I perform I am given an extraordinary opportunity to help others through my music. People flock to me, just sharing their own stories. That gives me such an overwhelming feeling of success. These songs are doing everything they should right here and now.

*Trudie:* How has being a singer and songwriter helped you deal with life’s challenges?

*Maree:* Writing music is so healing because it allows me to put my emotions into words. Sharing my music with others who can benefit is also very therapeutic. I remember even as a little kid, I’d go sit on the piano stool and pluck away at the keys and totally disappear from this world. So I would say music is a total release for me.

*Trudie:* Has this experience with your child's illness made you stronger?

*Maree:* I have grown stronger because I had no other choice. I mean, you either sink or swim. When it’s your child who is sick, you naturally make a decision to swim.

*Maree’s albums are available on Amazon.com, iTunes and on her website, www.mareemcrae.com/music.html. You can also see Maree perform on her YouTube channel, www.youtube.com/user/mareemcrae.*

*TRUDIE MITSCHANG is a staff writer for IG Living magazine.*
THE BROWN RECLUSE, a tarantula and the chilling shake of a rattlesnake’s tail. Fish guts. Fingernails digging into a blackboard and the sting of a fresh paper cut. Rotten eggs and the slippery, tasteless goo left on my tongue from a first encounter with okra. This is a short list of things that freak, frighten, repel and revolt me! My skin is craw ling as I write this (and I’m quite sure it’s not hives or a herpes out- break causing my discomfort)! Other than this laundry list of what repulses me, there is really only one thing I fear more than anything: the stomach flu. Of all things a parent of kids with primary immunodeficiency disease should fret about, a little barf is really scraping the bottom of the, uh, bucket. Needles, nebulizers and neti-pot leftovers seem better choices to nauseate, but I’d take all three of them any day of the week over a battle with the barf bug. Why? Because when the call goes out that an intestinal bug has hit, I get a little, well, crazy. I live in fear everybody will get “it.” I have no stomach for this enemy of my family, so I declare a disinfectant war. Every surface within reach gets bombed with bleach or clobbered with Comet. My only comfort: knowing our toilets will finally get cleaned. I’m so anal about not spreading the “love” that economy size bottles of hand sanitizer and Lysol hang on our front door with a sign that reads, “Please Scrub Up Before Entering.”

I dislike intestinal bugs so much that I’ve been known to hand out chewable vitamins instead of candy for Halloween. I figure if I can help boost the neighborhood kids’ immune systems, I just might thwart a “cookie-tossing” epidemic. Besides, kids won’t know the difference between the colorful vitamins and regular candy; both have some variant of sugar listed as their first ingredient!

Since implementing my plan of attack in my war against stomach flu, my family has fared pretty well. We’ve suffered through only an occasional episode of vomiting in the past 14-plus years, and they weren’t my fault. Yup, I’m pretty proud of the Haggard family hurling record. That record includes me 13 years ago when birthing Caleb, and Mark 25 years ago when birthing his appendix. Then, once, Molly and her BFF ate too many corn dogs at the fair and proceeded to ride the stand-while-getting-spun-around-really-fast ride three times in a row, thus tasting
their lunch twice. Because I didn’t have to run for the bucket, smell it or clean it up, I say her state fair episode doesn’t count.

As far as the kids go, well, can you really call baby spit-up vomiting? It certainly doesn’t qualify as a stomach flu. And, it’s precious when they do it anyway! I mean, they bob their head, giggling with satisfaction as a fleece bib collects sweet baby cocktail of regurgitated milk and drool dripping from their rosebud lips. So, as far as I’m concerned, that leaves the Haggard record at 14 years of “wins” versus the stomach flu’s 14 years of unsuccessful attempts at my family’s intestines.

Pride comes before a fall, or so I’ve been told. Just as I was finishing up this column, I, well, I had to (this is really hard) change the end.

“Moooommm! Here it coooomes!” Caleb hollered from the next-door neighbor’s driveway.

Caleb’s announcement echoed from one house to another, inciting a barking riot among the neighbors’ dogs. I had never heard Caleb call to me like that before, so a very ugly, unsavory feeling came over me.

I know it’s been going around, I thought. But was I prepared for the onslaught? Between me and Comet, we were victorious over my sworn enemy. I had goosebumps on my goosebumps. My heart started to pound hard with fear, and my shirt reverberated with every heartbeat. I felt sweaty and weak at just the thought of what Caleb might be doing in the bathroom at any second. I caught a glimpse of Caleb’s crisp, white T-shirt from the front window. I thought: Will his shirt still be white in the next few minutes?

I put my clammy hand on the doorknob and kicked a few things out of the way so Caleb’s entry might go faster. Do I just tell him to puke in the bushes? It’d be so easy to hose him and the bushes off.

“Outta my way, Mom!” Bounding through the front door, Caleb brushed my shirt and announced: “I gotta goooooo!!!”

I was frozen in pure fear. I didn’t know what to do! A bloody nose? No problem. A fractured arm? No sweat. Sinus infections? Nothing to them. What about wheezing? Well, what about it?! Wasp bites, bee stings and lacerations to the bone. Ear infections, eye goo and constipation. Nothing to it! Surgeries aplenty, IVIGs, PICC lines and CT scans. Easy breezy. Puking? I am embarrassed to say that I didn’t have a clue.

I eased my way toward the bathroom door, freaked out from head to toe. I didn’t want to hear the gruesome explosions reverberating from my child’s innards. Of all illnesses I’ve experienced, this is the one disease I did not want to have sympathy pains for.

I waited expectantly for the ugly sounds of Caleb losing his lunch, but was met with silence. I mustered enough gumption to spit out a few consoling words, hoping they’d bounce off the door and into my heart. “Mom’s here, Caleb. Are you OK? Do you need anything?” Silence.

“Wait a minute,” I thought. “Is that the rustling sound of magazine pages I hear? What about that hum-ming? This doesn’t sound like human suffering.” Then, out of the bathroom I heard my “sick” boy sing, “Zippity Doo Dah, Zippity Ay … wonderful feeling, wonderful day!”

“Wassup, Mommabear?” Caleb greeted me with magazine in hand.

Trying to get my mouth to work, I muttered, “I’mmm good.” Caleb nodded his head while making his way to the kitchen. From the belly of the fridge, Caleb sang “Mr. Bluebird on my shoulder.”

“So, are you OK?”

“I’m fine!” Caleb answered with a spoonful of sugar cereal dripping from his chin.

I didn’t know who felt more relief, Caleb or me! A feeling of sweet serenity washed over me, knowing that Caleb was just fine, as was the universe.

Caleb and I spent the next few minutes catching up on the school day’s activities, when I realized someone was missing snack time.

“Caleb, where is your sister?” I panicked. I was so caught up in the toilet drama that I forgot about Molly.

Caleb shrugged his shoulders, which was my cue. A thousand worries re-entered my mind as I bolted toward the front door: Is she hurt? Did she go to her friend’s house? Did she miss the school bus?

All these worries were for naught. I missed the mark completely as Molly was bent over in the bushes “yawning in technicolor.”

After two weeks of the stomach flu making its rounds, we thought it would be appropriate to change our last name from “Haggard” to “Huey.”

As for me, my greatest fear is running out of Comet. ■

CHERYL L. HAGGARD is a stay-at-home mom and has three children, two of whom have CVID. She and her husband, Mark, also operate Under the Hood Ministries at www.underthehoodministries.org.
Immune globulin (IG) is a miraculous therapy, and no one knows this better than patients who receive it for an immune-mediated disease. Indeed, without IG, these individuals would fail to make the transition from living in a constant state of illness, struggling to survive, to a healthy, happy lifestyle. That is what this column is about — the unique and sometimes extraordinary stories of people of all ages whose lives have positively transitioned with the help of IG. We want to hear your stories! Email us at editor@igliving.com.

When All Else Fails, Rest Assured

Lydia Turner had two sons, Micah, who was 4, and Noah, who was 3, when she was diagnosed with common variable immunodeficiency.

When Lydia Turner realized she might not be able to afford her immune globulin (IG) treatments, she was “scared to death.” She wasn’t as worried about herself as she was about her two young sons, Micah, 8, and Noah, 7. Who would care for them if she was too sick to do so? “I realized,” she said, “that I was desperately in need of help from anyone.” And, that anyone ended up being the company that provides her with her lifesaving treatments.

The Delayed Diagnosis

Her story is a common one. Lydia was sick a lot as a child with sinus infections, bronchitis, strep, etc. “I would frequently miss a lot of school because I was really sick,” explains Lydia, “even though family and friends thought I as just ‘laying out.’” Despite undergoing every test in the book to figure out why she was always getting infections, there was no diagnosis. “I felt, and still do feel, like an experimental lab rat,” she says.

After becoming an adult, she had four sinus surgeries. Then, in January 2006, a major surgery left her with an open wound that took four months to heal. In addition, she has been in the hospital “uncountable times” for pneumonia or other illnesses. But, following a severe case of pneumonia, she saw a pulmonologist who suggested there was a very remote possibility that she might have “something.” She underwent a simple blood test and was called into the pulmonologist’s office a week later to repeat the test. Then, he gave Lydia the “good news.” She was diagnosed with common variable immunodeficiency (CVID). “I said, ‘OK, so what kind of pill do I take?’” says Lydia. But, he said there was no pill and there was no cure. There was only intravenous IG (IVIG) treatments. “My stomach dropped,” explains Lydia. “Here I was so excited that someone had finally figured out what was going on with me after all these years, and this was the only way to help me?”

The Life-Changing Stage

By the time of Lydia’s diagnosis, her sons were 3 and 4 years old. But, the disease had taken its toll on family life. And, in June 2007, two months prior to her divorce being finalized, she moved to Savannah, Ga., where her mother and stepfather live. “They were the only people who would be able to help me when I would have a treatment, get sick or need help with my boys,” says Lydia. While she originally moved into an apartment a mile from her parents’ home, she was hospitalized again in February 2008, after which she and her boys moved into her parents’ two guest bedrooms. Today, after some renovations to the home, Lydia and her sons have their own accommodations in her parents’ home.

Her constant illness also made it impossible for Lydia to work. Prior to her pregnancies, she was a marketing support specialist, but she had to resign due to frequent illnesses and absences. So, she started her own business as a home and pet sitter to provide some flexibility. But, her doctor advised her to stop this when she became pregnant, at which time she lost her insurance and was forced to go on COBRA when her divorce was finalized.
Uninsurable, But Not Un-“assurable”

When Lydia found out her COBRA coverage was coming to an end, she went to the private insurance sector. She attempted to obtain a new policy with her current provider, but was refused. She tried many companies, and “numerous companies no one has ever heard of.” But, she quickly found out just how ineligible she was for private or government insurance programs. Because she was frequently absent from work due to her illnesses, she didn’t qualify for government programs because she never worked for a specific employer long enough to qualify.

This was when Lydia was “scared to death” of not being able to afford her IG treatments. But, to Lydia’s surprise, there was help available. When she first started treatment with CSL Behring’s Vivaglobin, she signed up for the company’s Assurance Program. “I filled out a card thinking it was like a warranty/registration/recall card and sent it back,” she explains. In response, CSL said it would help Lydia if she ever had a lapse in insurance coverage. “At the time I did it, I never thought I would ever be in that position,” she says. But, ever since she contacted the company, it has helped her every step of the way. “My experience with CSL Behring and [its] Assurance Program has been nothing but incredible!” exclaims Lydia.

Today, Lydia infuses Hizentra, also a CSL Behring product. “I contact the CSL Behring Assurance Program department and they work it all through for me,” she says. “They send my medication to a healthcare corporation, who then sends it to me with all my infusion supplies.” All the medication and supplies are covered through the Assurance Program.

While Lydia eventually retained insurance coverage, it is far from sufficient to meet her medical needs. “They pay for hardly anything, and they have a pre-existing clause that is for a 12-month period,” she says. “They cover nothing that has anything to do with any pre-existing health issues I had or have. They don’t cover any specialists, and the drug coverage is even worse.” And, most of her health issues are pre-existing conditions. “I’m truly blessed with an incredible drug company that sees the true needs and cares for their patients,” says Lydia.

Of course, there is a “window” of time that will allow her to receive her medication through the Assurance Program. But, when she raised this concern, she was told that CSL Behring would continue to work with her until she can find insurance that will help cover the medication. Luckily, the 12-month pre-existing clause with her insurance company is about to expire. “That date is approaching fast,” she says. “I guess I’ll see what happens.”

Anything Is Possible

Lydia’s advice to others who find themselves in the position of not being able to get coverage for their IG treatments? “Keep a positive attitude and keep moving forward,” she encourages. “Continue to build on relationships with the companies you have contact with. I have made many friends with employees over the phone. Don’t get discouraged. It will work out. I’m finally in a place where I can say, ‘Wow, if I’ve made it through this, I can do anything with God’s help.’ When we think it’s impossible, he always makes it possible.”

RONALE TUCKER RHODES is the editor for IG Living magazine.

When Lydia Turner realized she might not be able to afford her immune globulin (IG) treatments, she was “scared to death.”
Blue Skies and the Meaning of Life: Communicating with Chronically Ill Kids

Explaining the “how” of disease can be easier than explaining the “why,” but with simplified language, as well as guidance and support, parents can help kids to understand and cope.

By Mark T. Haggard

“WHY IS THE sky blue?” Ah, the classic question asked of parents by their children. Does anyone really know? I don’t. I have heard that it is the reflection of the ocean, but I’m 500 miles away from the coast. I digress. As parents, we field a number of questions from our children, many of them innocuous like “Why is Mr. Sky Blue?” But some of those questions are very important: to them, to us and to life itself. Especially for parents of children with a chronic illness such as primary immune deficiency disease (PIDD), those questions become much more important and much more difficult as our kids get older. It would be foolish to get an answer wrong and worse to simply brush it off.

Once in a while, just before having two needles put into her belly, my 9-year-old daughter, Molly, will look at me, sometimes with tears in her eyes, and ask why she has to get infusions. “Other kids don’t. I’m tired of being different,” she says. I usually respond with some kind of clinic-speak about how she is missing parts of her immune system and how the immune globulin (IG) replaces what is lacking in her body. I’ve educated myself and become rather adept at answering the “how” question.

One particular afternoon as I was preparing to infuse Molly, she sprung another question. “Why did I get this disease?” she asked. But, my clinic-speak response did not quench the fire burning in her heart. I was reminded of an episode of the television show “Everybody Loves Raymond,” where Ray, the father, sheepishly heads upstairs to have “the talk” with his preteen daughter, Ali. He arrives in her room well-rehearsed in the “birds and bees” story and armed with numerous scholarly journals, but he is thrown a curve when Ali asks, not about the “how” of life, but the “why.” “Why are we put on the Earth?” she asks.

My daughter’s question, “Why did I get this disease?” echoed in my head. This was not television and the issue was not going to be resolved in 30 minutes. As the parent of a PIDD kid, I am generally well-versed in the latest medical knowledge of my daughter’s immune deficiency. But what is the “why”? To do right by our kids, we must prepare ourselves to answer both the “how” and the “why.”

Answering the “How”

According to Dr. Erika Lawrence, professor of psychology at the University of Iowa, when parents speak with their child, it is first important for us to be calm and come to terms with our child’s condition; if we are not in a good place, then we are in no position to talk to them. Second, it is important to put difficult concepts into a language they can understand. Dr. Lawrence uses charts with smiles and frowns, much like the “pain chart” found in an emergency room to let children explain how they feel, rather than have parents talking for them. “Pictures and charts give a child control, so we are not talking over their heads,” she explains. Along the same line, she suggests using metaphors that children understand. Finally, she recommends talking to children “in stages.” Some may want to know everything about the condition at one time; some can only ingest so much at once. We have to know our kids, their needs and how they respond to things.

When my daughter was finally diagnosed with an immune deficiency, we read Sara LeBien’s children’s book, Our Immune System: A Story for Children with Primary Immunodeficiency Diseases. The book explains immune deficiencies in layman’s terms. It is a simple read with short sentences and clinical terms broken up by elementary words. And it is illustrated and has cute little cartoon complements flowing throughout the immune system, fat phagocytes marching through the body feasting on germs and viruses, and killer T cells with bulging biceps pummeling pathogens. An online version of the book can be accessed on the Immune Deficiency Foundation’s website.
Answering the “Why”

There is no textbook that can answer the question of why our children are immune deficient while others are healthy. And, 20 years in a classroom has provided no insight into this matter. The answer to “why” will vary, depending on each individual’s worldview. Dr. Lawrence reassures parents that it is fine if we do not know the answer to this question. In fact, it is better not to pretend that we do have the answer. “Turn it back on the child,” she suggests. Ask: “What do you think? What do you think you are learning from this disease?” Also, visiting a local pastor, priest, rabbi or counselor could help your child in their quest for the answer to “why.” These professionals have been trained to help individuals find answers for themselves.

There is no textbook that can answer the question of why our children are immune deficient while others are healthy.

I am raising my daughter with the idea that she has gone through the numerous hospital visits, tests and the “pokies” twice a week in order to help others in similar circumstances. After eight years of IG therapy, Molly has learned to have great empathy for others. Longtime readers of IG Living magazine might remember the story about her trying to resuscitate a praying mantis that had become the victim of Idaho’s first hard frost, or of her trying to incubate an unhatched duck egg in my golf bag.

Remarkable Results

I am amazed at how children grow up well despite their parents’ imperfections. A few weeks ago, my wife emerged from the bedroom and approached Molly and me with a grim expression. “Molly, I have sad news,” she said. My daughter’s face fell slightly as her mom continued her report. “Your cousin Ashley has leukemia.” Molly and her cousin are the same age. Neither of them is at an age that they ought to know about leukemia, or any other cancer for that matter, but now they do. Now it was for real; her cousin was in need of Molly’s empathy. The combination of her knowledge and compassion is being put to good use in helping Ashley through her treatment for leukemia. “I have that coupon for a free Build-A-Bear,” Molly recalled. “What if I made one for her?”

There is reason for our children’s sickness; there is purpose. We might not know it right away, but eventually, it becomes evident. When our children ask us the next question, the “why” beyond the “how,” we don’t need to know all the answers. We can explain the “how.” As for the “why,” we need to be beside them and guide and support them in their search for their own answers.

Later in the day, I noticed Molly on the phone talking to Ashley. The smile and the giggle that she shared with her cousin let me know that she had started understanding the “why.”

MARK T. HAGGARD is a high school teacher and football coach, and has three children, two of whom have CID. He and his wife, Cheryl, also operate Under the Hood Ministries at www.underthehoodministries.org.
IMMUNE GLOBULIN (IG) therapies have evolved into one of the most promising therapies of all times. Although current products on the market collectively carry U.S. Food and Drug Administration (FDA)-approved indications for only six different disease states, IG is an accepted use of treatment for many more. In part because of its success in treating immune-mediated diseases, IG is currently being studied as a possible treatment in more than 50 active clinical trials, according to www.clinicaltrials.gov.

A Unique Drug
IG is a unique drug. Currently, there are only a handful of manufacturers approved to sell IG in the U.S., and there are no generic forms of it; they all are considered name brand. In addition, although all manufacturers must meet at least the same criteria for safety, the ingredients and manufacturing processes can and do vary. As a result, no two IG products are exactly the same. And while many practitioners still consider all IG products to be clinically equivalent, they are not pharmaceutically equivalent.¹

Mandated Warnings
All IG products are FDA-mandated to carry a black-box warning for acute renal dysfunction and failure. However, it is thought that such problems are more often associated with products containing sucrose, which can be used to stabilize the IG proteins. As a result, most IG products in the market today do not contain sucrose.

Additionally, all IG products carry a warning stating that the product is not indicated for patients with a selective IgA deficiency that are known to carry antibodies against IgA and who have a history of hypersensitivity. Patients reading the package insert for the first time should understand that having a low IgA level and having antibodies to IgA is not the same thing. Regardless, doctors prescribing IG for naive patients who have a low IgA level may decide to use a product with a low IgA level as a precaution.

Extra Precautions
Choosing a product carefully for patients with comorbidities such as diabetes, renal dysfunction, heart failure and vascular disease can be especially important. In particular, the amount of sodium and sucrose can affect the osmolality of the product, which in turn can affect the patient. It is felt that the closer an IG product’s osmolality is to the human plasma, which is 280 to 300 mOsm/kg, the better it may be tolerated.

Besides osmolality, patients with diabetes using a glucometer to monitor their diabetes need to be aware that an infusion with an IG containing maltose could lead to falsely high sugar readings. Specifically, monitors that use test strips containing the enzyme glucose dehydrogenase (GDH)-pyrrolquinoline-linequinone (PQQ) falsely interpret maltose as glucose, producing an unreliable reading. A falsely high reading could lead to an inappropriate administration of insulin, resulting in life-threatening hypoglycemia. The FDA has recommended that healthcare facilities not use test strips containing GDH-PQQ.² Despite that, some glucometers, mainly those manufactured by Roche, continue to use the GDH-PQQ enzyme in their test strips. To see a list of all test strips made with GDH-PQQ, go to http://www.fda.gov/medicaldevices/safety/alertsandnotices/publichealthnotifications/ucm176992.htm#attachment.

Shelf life is another pharmaceutical element that determines the cost of distribution and which drug is provided to the patient. Most IG products carry at least

Choosing an Immune Globulin Product
By Kris McFalls
Sources

a 24-month or longer shelf life. However, for some products, refrigeration is necessary for all or at least part of the shelf life for them to maintain stability.

**Considering the Needs of the Patient**

Many factors need to be considered when choosing an IG product. But, by far, the most important considerations are the needs of the patient. While some products may be better tolerated than others, each patient may exhibit an individual tolerability of one product over another.

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**Baxter Healthcare Corp.**

Gammagard S/D is approved for intravenous administration for primary immunodeficiency, chronic lymphocytic leukemia, immune thrombocytopenic purpura and Kawasaki syndrome.

(800) 422-9837; www.baxter.com/healthcare_professionals/products/gammagard_sd_5.html

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**Baxter Healthcare Corp.**

Gammagard Liquid 10% is approved for intravenous and subcutaneous use for primary immunodeficiency.

(800) 422-9837; www.gammagardliquid.com

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**Bio Products Laboratory**

Gammaplex is approved for intravenous administration for primary immunodeficiency.

(800) 843-7477; www.gammaplex.com

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**CSL Behring**

Carimune NF is approved for intravenous administration for primary immunodeficiency and for acute and chronic immune thrombocytopenic purpura.

(800) 683-1288; www.cslbehring-us.com

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**CSL Behring**

Hizentra is approved for subcutaneous administration for primary immunodeficiency.

(800) 683-1288; www.hizentra.com

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**CSL Behring**

Privigen is approved for intravenous administration for primary immunodeficiency and immune thrombocytopenic purpura.

(800) 683-1288; www.privigen.com

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**Grifols USA**

Flebogamma DIF 5% and Flebogamma DIF 10% are approved for intravenous administration for primary immunodeficiency.

(888) 474-3657; www.grifolsusa.com

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**Grifols USA**

Gamunex-C is approved for intravenous and subcutaneous administration for primary immunodeficiency. Gamunex-C is also approved for intravenous administration for immune thrombocytopenic purpura and chronic inflammatory demyelinating polyneuropathy.

(888) 694-2686; www.gamunex-c.com

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**Kedrion Biopharma**

Gammaked is a 10% solution approved for intravenous administration for the treatment of primary immunodeficiency, idiopathic thrombocytopenic purpura and chronic inflammatory demyelinating polyneuropathy, and for subcutaneous administration to treat primary immune deficiency. The product was launched in the U.S. market in August.

(888) 694-2686; www.gammaked.com

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**Octapharma**

Octagam 5% is approved for intravenous administration for primary immunodeficiency.

(800) 826-6905; www.octapharma.com

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**References**

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