VINCENT'S TWO CENTS' WORTH OF FALL SENSE:

Hopefully this is not a sign. The facts are: 1) Jim Theodore cared for his family, his patients and all of us; 2) he disappeared over ten years ago; and 3) technology continues to race ahead but requires communication and trust.

Paramount to all of this is planning, protocol development, review, prevention, performance improvement, reassessment and again, communication.

Communication—simple and direct, not only for us and the multidisciplinary teams we are all part of, but most importantly for the primary caregivers or patient's support system to understand. To understand truly, madly and deeply.

With all the different Englishes there is still the potential for mass confusion. Not to mention everyone's biases and, the new confounder (a by-product of rapid technological advancement), potential obstacles to the delivery of passionate and attentive care for the relief our patients that is, along with the biases, social media.

In the end, to prevent and minimize the undermining of our great successes, great stories and "fairy-tales" still boils down to good old-fashion English, I mean common sense.

Vincent Valentine, MD
Editor-in-Chief, ISHLT Links Newsletter
IN THE SPOTLIGHT: Jim Theodore: A Pioneer in Lung Transplantation
August 28, 1935 – August 17, 2003
by Vincent Valentine, MD

Many a time, a patient’s spouse, usually of a technical or engineering background would come in with several pages of questions about their near-suffocating loved ones undergoing evaluation for heart-lung or lung transplantation. Many a time after presenting such patients to Jim, he would kindly and methodically state to the patient and their spouse, “before we get to your questions, let me make a few comments that might answer most of your questions. We know replacing bad lungs with better lungs work. We do not know why and we do not know how they work. But the primary reasons why we lose sleep and come to work every day are to answer these questions.”

He was an athlete, a husband, a father, a mentor, a grandfather, a friend, an advocate, a student, a physician, a scientist, a researcher in space exploration, a teacher, a scholar, a Division Chief, a team player, a cetologist, an historian, a bookworm, and a pulmonologist but above all he was the first lung transplant specialist.

At a time when America struggled with the depression, Hitler rose to power and physicists quietly collaborated across borders. At a time when a basic problem in magnetism was solved and proven useful to analyze hemoglobin molecules that absorb oxygen, the United States began building the atomic bomb. At a time when FM radio was born, so was Jim Theodore on August 28, 1935 in the tiny town of Wilmerding, Pennsylvania. This town was among the first planned developments in the United States.

Jim was defined by and was proud of his hard core and hardworking blue collar roots. He married his best friend (Gale McIntyre) on March 30, 1961 in Wilmerding.

He was a highly sought after outstanding collegiate athlete on the gridiron. This landed him an eight year scholarship to the University of Pittsburgh and its School of Medicine where he earned his M.D. in 1962. It is ironic that he finished his internal medical residency training at the University of Pittsburgh and Washington University in St Louis, two of the most prolific programs in lung transplantation today.

He was awarded the U.S. Air Force Commendation Medal for Meritorious Service (one of his subtle witty quips with me which only fueled my flames with word play was the manner of how he would point out the uncertainty of using the word meritorious rather than the word meretricious. He and I enjoyed malapropisms or Bunkerisms. He had a very subtle way with humor and if one did not get it Jim would laugh out loud to make sure the listener knew it was a joke).
He began his scholarly tenure serving as Chief of Respiratory Medicine at Stanford University from 1970-1982, an era when attempts at lung replacement were considered fruitless. He would later become the first Medical Director of Heart-Lung and Lung Transplantation in the World. His contributions to transplant pulmonary medicine are unparalleled and his legacy, matchless. What’s not obvious, he was a leader’s leader. He led by example and showed how leaders must not only lead but also be led. He was a team player and demonstrated the importance of heading in the direction for the team through influence, sacrifice, empowerment and respect. But these points are difficult to measure. However, there are other measures of success.

In the academic world of medicine, the number of grants and how much funding you can secure, especially from the NIH, are major determinants for your success. He earned NIH support, received numerous grants, including an NHLB Pulmonary Academic Award and a Pulmonary Division Fellowship Training Grant, an RO1 – Lung Cell Function in Health and Disease and two Program Project Grants in Clinical Heart and Heart-Lung Transplantation.

Another measure of academic success is the number of publications and the lasting effect they have. Jim achieved this with 163 articles in 54 different journals with mean and median impact factors of 7.0 and 5.1 (when measured today), respectively.

Among the 35 publications with an impact factor > 10 by today’s criteria: 15 were in the American Journal of Respiratory and Critical Care Medicine, four in both the Annals of Internal Medicine and Journal of Clinical Investigation, three in both the New England Journal of Medicine and Lancet, two in both Science and Circulation and one in JAMA and the British Medical Journal. He is one of the most prolific contributors of highly influential articles to the literature of lung transplantation. His concepts were original, brilliant and durable. He would frequently remind me of Gene Fowler’s quote – “Writing is easy. All you do is stare at a blank sheet of paper until drops of blood form on your forehead.” Jim advised all his trainees to write something that will stand the test of time. From the influence of his mentor and colleague, Eugene Robin – a giant in pulmonary medicine, even the titles of many of Jim’s articles speak for themselves:

1/ Lung energetics and lung disease, 1968.
2/ Pathogenesis of neurogenic pulmonary oedema, 1975.
3/ A shunt is (not) a shunt is (not) a shunt, 1977.
5/ Are there ischemic lung diseases?, 1982.
8/ Augmented ventilator responses to exercise in pulmonary hypertension, 1986.
13/ Lung transplantation comes of age, 1990
14/ Obliterative bronchiolitis, 1990
17/ Lung transplantation is here to stay, 1992.
18/ Actuarial survival of heart-lung and bilateral sequential lung transplant recipients with obliterative bronchiolitis, 1996.
19/ T cell receptor biases and clonal proliferations among lung transplant recipients with obliterative bronchiolitis, 1996.
20/ Impact of ganciclovir prophylaxis on heart-lung and lung transplant recipients, 1996.
21/ Metabolic myopathy as a cause of the exercise limitation in lung transplant recipients, 1998.
22/ Dendritic cells and macrophages in lung allografts: A role in chronic rejection?, 2000

An additional indicator of enduring success can be measured by the quality of those you influence. Take note of the list of his former transplant fellows and others he mentored during his career from 10 countries representing 5 continents across the globe. Nearly all are leaders today.

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<th>Name</th>
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<td>Conor Burke</td>
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<td>Allan Glanville</td>
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<td>Mordechai Kramer</td>
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<td>Glenda Patterson</td>
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<td>Maria Padilla</td>
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<td>Reda Girgis</td>
<td>1994-1996</td>
<td>Richard DeVos Heart and Lung Program, Grand Rapids, MI*</td>
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Less objective and more subjective measures about Jim and his character come through the comments of the fellows he trained.

**Allan Glanville:** As for Jim I think it is fair to say that he was a quiet unassuming fellow who let his applied science speak for itself without ever in the greater arena being accorded the credit appropriately due for his pioneering role in understanding the physiology of the transplanted lung and the pulmonary care of this population of deserving patients. He showed a depth of humanity and care that was not always appreciated by those around him and was an excellent patient advocate. He taught me to see through the charades that too often invest clinical and scientific medicine and value the richness of the great privilege of serving this community.

**Steve Duncan:** It does not matter what will be said about Jim, his accomplishments or what defined his academic or occupational success, but to me at least the more relevant attributes are his humanness, warmth, patience and goodness. These things are what he will be remembered by more people like those he touched as a mentor, colleague and friend.

**Mordechai Kramer:** Two personal memories—as an orthodox Jew on Friday I had to go home early in winter time. Jim always allow me to do so and moreover he reminded me "Mordechai, the sun is going down, go home it's Sabbath soon." When I had Jewish bosses they weren't so understanding about it, they used to say if I stay you stay too...

The second anecdote was about his smoking. He could not stop it and when we were in the clinic he used to say "Mordechai, I am going up for a 5 minute break. So I used to tell him, "just one cigarette—no more." Later on it was a known signal: he raised his hand 5 fingers (meaning 5 minutes) and I raised one finger (meaning just one cigarette).

He was a very warm and compassionate person to both patients and staff and set the basis for my whole career and I am in debt to him for that.

**Reda Girgis:** I think the first thing to comes to mind when I remember Jim was his uniquely persistent upbeat mood, always joking and laughing. It was contagious. At the same time, he

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<th>Charles Poirier</th>
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<td><strong>Lianne Singer</strong></td>
<td><strong>1998-2001</strong></td>
<td><strong>Toronto General Hospital, Toronto</strong>*</td>
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<td>1999-2000</td>
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<td>Shahzad Ahmad</td>
<td>2001-2002</td>
<td>Inova Fairfax Hospital, Falls Church, VA</td>
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<td>Anna Yiannopoulou</td>
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<td>Justin Weinkauf</td>
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<td>University of Alberta, Edmonton</td>
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<td><strong>Steve Hays</strong></td>
<td><strong>2003</strong></td>
<td><strong>UCSF San Francisco</strong>*</td>
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*Medical Directors or former Medical Directors of Lung Transplantation Programs
clearly cared a lot of his fellows, was proud of previous ones and really encouraged me to advance my academic career.

**Lianne Singer:** When I think of Jim - to me what comes to mind is what an incredibly caring and sincere person he was. As his fellow I was made to feel like a member of his family, but he also showed great compassion to his patients and was genuinely interested in the lives of everyone he worked with. I always felt like he was looking out for me even after I left Stanford; he would call regularly to see how I was settling in as staff and give advice when needed. I still keep a picture of him in my office as a reminder of the kind of mentor and physician I strive to be.

**Shahzad Ahmad:** The patients loved and respected him more than anyone, and rightly so as he was a fatherly figure to most. He was a great role model to all the fellows and to anyone who came in contact with him.

Finally, the most consistent part of Jim’s actions remembered by his patients, professional colleagues and pupils were his patented hugs. In today’s “political correct” society, many may object to his warmth and compassion he displayed especially through these quite therapeutic, sincere and caring hugs. Many times he and I talked about these hugs and recognized their therapeutic and economic value.

Hugs relieve tension, improve blood flow, reduce stress, are non-polluting, help self-esteem, generate good will, require no batteries, cost nothing, are non-taxable, are quiet and extremely personal and most importantly, hugs are fully returnable. It took me months to figure out how all the benefits of these hugs were actually for him. Then I asked; how do these hugs benefit the patients?

Unequivocally, Jim possessed the highest degree of honesty, loyalty, and humility. His strength of will and character was best seen in his unwavering devotion to his patients, colleagues and family. Yet his self-effacing humility and unbroken silence were as impressive as his loyalty. He was above all, a man of action, always reminding us that results will speak for themselves. Regardless of the results bad or good he was well composed and poised. But only one time have I ever seen him flustered. It was in August 1991 when Norman Lewiston Professor of Pediatrics, who worked with Jim in the adult and pediatrics heart-lung and lung transplant clinics, suddenly died. Shortly after his death, it was discovered that Dr Lewiston had three wives without the pleasure or benefit of any divorce (read article). After several days, I soon realized Jim was the most jealous of all. He said, “you know a man for nearly twenty years, you think you’d know him and that he might tell you a few secrets.”

Today, he is survived by his childhood sweetheart and wife, Gale, four accomplished children: Laurel, Terry, RJ, and Brian and 11 lovely grandchildren: Michael, Christian, Grace, Sutton, Clayton, Anastasia, Andrei, Madison, Hannah, James, and Claire. Gale reminded me, Jim took no time for himself. Reading was his passion and his favorite time was following and attending all of their kids’ sports. He did love to travel and he spent quite a lot of time on bible study early in the morning.
Jim, it’s been a decade but your influence and your presence remains with us today and will remain so in the ISHLT. We will always revere you, your selflessness, your compassion and action as well as a legacy which remains second to none and very much alive today in the breaths of our patients. This is your commendation. To which he will retort, do you mean condemnation?

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The Vanishing Caregiver

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Missing in the darkness,
vanished without a trace,
with only the memories and photographs
to fill an empty place.

--The Great Eternal Silence, by Aquinas T. Duffy [1]

Due to a significant improvement in survival rates following implantation of ventricular assist devices (VADs), the number of patients with implanted VADs has increased considerably [2]. With such technology now employed to sustain the life of the VAD recipient, patients are generally discharged home with a caregiver [3]. Though very committed, the caregiver may experience negative psychological, behavioral and physiological responses while implementing the necessary care for the patient [4].

If the burden is too heavy, the caregiver may deem the designated responsibility as impossible to fulfill. Thus, the VAD team may notice the presence of the caregiver, as Mr. Duffy would say, vanishing. What steps can the VAD team take to prevent the caregivers from disappearing? The following are a few simple actions to reduce the potential of the caregiver vanishing away:

1. Support groups hosted by the VAD team allow the caregiver to socialize with fellow caregivers and share stories. This not only allows a respite, of sorts, but increases knowledge of caregiving tasks. Many VAD teams offer VAD support group meetings in relaxing, non-medical atmospheres, such as restaurants or parks. Some VAD teams separate the caregivers and recipients to allow opportunities for frank conversations. These meetings have been known to foster a bond that produces long-lasting caregiver friendships. Furthermore, the caregivers and patients meet the social side of the VAD team; this may accomplish a goal of promoting a more positive view of the VAD experience.

2. Encouraging the caregiver to take respite breaks may allow a time to re-energize. Many caregivers have stated that a simple stop to the grocery store, attending a church service or participating in yoga is enough to refresh a low energy level. During the VAD patient’s assessment, VAD teams should incorporate questions that ask the caregiver the following: 1) “Do you have any feelings you would like to share about assuming the role of caregiver?” 2) “What actions do you take to assure you are taking care of yourself?” and 3) “What do you do to relax?”
3. The dominant force of social networking may be impactful for the caregiver and allow for socialization without leaving the home. VAD caregivers become Facebook “friends” with fellow caregivers and converse via Facebook. This bond promotes a camaraderie that the caregiver views as “there is someone else out there going through what I am going through.” Additionally, the internet site, MyLVAD.com, is frequently perused by caregivers as not only a venue for socialization but as a source of information that may enhance their caregiving. MyLVAD.com has become a popular source of unbiased information about LVADs [5]. VAD teams share this site with VAD patients and their caregivers and encourage them to read the site’s blogs, stories and videos.

In the end, the key is for the VAD team to incorporate the caregiver as a part of the VAD care team. By maintaining regular communication with the caregiver and asking open-ended questions, the VAD team encourages the caregiver to offer more information, including feelings, attitudes and understanding. The preceding discussion mentions only a few suggestions to prevent the vanishing of the caregiver. Many other actions may be applicable that enhance communication, decrease burden and promote positive outcomes for the patient AND the caregiver, an important part of the VAD patient’s care.

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References:

http://icvts.oxfordjournals.org/content/13/Supplement_2/iii.full
Evolving Technology—A Single Center Perspective

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“Never before in history has innovation offered promise of so much to so many in so short a time.”
--Bill Gates

In late 2010 with the arrival of a new transplant leader, the University of Kentucky began to introduce cutting edge technology within lung transplantation. One example is the concept of ambulatory ECMO as a bridge to lung transplantation. Historically, ECMO was recognized as a contraindication to lung transplantation in most centers [1]. At the University of Kentucky, ECMO was only used as a last resort, salvage treatment prior to this time. However, a new surgeon came with a history of using ambulatory ECMO strategies and found great success. For the people of Eastern Kentucky and the extended region, riddled with lung disease from years of working in coal mines or other complex conditions, this would give them a better chance of survival and rehabilitation until donor lungs became available. Living in an area of the country with extreme tobacco abuse, good donor lungs are hard to come by [2].

This new treatment option required extensive collaboration and planning with the ICU and multidisciplinary team. The process began with a full-day training including didactic and wet lab for the nursing staff. Nurse champions were identified and partnered with physical therapists. The physicians worked side-by-side with the team and built trust amongst caregivers. During this time, staffing needs were addressed, and the need for more assistance was identified to implement the ambulation process. The charge nurses acted as leaders and provided an open dialogue with all team members. With the help of nurses, physical therapists, perfusionists, nursing care techs, and physicians, the process is now second nature in the ICU. The team has taken great pride in the collaboration and success seen in the last two years. Forward-thinking nurses realized early on that there would be an equipment need for walking carts and tilt tables which are used to get the most debilitated patients upright.

The multidisciplinary team established a protocol that included the following [3]:

1. All sedation off, patient fully awake
2. Hemodynamically stable
3. Ambulation goal of 200 feet prior to transplant
4. Upper extremity ROM exercises and weight lifting with physical therapy
5. Nutrition consult: allowed to eat if swallow evaluation normal
In summary, multidisciplinary planning with trust and communication is essential when implementing new technology or procedures in a highly complex patient population. It is valuable to identify champions throughout disciplines to drive forth the process to all staff members.

Disclosure Statement: the author has no conflicts of interest to disclose.

References:

The parents of 10 year old Sarah Murnaghan, a child with cystic fibrosis in Philadelphia who had been waiting 18 months for lung transplant, ignited a media frenzy when they made public their concerns that allocation policies in the United States might prevent their child from receiving a transplant [1].

The episode raised several important ethical questions, including the responsibility of the media and public officials to avoid propagation of misinformation regarding a complex issue, the role of the courts in decision making regarding complex policies involving allocation of scarce health care resources, and the inequity inherent in the media and others promoting the interests of a single lung transplant candidate when there are more than 1700 patients currently listed for lung transplant in the United States including (at that time) 29 others under 12 years of age [2]. Others have and will continue to opine in regard to these issues.

We would like to focus on the issues in this case relevant to pediatric organ allocation and transplantation. We believe that the following points of clarification may be helpful for families, transplant caregivers and other stakeholders to ponder:

First and foremost, there remains an important and life-limiting shortage of suitable donor lungs for candidates of all ages. Infants, children and adults are still dying on the wait list despite enormous past and ongoing efforts to increase organ donation and develop the most transparent, equitable system of lung distribution possible. Similar challenges exist for patients waiting for heart, liver and kidney transplant. As American Society of Transplantation President Dan Salomon put it succinctly in his recent blog "It’s Organ Donation Stupid”.

Lungs are the transplantable organ most likely to be unsuitable for transplant in a brain dead donor due to issues of infection, trauma, fluid overload or atelectasis. The assessment of the quality of donor lungs is a challenging endeavor and management of donors after organ offers has improved in recent years leading to an absolute increase in lung transplantation in the past five years. However, most of this increase is in adult lung transplant (the number of pediatric lung transplants in the United States has remained relatively flat over the past 5 years) and is a result of increased...
yield of lungs from adolescent donors. In recent years lungs are procured from more than 35% of adolescent donors of any organ, compared to less than 25% 10 years ago. In contrast, lungs are currently procured from less than 10% of donors aged 10 or younger and less than 15% of donors of any age [2]. This observation calls into question one of the fundamental arguments used in the Murnaghan case: that there are too few pediatric lung donors. The reality is that the number of pediatric lung donors reported in the OPTN/UNOS database reflects a combination of supply and demand. It appears clear from this data that there is an opportunity for improvement in yield of donors from this age group. This should be a focus point for pediatric lung transplant physicians and surgeons.

Even so, infants and children are particularly vulnerable to death on the wait list because many (such as infants with congenital surfactant disorders) are ventilator dependent from birth and others have diseases such as cystic fibrosis with unpredictable and often catastrophic progression of disease. Moreover, because allocation policies for adolescent and adult organs still favor local candidates ahead of other sicker patients, in the current allocation environment for many children the absolute and relative number of organ donors of comparable age and size is very limited. There are many weeks in which there will be no suitable donor lungs anywhere in the USA for a candidate less than 12 years of age. This epidemiologic fact is undeniable and sobering. One way to address this would be to increase access for young children to adolescent organs which may, particularly for children of Sarah’s age, be of suitable size. As more than 90% of adolescent lungs in the United States are currently transplanted into adult recipients, and in any given year less than 5% of lung transplant recipients in the US are children, this would seem to be an equitable solution [2,3].

Indeed, we prefer broader access to adolescent organs over increased access for children to lobar transplant from adult donors. Although the successful performance of lobar transplantation instead of whole lung transplantation has been described in the published medical literature for over 20 years, in the published series, the majority of the recipients of deceased donor lobar transplant from adult donors are adults [4,5]. The youngest reported recipient of an adult deceased donor lobar transplant was a 9 y/o [4]. Although our experience with living donor lobar transplant suggests that there are anatomic reasons that lobes will not function with the same efficiency as whole lungs, the decision about whether to consider lobar transplantation must be a decision of the transplant surgeon. Transplant center physicians and surgeons should engage in transparent and evidence based discussion of benefits and risks of this approach with individual patients and families.

Finally, the UNOS system of committees, which includes a Pediatric Committee and a Thoracic Organ Committee, has and will continue to consider modifications of organ distribution with the possibility of modifying usual rules via specific requests for waivers based on clinical facts. In fact, each of us has been a member of each committee over a number of years and knows first-hand the diligence of this process. This system has historically been transparent with decisions, proposals and policies published in the public forum with invitation from any citizen for comment. The decision of the UNOS Board of Directors in June 2013 to allow such a waiver, while unusual, is a testimony to the willingness of this organization to consider the uncommon individual situations in
which the current rules might lead to disadvantage. As a general rule, we believe that government officials and politicians should be well informed about the OPTN but that the function of the OPTN should rarely, if ever, be manipulated or changed by the political process.

Overall, we hope that this case leads to significant increases in lung donation, improved access to lungs for children and reaffirmation of the transplant models of organ allocation policy development, in the US and elsewhere.

Disclosure statements: The authors have no conflicts of interest to disclose.

References:

Fontan-Associated Liver Disease: Reversible with Cardiac Transplantation, or “Past the Point of No Return”?

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Since the success of palliative procedures for complex single ventricle cardiac defects, there has been a shift in the need for heart transplantation as primary therapy for infants with single ventricles to the need for heart transplantation in adolescence or young adulthood for late heart failure and complications arising from the passive venous-to-pulmonary artery circulation of the Fontan procedure. While protein-losing enteropathy, systolic heart failure, and plastic bronchitis are well described complications of the Fontan procedure, there has been growing awareness of Fontan-associated liver disease. Many questions arise in terms of the impact of Fontan-associated liver disease on heart transplant mortality and the reversibility of the disease process after heart transplant.

The good news is that reports examining the current era of heart transplantation indicate improving outcomes for all recipients, including those with complex congenital heart disease [1]. Moreover, a history of Fontan procedure may not be associated with the same mortality risk in the current era of heart transplantation as in earlier eras [2]. Complete assessment of the transplant candidate with complex congenital heart disease in terms of mortality risk from the cardiac disease as well as from associated morbidities contributes to improved outcomes and has become a hot topic for pediatric and congenital heart disease specialists.

And so, along comes the patient with Fontan-associated liver disease. A 19-year-old with longstanding protein-losing enteropathy, ascites, muscle-wasting, lower extremity edema to above the knees, cutaneous angiomas, and hypoxemia secondary to pulmonary arterio-venous malformations presents for heart transplant evaluation. Other than the low albumin, laboratory studies do not show synthetic liver dysfunction. As part of the evaluation, you obtain a liver scan. You ask your hepatologist to perform a liver biopsy which is interpreted as “marked fibrosis”. What does this mean for your patient’s operative risk and potential for recovery? Should you recommend heart transplant, liver-heart transplant, or consider the patient too high risk for transplant?

The presence of liver fibrosis has been previously described in a substantial portion of Fontan patients at follow-up. The development of liver disease is thought to be multi-factorial, in part due
to the after effects of the Fontan procedure as well as years of passive venous congestion and volume overload [3]. Liver biopsy remains the gold standard for assessment of liver disease but, due to the risks of bleeding complications, noninvasive imaging is more feasible for serial monitoring. Unfortunately, the optimal mode of imaging is not clear in this patient population as the disease is different from other cirrhotic processes. Liver ultrasound with Doppler to assess for hepatofugal flow, computed tomography (CT), or magnetic resonance imaging (MRI) have been used to various degrees depending upon the institution. In general, there is an extended period of time after the Fontan in childhood when liver fibrosis develops and progresses without alterations in synthetic liver function [4,5]. Research in mainly rodent models has also suggested liver fibrosis may even be reversible to a point, but this has not been well studied in humans and the threshold of liver damage leading to overt liver dysfunction is unknown [6].

There is no consensus on whether the presence of severe liver disease requires combined heart-liver transplantation in Fontan patients. Hollander et al reported successful combined heart-liver transplantation in 3 single ventricle patients with severe liver fibrosis by imaging, including patients with relatively intact synthetic function, although the authors note the decision for combined transplantation was based on presumed increased risk with heart only transplantation [7]. Unfortunately, there are limited reports of post-transplant outcomes in Fontan patients with evidence of severe liver fibrosis who underwent heart transplant alone. In 2005 at St. Louis Children’s Hospital, liver imaging became a routine part of pre-transplant evaluation in Fontan patients. Of those with liver cirrhosis who undergo heart transplant, 1 year mortality has been similar to previously published outcomes in Fontan patients, and we have seen no significant difference between those with and without liver cirrhosis [8]. In the majority of patients with evidence of liver cirrhosis on CT scan, synthetic liver function appeared normal at transplant evaluation and no patients had liver dysfunction post-transplant.

Intuitively, in single ventricle patients with liver fibrosis without detectable synthetic liver dysfunction, correction of the abnormal physiology with heart transplantation may halt progression of liver dysfunction and even possibly allow for reversal of liver changes. In fact, there is at least one case report to date of complete regression of cardiac cirrhosis after heart transplantation in a patient with a 12-year history of heart failure from dilated cardiomyopathy [9]. Therefore, liver fibrosis and cirrhosis may not be a contraindication to heart transplant alone in those patients who have normal liver synthetic function despite abnormal liver imaging or even biopsy findings. Further studies are required to evaluate liver changes after transplantation in single ventricle patients to understand the degree of reversibility of fibrosis and long-term post-transplant outcomes.

The current practice at our centers is to proceed with heart transplant alone in most cases. Liver transplant is reserved for those patients who meet standard criteria for liver transplant. Namely, in other forms of liver disease, the presence of cirrhosis alone does not warrant organ transplantation so the mere presence of cirrhosis by biopsy or noninvasive imaging in the Fontan patient has not obligated combined heart-liver transplant. It is the complications of portal hypertension and synthetic dysfunction (i.e. variceal hemorrhage, encephalopathy, hepato-renal syndrome) or hepatocellular carcinomas that drive liver transplant consideration. In other words, if the function
of the liver is such that the patient is anticipated to survive heart transplant alone, then heart transplant alone is performed. Serial follow-up of the liver disease is imperative, however, as the development of hepatocellular carcinoma after heart transplant in the Fontan patient has been observed [10].

**Disclosure statement:** The authors have no conflicts of interest to disclose.

References:

A Review of New Oral Anticoagulants: Some ‘Factors’ to Consider

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An increasing number of patients are being treated with the novel oral anticoagulants (NOACs), in lieu of the vitamin K antagonist, warfarin, for a variety of indications. Although quite promising in some aspects (predictable effect without need for monitoring, fewer food and drug interactions, shorter plasma half-life, and improved efficacy/safety ratio), these drugs present a new set of challenges (no reversal agent, lack of evidence in patients with valves/devices, dependence on strict compliance with dosing), which require careful consideration in the already tenuous course of transplant and VAD patient populations.

Dabigatran (Pradaxa®), an oral direct thrombin inhibitor (DTI), was the first of its like to come to market. Approved in the U.S. for use in the prevention of stroke and systemic embolism in patients with non-valvular A fib, it is also approved for primary venous thromboembolism (VTE) prevention in patients undergoing elective total hip and knee replacements in Europe and Canada. Use is not recommended in patients with mechanical or bioprosthetic heart valves [1]. Dose adjustments must be made in patients with moderate renal impairment (CrCl 15-30 ml/min), and use should be avoided in renal failure (CrCl < 15 ml/min) [1-3]. Notable effects on dabigatran exposure are seen with concurrent therapy of inducers or inhibitors (i.e. cyclosporines) of the P-glycoprotein (P-gp) system, which may require dose adjustment or discontinuation [4] (see Table 1 for a summary of indications, dosing, and drug interactions).

Another special consideration with dabigatran is the significantly increased rate of gastrointestinal adverse reactions (bleeding and gastritis-like symptoms) compared to warfarin [1,4]. These GI effects present a significant concern in patients already at risk for GI bleeding due to pulsatile ventricular assist devices or chronic steroid use post transplantation. However, the lack of routine monitoring and first dose effectiveness make dabigatran a desirable option for anticoagulation in certain patient populations.

Two other oral anticoagulants have since emerged, the factor Xa inhibitors, Rivaroxaban (Xarelto®) and Apixaban (Eliquis®). Like dabigatran, the proposed advantages to these agents include the lack of routine monitoring and their first dose effectiveness, eliminating the need for bridging with injectable anticoagulants. In the United States, rivaroxaban carries an additional indication for use in the treatment of deep vein thrombosis, pulmonary embolism, and/or secondary prophylaxis of VTE. The bioavailability of rivaroxaban is significantly increased when taken with food, so it should be dosed with a meal [6]. Both Xa inhibitors are labeled with black box warnings for the increased risk of thrombotic events after discontinuation in the absence of
adequate alternative anticoagulation [6,7]. Since the anticoagulant effect fades rapidly 12 – 24 hours after the last intake, these agents may not provide adequate protection for patients with non-compliance to medication regimens [1, 5-7]. Avoidance or reduced dosing for both rivaroxaban and apixaban are recommended with co-administration of CYP3A4 and P-gp inducers and inhibitors [6,7]. Like dabigatran, no direct reversal agent is available.

Because there is no reversal for the anticoagulant effect of NOACs, yet also an increased risk of thrombosis if discontinued abruptly in the absence of alternative anticoagulation, careful consideration must be given to their use in the peri-operative and interventional setting. Table 2 highlights the recommendations for discontinuing these DTI and factor Xa inhibitors prior to surgery and other procedures. In emergent situations, anticoagulation assays may provide a qualitative assessment of the presence of dabigatran (aPTT) or factor Xa inhibitors (PT). In these cases, the time delay between last intake and blood sampling must be carefully considered. For instance, in patients treated with dabigatran, an aPTT exceeding two times the upper limit of normal at trough (12 – 24 hours after ingestion) may indicate a higher risk for bleeding [5]. At this time, however, there is insufficient data and no specific recommendations to guide the use and interpretation of these tests in DTI or Xa inhibitor therapy. Table 3 summarizes recommendations for the safe conversion of NOACs to or from warfarin.

In summary, we must be diligent as we evaluate new patients and plan surgical and other procedures to be aware of the potential use of NOACs. We must minimize the potential increased risk for both bleeding and thrombosis by ensuring the DTI or factor Xa inhibitors are properly dosed and discontinued around procedures. More data is needed to evaluate the safety and efficacy of using these agents in patients with mechanical valves and devices, as well. Given the relatively narrow patient population studied in clinical trials with these agents to date and the lack of predictable reversal or remedy in case of hemorrhage, we probably aren’t ready for NOACs to replace our old friend, warfarin, in the care of our patients implanted with LVADs just yet. We must continue to consider all the ‘factors’ when choosing anticoagulants for all our patients.
### Table 1

<table>
<thead>
<tr>
<th>Drug Name</th>
<th><strong>Dabigatran</strong> (Pradaxa®)</th>
<th><strong>Rivaroxaban</strong> (Xarelto®)</th>
<th><strong>Apixaban</strong> (Eliquis®)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drug Class</strong></td>
<td>Direct Thrombin Inhibitor</td>
<td>Factor Xa Inhibitor</td>
<td>Factor Xa Inhibitor</td>
</tr>
<tr>
<td><strong>Prophylaxis of stroke and systemic embolism in non-valvular Atrial Fib</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Labeling:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 150 mg BID</td>
<td>• 20 mg daily (with food)</td>
<td>• 5 mg BID</td>
<td></td>
</tr>
<tr>
<td>• CrCl 30–50 ml/min or with dronedarone/ ketoconazole: 75 mg BID</td>
<td>• CrCl 15–50 ml/min: 15 mg daily</td>
<td>• With any 2/3 of the following: age ≥80 weight ≤60kg serum Cr ≥1.5: 2.5 mg BID</td>
<td></td>
</tr>
<tr>
<td>• CrCl 15–30 ml/min: 75 g BID</td>
<td>• CrCl &lt;15 ml/min: not recommended</td>
<td>• With azoles, erythromycins, or strong dual inhibitors of CYP3A4/P-gp: 2.5 mg BID</td>
<td></td>
</tr>
<tr>
<td>• CrCl &lt;15 ml/min: not recommended</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian Labeling:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• CrCl &gt;30 ml/min and age &lt; 75:</td>
<td>• 15 mg BID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 150 mg BID</td>
<td>• Age &gt; 80: 110 mg BID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Age &gt; 80: 110 mg BID</td>
<td>• CrCl &lt; 30: not recommended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• CrCl &lt; 30: not recommended</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment of DVT, PE, and to decrease risk for recurrent VTE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not currently approved</td>
<td>• 15 mg BID x 3 weeks followed by 20 mg daily (with food)</td>
<td>Not currently approved</td>
<td></td>
</tr>
<tr>
<td><strong>Peak Effect</strong></td>
<td>1 hour (delayed 2 hours by food)</td>
<td>2 – 4 hours</td>
<td>3-4 hours</td>
</tr>
<tr>
<td><strong>Half-life (t1/2)</strong></td>
<td>12-17 hours</td>
<td>5-9 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td>Elderly: 14-17 hours</td>
<td>Elderly: 11-13 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild/mod renal impairment: 15-18 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe renal impairment: 28 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Drug Interactions/ Metabolism</strong></td>
<td>P-glycoproteins</td>
<td>CYP3A4, CYP3A5, CYP2J2</td>
<td>CYP3A4 and P-glycoproteins</td>
</tr>
</tbody>
</table>
**Table 2 – Discontinuation interval prior to invasive procedures**

<table>
<thead>
<tr>
<th></th>
<th>Dabigatran</th>
<th>Rivaroxaban</th>
<th>Apixaban</th>
</tr>
</thead>
<tbody>
<tr>
<td>CrCl &gt; 50 ml/min: 24 to 48 hours</td>
<td>24 hours</td>
<td>24 hours for low-bleeding risk procedure or where bleeding would be non-critical and easily controlled</td>
<td>48 hours if high-bleeding risk procedure</td>
</tr>
</tbody>
</table>
| CrCl < 50 ml/min: 72 to 120 hours (3 - 5 days)

*Consider longer interval for patients undergoing major surgery, spinal puncture, epidural placement, or if complete hemostasis may be required.*

**Table 3 – Converting to/from warfarin**

<table>
<thead>
<tr>
<th></th>
<th>Dabigatran</th>
<th>Rivaroxaban</th>
<th>Apixaban</th>
</tr>
</thead>
</table>
| Warfarin to new agent | • Stop warfarin  
  • Once INR <2 begin Dabigatran | • Stop warfarin  
  • Once INR <3 begin rivaroxaban | • Stop warfarin  
  • Once INR <2 begin apixaban |
| New agent to Warfarin | • CrCl>50 ml/min, start warfarin 3 days before stopping dabigatran 
  • CrCl 30-50ml/min, start warfarin 2 days before stopping dabigatran 
  • CrCl 15-30ml/min, start warfarin 1 day before stopping dabigatran 
  • CrCl ≤15ml/min, no recommendations can be made | • Stop rivaroxaban 
  • Begin both a parenteral anticoagulant and warfarin at the time the next dose of rivaroxaban would have been due 
  • Stop parenteral anticoagulant when INR is acceptable | • Stop apixaban 
  • Begin both a parenteral anticoagulant and warfarin at the time the next dose of apixaban would have been due 
  • Stop parenteral anticoagulant when INR is acceptable |

Disclosure statement: the author has no conflicts of interest to disclose.

References:


Vaccines: the First Line of Infection Prophylaxis

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Vaccine administration is one of the most effective ways of preventing diseases, specifically influenza, herpes zoster, pneumococcal disease, and others. This disease prevention is especially important in the transplant patient population. Vaccines are considered later and it can be difficult to keep up to date with recommendations that appear to be constantly in flux, especially since there is a lack of international consensus from varying bodies of government. In the United States, the Centers for Disease Control (CDC) provide recommendations for vaccinations used in a variety of patient populations. Additionally, the European Centre for Disease Prevention and Control (ECDC) can serve as a valuable resource for information on timing of various immunizations, with country-specific recommendations (National Immunisation schedules in the EU/EEA countries). Another resource available to providers is the Australian Immunisation Handbook, which was last updated in 2013 and contains section pertinent to solid-organ transplant recipients.

In examining the CDC immunization schedule, it can be difficult to follow and recommendations change regularly [1]. For example, one of the newest recommendations is that all immunocompromised patients are eligible for the pneumococcal vaccine PCV13 (Prevnar 13®) in addition to the current pneumococcal vaccine recommendation PPSV23 (Pneumovax ®). The conjugate vaccine, Prevnar 13®, is now recommended due to increased immunogenicity over the polysaccharide vaccine, Pneumovax®, eliciting a greater immune response [2]. Per the recommendation, Prevnar 13® should be given 8 weeks prior or 1 year after Pneumovax® [1]. Various combinations and timing of these two pneumococcal vaccines are recommended for immunocompromised patients depending on international recommendations.

The herpes zoster vaccine (Zostavax®) is another example of a complex recommendation for transplant patients. In the United States, it is FDA approved for patients aged 50 and older, the CDC recommends Zostavax® only for patients aged 60 and older [1,3]. The vaccine should not be given after a transplant because it is a live vaccine. In non-transplant patients, providers should follow the FDA indication and receive Zostavax® if they are between 50 and 60 years-old. This age group can pose a problem with insurance reimbursement due to the CDC age recommendation.

Vaccine schedule complexities can easily lead to confusion on both the part of the patient and the practitioner. In an effort to condense the recommendations into a useable format, below is a checklist for adults prior to or after heart and lung transplantation in the United States. Each country has their unique national recommendations and the checklist can be altered to suit.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Eligibility</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Patient Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Influenza vaccine</td>
<td>All patients</td>
</tr>
<tr>
<td></td>
<td>(1 dose per year)</td>
</tr>
<tr>
<td>☐ Pneumococcal (Pneumovax&lt;sup&gt;®&lt;/sup&gt;)</td>
<td>All patients</td>
</tr>
<tr>
<td></td>
<td>(1 dose plus a second dose if &gt;65 years-old and 5 years since last dose)</td>
</tr>
<tr>
<td>☐ Pneumococcal (Prevnar 13&lt;sup&gt;®&lt;/sup&gt;)</td>
<td>Any patient</td>
</tr>
<tr>
<td></td>
<td>☐ Post transplant</td>
</tr>
<tr>
<td></td>
<td>☐ Asplenic patients</td>
</tr>
<tr>
<td></td>
<td>(1 dose 8 weeks before or 1 year after Pneumovax&lt;sup&gt;®&lt;/sup&gt;)</td>
</tr>
<tr>
<td>☐ Tetanus</td>
<td>All patients</td>
</tr>
<tr>
<td></td>
<td>(1 dose of Tdap then Td booster every 10 years)</td>
</tr>
<tr>
<td>☐ Zoster (Zostavax&lt;sup&gt;®&lt;/sup&gt;)/varicella (Varivax&lt;sup&gt;®&lt;/sup&gt;)</td>
<td>Any pre-transplant patient</td>
</tr>
<tr>
<td></td>
<td>☐ &gt;50 years-old</td>
</tr>
<tr>
<td></td>
<td>(1 dose of Zostavax&lt;sup&gt;®&lt;/sup&gt;)</td>
</tr>
<tr>
<td></td>
<td>☐ &lt;50 years-old and no evidence of immunity</td>
</tr>
<tr>
<td></td>
<td>(2 doses series of Varivax&lt;sup&gt;®&lt;/sup&gt;)</td>
</tr>
<tr>
<td></td>
<td><strong>Not for patients on immunosuppression</strong></td>
</tr>
<tr>
<td>☐ Hepatitis B</td>
<td>Any patient</td>
</tr>
<tr>
<td></td>
<td>☐ &lt;60 years-old with diabetes</td>
</tr>
<tr>
<td></td>
<td>☐ Dialysis-dependent</td>
</tr>
<tr>
<td></td>
<td>(3 dose series)</td>
</tr>
<tr>
<td>☐ HPV (Gardasil&lt;sup&gt;®&lt;/sup&gt;)</td>
<td>Any patient</td>
</tr>
<tr>
<td></td>
<td>☐ &lt;27 years-old</td>
</tr>
<tr>
<td></td>
<td>(3 dose series)</td>
</tr>
<tr>
<td>☐ Meningococcal</td>
<td>Any patient</td>
</tr>
<tr>
<td></td>
<td>☐ Asplenic</td>
</tr>
<tr>
<td></td>
<td>(1 dose every 5 years)</td>
</tr>
<tr>
<td>☐ Haemophilus influenza (Hib)</td>
<td>Any patient</td>
</tr>
<tr>
<td></td>
<td>☐ Asplenic</td>
</tr>
<tr>
<td></td>
<td>(1 dose per lifetime)</td>
</tr>
</tbody>
</table>

Please note that these recommendations are for adults with disease states commonly seen with heart/lung transplant candidates and recipients. If the patient is <19 years-old or has other diseases, such as chronic liver disease, other vaccine recommendations apply [1]. Also, it is important to verify with your national immunization schedules for eligibility, dosing, and timing especially regarding hepatitis B, herpes zoster, poliomyelitis, and pneumococcal vaccine recommendations.

Ideally, these recommended vaccines should be administered prior to a transplant for several reasons:

1. Live vaccines, like the shingles vaccine, are not indicated for significantly immunocompromised hosts and should be given before a transplant [3];
2. Vaccines are generally less immunogenic in the post-transplant population therefore vaccines may be more efficacious if given prior to transplantation [4];
3. Transplant recipients are more susceptible to diseases than the general population, so they should always strive to obtain vaccines at their earliest convenience [5];

For these reasons, the pre-transplant evaluation may be the best time to evaluate vaccination status for each patient [6]. Afterward, vaccination history can be assessed on a yearly basis to maintain the recommended prophylaxis.

Whether to recommend a vaccine before or after transplant can be difficult with a patient who you expect will be transplanted soon. If you suspect a transplant within a month, the zoster and varicella vaccines should not be recommended because they are live vaccines that are not indicated for immunocompromised hosts [1,6]. As a last resort, if the vaccine is given prior to transplant, the product varicella zoster immune globulin (Varizig®) can be given for vaccine reversal, though it is not FDA-indicated or studied for this purpose [7]. Caution should be taken with other live vaccines, such as the tuberculosis vaccine (BCG) and MMR before and after transplantation.

With all vaccines, it takes at least 3-4 weeks with an intact immune system to fully benefit from vaccination, so it is not efficacious to vaccinate immediately before or after a transplant, especially when using t-cell depleting induction agents like thymoglobin or alemtuzumab.

In an era where transplant patients are living longer, immunization remains an important aspect of chronic health management that should be assessed. Developing a clear plan with both the pre- and post-transplant patient can help prevent communicable diseases and improve quality of life post-transplant. While navigating the maze of immunization can be difficult, development of an institutional protocol based on national recommendations can help ensure patients get the vaccinations that are needed.

Disclosure statement: The author has no conflicts of interest to disclose.

References:

Once Upon A Time

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Once upon a time there was a person who had a bad heart (or lungs). He was very poorly until a nice doctor came along and said she could make him better by taking out his old heart and plumbing in a new one. The operation took place, there were no complications and the person went back to living a normal life and lived happily ever after.

Of course this is a fairy tale, but I’m sure we would all want this for our patients. A full return to “normal” life should be the Holy Grail for our transplant teams, but sadly, even if we can get individuals back to normality from a physical perspective, there remains the issue of the immunosuppression.

We are all familiar with how immunosuppression works to preserve a transplanted organ and how that makes individuals more prone to certain infections, but how to we balance the positive with the negative when it comes to making lifestyle choices?

It is well known that T cell suppression makes you more prone to infections from environmental organisms such as *Legionella* and *Aspergillus* spp, but it can also make you more likely to become infected with some of the Zoonoses such as *Brucella* and *Bartonella* spp.

When I gave a short talk about this at the meeting in Montreal it was clear that no two transplant centres gave the same advice. So not to cause controversy (very difficult for me, I realise) I will just give my personal opinion, but maybe it’s time for another ISHLT Monograph?

**WORK**

If a transplant recipient goes back to work, it can only be a good thing. In the UK, where healthcare is free, going back to work and paying taxes is beneficial to the health of the national economy.

Are there any professions which represent a completely unacceptable risk? There must be some, but I haven’t found any yet. If someone wants to go back to farming, they can, so long as they are careful about hand hygiene and are risk averse. The biggest risk is poorly ventilated barns full of animals and dusty straw or Silage. Silage is partially rotted hay which is used widely as feed for over wintering livestock in Europe. It is full of aspergillus spores. The transplant recipient has to make sure that the barn is well ventilated before they enter, or get someone else to do this work for them. There is the possibility of portable ventilation helmets (see below).
Nursing and medicine are also acceptable now that everyone has to wash their hands properly and frequently for Infection Control purposes. Lung recipients will need to take extra care when caring for patients with cystic fibrosis colonised with resistant organisms. One of our recipients wanted to be a Microbiology technician. This was no problem as they are so well trained in terms of safety and even immunocompetant individuals are protected from aerosols by safety cabinets.

**TRAVEL AND RECREATION**

A recipient who has been ill all their life (or a very long time) will be keen to visit all those places that they were too poorly to visit before. Most transplant centres provide handbooks about immunisations and water safety. Live vaccines are prohibited which makes travel to or through countries with Yellow Fever impossible.

Canoeing in slow moving water may put folk at risk from Leptospirosis and potholing in bat infested caves would not be safe owing to the risk from fungal infections.

Transplant recipients are more susceptible to food poisoning, so those lovely buffets with luke warm, undercooked dishes may have to be given a miss.

There is not much in the transplant literature about sexually transmitted infection, but it must happen. Logic would suggest that that gonorrhoea and chlamydia are more likely to disseminate in the immunocompromised.

**PETS**

Never in my career have I advised a potential transplant recipient that they will have to give up their pets. It’s back to good hand hygiene again. Mouth to mouth resuscitation (or French kissing) another mammal may risk colonisation with Capnocytophagia which may cause an overwhelming infection, but it is so rare that it is not worth obsessing about. Animal bites are a completely different issue requiring urgent medical attention, prophylactic antibiotics plus tetanus (+/- rabies) shots.

In the UK some folk like to keep pigeons in dusty lofts. They really become attached to them. This is where the portable exhaust ventilation helmets come in useful.

**HAPPLY EVER AFTER**

We want our transplant patients to return to normal life as quickly as possible. Everything we do in life carries a potential risk. The risk of acquiring an infection may be greater in our patients but in the end it comes down to good old fashioned “common sense,” something you have either got, or you haven’t. If you lack common sense, no rules or protocols are ever going to keep you safe!

Disclosure statement: The author has no conflicts of interest to disclose.
NEWS & ANNOUNCEMENTS:

2014 ISHLT SAN DIEGO

The 34th Annual Meeting & Scientific Sessions will be held April 10-13, 2014 at the Manchester Grand Hyatt San Diego. Please note that the main meeting begins on Thursday, April 10, one day later than usual, and concludes at mid-day on Sunday, April 13. Please note this change of dates and makes plans accordingly. There will be three ISHLT Academies held on Wednesday, April 9th: Core Competencies in Basic and Translational Science, Core Competencies in Heart Failure and Cardiac Transplantation, and Core Competencies in Nursing, Health Science, and Allied Health.

Also, on Monday and Tuesday, April 7-8, ISHLT will conduct two Academies related to MCS: Core Competencies in Mechanical Circulatory Support and a Master's Course in Mechanical Circulatory Support. These will be held at the Loews San Diego Bay Resort in Coronado, California. Those wishing to attend either of the MCS Academies must make hotel reservations at the Loews for those 2/3 nights as rooms for this are not available at the Annual Meeting HQ hotel.

Registration and housing for the Annual Meeting and the Academies will be available on October 1, 2013. Check the ISHLT web site for details.

The Abstract Submission Site will be live on September 9, 2013 at www.ishlt.org. Abstract Submission deadline is November 15, 2013 at 11:59 PM EST.

International Traveling Scholarship Awards
Next application deadline: December 1st, 2013

The ISHLT Travelling Scholarship Awards were established to facilitate the exchange of knowledge and techniques regarding heart and lung transplantation and the treatment of end stage heart and lung failure and to build relationships between individuals, institutions, and countries. The Scholarships may be used to learn new techniques in the clinic, operating room, or laboratory or just to experience first-hand how others deal with challenging problems. These awards are open to any member of the Society, in any country. They represent a unique opportunity for garnering fresh ideas and collaborative work across the globe.

The ISHLT funds a minimum of ten scholarships per year. Each award will be in an amount of up to $6,000. ALL members of the Society are eligible to apply for a Scholarship. Applications for the next round close on August 1st.

INTERNATIONAL TRAVELING SCHOLARSHIP APPLICATION & INFORMATION:
http://www.ishlt.org/awards/awardIntlTravelScholar.asp

PAST INTERNATIONAL TRAVELING SCHOLARSHIP RECIPIENTS:
http://www.ishlt.org/awards/awardIntlTravelScholarPast.asp

ICAAC 2013
September 10-13, 2013, Denver, Colorado, USA
ICAAC, the premier conference on antimicrobial agents and infectious diseases, showcases the latest-breaking science and lectures from top researchers from around the world. With over 60% of its attendees living outside of the United States, ICAAC provides a rare opportunity to bring together the field's foremost leaders to discuss the state of infection control and prevention on a global scale. Can't attend ICAAC 2013? Register today for online access to 126 sessions from the leading infectious diseases and antimicrobial agents conference in the world, ICAAC 2013. New this year! ICAAC 2013 now offers a track dedicated to transplantation infectious diseases. With ICAAC Online you can watch this year's presentations discussing solid organ transplantation, hematopoietic stem cell transplantation, donor-derived infections, immunosuppression-related infections, and more. Earn AMA PRA Category 1 Credits™, view 1,800 conference abstracts, and tour the Digital Poster Hall. Visit http://www.icaaconline.com for more information.

WORD OF THE MONTH:

"incessant"

**adjective:** continuing without interruption; ceaseless; unending.

The privative prefix *in-*, meaning not, combines with the Latin root *cessare* which means to stop or cease, giving us the word incessant. Synonyms include interminable, relentless, and unremitting. Antonyms include occasional, irregular, intermittent, sporadic, and erratic.

Incessant, continuous and continual are close synonyms. Distinguishing continuous and continual from incessant is a sign of a careful user of the language. Continuous means unbroken and is passive. Incessant means unceasing and is active. Railroad tracks and highways are continuous. Background music in elevators and malls is continuous for those who don't mind it and is incessant for those who become irritated by it and ends up constant and never-ending. Continual means happening repeatedly at short intervals. There are continual e-mail reminders about the article you need to review. Also there is the continual ring tone of your smartphone until you answer it. On the other hand, there is the continuous rotation of the earth, which might quite actively be incessant, we hope.

LAUGHING LINKS: You Just Gotta Laugh

by LeAnn Thieman

Statistics show that little kids laugh 400 times a day. One study showed that grownups laugh only eleven, and yet another said only four...and we've all had shifts when we couldn't even meet that quota! Proverbs tells us, "Laughter is good medicine, but a broken spirit dries the bones." Now there is medical evidence to corroborate that theory. Volumes are written today on the therapeutic benefits of laughter. Read more →
OUTTA THIS WORLD LINKS
Interesting, Inspiring and Intriguing Links from Around the Globe

FROM THE UNITED KINGDOM:

Heart Disease: How Music (And Exercise) Can Help
Huffpost Lifestyle, Aug 2013
Listening to your favourite music is beneficial if you suffer from heart disease, a study suggests. Music and exercise training combined produced the most benefit, according to research presented at the European Society of Cardiology Congress 2013 in Amsterdam. A total of 74 patients with cardiac disease were divided into three groups. Patients in two of the groups underwent three weeks of supervised aerobic exercise training at a residential centre. In addition to exercise training, patients in one of the above groups listened to their favourite music for 30 minutes every day. The third group of patients did not exercise and received usual community care and listened to their favourite music for 30 minutes every day. Read full article →

Golden guy Bill feels on top of the world
Manchester Evening News, 25 Aug 2013
A former policeman whose life was saved by a heart transplant has triumphed once again at an international sports event. Bill Noble, 66, won five gold medals and set three new world records at this summer's World Transplant Games in Durban, South Africa. The event is held every two years at a different country and brings together competitors from around the world who have been given a second chance by organ donors. Read full article →

FROM SOUTH AFRICA:

Save 7 lives
health24.com, 22 Aug 2013
Every year fewer transplants are performed in South Africa - while the demand for organs is getting bigger every day. According to the Organ Donor Foundation there are currently 4,300 South African children, teens and adults on the waiting list for lifesaving organ transplants. In 2012, a total of 573 organ and tissue transplants took place in South Africa. Read full article →

FROM THE UNITED STATES:

PARENTS: LUNG TRANSPLANT GIRL FACES REHAB, SCHOOL
AP, 27 Aug 2013
A Pennsylvania girl whose need for new lungs sparked a national debate on how transplant recipients are prioritized returned home to her family Tuesday after six months in the hospital. Sarah Murnaghan, who turned 11 this month, left The Children's Hospital of Philadelphia and was carried into her family's Newtown Square home, which was festooned with balloons and signs that
welcomed her home and thanked the donors whose lungs she received after her parents sued to change national transplant policy. Read full article →

Erik Compton, PGA golfer who has received two heart transplants, spreads the word on organ donation
New Jersey nj.com, 20 Aug 2013
In March, his career arc was a glorious sweep with no end in sight—fourth place at the Honda Classic, 16th place at the Arnold Palmer Invitational, another top-25 in Puerto Rico. The big money was coming in, his rankings were climbing, and suddenly Erik Compton was more than just an athletic anomaly. He was literally constructing a path from anomaly to miracle. "And then," he recalled Monday, "I caught a cold." Read full article →

Meet a Man with 'Three Big Hearts'
The Moderate Voice, 26 Aug 2013
Many heart transplant patients feel stressed and overwhelmed both before and after the heart transplant and need emotional support. There are several organizations and support groups that do exactly that. They support heart transplant candidates, recipients and their families emotionally, morally, "educationally" and financially. Wouldn't it be perfect if the persons leading such organizations had experienced the travails and the blessings of a heart transplant themselves? How about two heart transplants? Or two heart transplants and a kidney transplant! Richard (Dick) Harbourt, Chairman of the "Second Chance Heart Transplant Support Group" ("Second Chance" for short) is just such a person. Read full article →

FROM BRAZIL:

Ads Ask Brazilian Soccer Fans to Show Their Guts ... and Donate Them, Too
ABC News, 19 Aug 2013
Getting folks to become organ donors can be a hard job sometimes. Some people aren't comfortable contemplating their own deaths, much less having vital parts scissored out of their bodies and given over to strangers after entering the big sleep. But an ad campaign in Brazil is giving people a bizarre incentive to help out: It is asking thousands of soccer fans to become donors so that when they die, their organs can continue to "vibrate" with the exploits of their team. Read full article →

FROM IRELAND:

Organ transplant 'is now in crisis' here
Donegal Democrat, Aug 2013
On the 21st anniversary of his pioneering lung transplant, Brendan McLaughlin says the current system for organ donations and transplants is not working. The views of Ireland's longest surviving lung transplant patient would seem to be especially timely. Yesterday, the Sunday Business Post reported that the Seanad will be recalled from its summer recess tomorrow specifically to discuss the issue of organ donations. Read full article →
TATTLING LINKS
ISHLT Members in the News

Alanna A Morris, MD
Emory University
Atlanta, Georgia, USA

Post-Transplant Immune Response May Hurt Blacks
Medpage Today, 28 Aug 2013
Multiple factors account for why African Americans have poorer survival after heart transplant—and immunological differences may play a role, a large study suggested. Compared with white, Hispanic, and Asian transplant recipients, blacks had higher peak panel reactive antibody (PRA) values, giving them a greater likelihood of rejection, according to Alanna A. Morris, MD, of Emory University School of Medicine in Atlanta, and colleagues. Nearly one-third of blacks (31%) experienced graft failure compared with 27% of Hispanics, 26% of whites, and 21% of Asians (P<0.001), they reported in the study published online in the Journal of the American College of Cardiology. Read full article →

Samuel S Gidding, MD and Christian Pizarro, MD
Nemours/Alfred duPont Hospital for Children
Wilmington, Delaware, USA

Nation's Second Accredited Pediatric Heart Failure Institute is Nemours/Alfred I. duPont Hospital for Children of Wilmington, DE
The Sacramento Bee, 27 Aug 2013
The Healthcare Accreditation Colloquium announced today that Nemours/Alfred I. duPont Hospital for Children, Wilmington, DE became the second Accredited Pediatric Heart Failure Institute in the nation following an in-depth onsite review. "We pursued accreditation with the Colloquium as a way to independently assess the quality of our heart failure and related clinical programs," said Sam Gidding, MD, Division Chief of Pediatric Cardiology. "The accreditation process both validated our sense of the quality of our program and gave us many new suggestions to improve our program. We anticipate working with other Colloquium pediatric centers to better standardize and improve pediatric heart failure care across the United States." ... "We had the sense we were making great progress in pediatric heart failure including advanced care with ventricular assist devices and heart transplant," said Christian Pizarro, MD, Chief of Pediatric Cardiothoracic Surgery and Director of the Nemours Cardiac Center. "The Colloquium's approach to collaborative learning will help everyone organize and implement existing knowledge more effectively and quickly than in the past." Read full article →

Rajat Walia, MD
St. Joseph’s Hospital
Phoenix, Arizona, USA
Prescott woman embraces life after double lung transplant, heart surgery
The Daily Courier, 25 Aug 2013
Margaret Duke said she quit a 30-year smoking habit about eight years ago, but it still took a toll on her. Duke, 55, said doctors diagnosed her with chronic obstructive pulmonary disease five years ago. COPD includes chronic bronchitis and emphysema. She is now leading a healthy life after undergoing emergency open-heart surgery April 8 and a double lung transplant May 8, both at St. Joseph's Hospital and Medical Center in Phoenix.... Lung-transplant surgeries typically take about six hours, but doctors finished Duke's procedure within five hours, said Rajat Walia, M.D., a leading pulmonologist and medical director of the lung-transplant program at St. Joseph's. "We expected it to be a difficult surgery because of her heart surgery, but it turned out fine," Walia said. Read full article

A Michael Borkon, MD
Mid American Heart & Lung/St. Luke's
Kansas City, Missouri, USA

Saint Luke's Mid America Heart Institute Performs 600th Heart Transplant
Kansas City InfoZine, 24 Aug 2013
Saint Luke's heart transplant program has performed its 600th heart transplant. Only 21 programs in the U.S. have performed more adult heart transplants.... "Our heart transplant team is very proud of this milestone," said Michael Borkon, M.D., surgical director of cardiac transplantation at Saint Luke's and co-executive medical director at Saint Luke's Mid America Heart Institute. "We have come a long way over the past 28 years and have assembled an exceptional team of dedicated and experienced heart failure, critical care, and transplant professionals which represents the very best of what Saint Luke's is all about." Read full article

Nirav Y Raval, MD
Piedmont Heart Institute
Atlanta, Georgia, USA

Listening to warning signs helped save woman's life
Neighbor Newspapers.com, 24 Aug 2013
When Lawrenceville resident Denise Widzgowski found she had trouble catching her breath after walking up a flight of stairs, she knew something was wrong. Immediately, she consulted with her doctor and test results revealed she had a weakening heart that would leave her in need of a heart transplant at Piedmont Atlanta Hospital in Buckhead just months after she was diagnosed with idiopathic cardiomyopathy. "When Dr. Porkert referred Denise to the heart transplant program here at Piedmont, we knew that the medications simply weren't doing what they needed to for her," said Nirav Raval, M.D., Piedmont Heart. "It was clear Denise needed a heart transplant and so, we started the evaluation process to see if she was eligible." Read full article

Andrew J Savage, IV, MD
Medical University of South Carolina
Charleston, South Carolina, USA

Spartanburg newborn perseveres against difficult odds
Go Upstate.com, 23 Aug 2013
Lily Bennett was born in an operating room on Jan. 28, 2013. She weighed six pounds, two ounces, with blonde hair, blue eyes, 10 fingers and 10 toes. But there was one major problem—a problem that would lead to months of uncertainty and fear—she was born with a congenital heart defect.... Lily had a deformation with a pulmonary valve and doctors placed her chance of survival at 10 percent. Over the next six months, Tara and Ryan would shed many tears and say many prayers. Their little girl turned out to be a fighter. A miracle, even. "I would definitely classify her as a miracle," said Dr. Andrew Savage, Medical Director of Heart Failure and Transplant at the Medical University of South Carolina. Read full article →

Leway Chen, MD, MPH
University of Rochester
New York, USA

Heart transplants add value, offer longer lease on life
Rochester Business Journal, 16 Aug 2013
Beth Coughlin started to notice odd sensations—racing and pounding feelings in her heart—when she was in her 30s. An elementary school teacher at a Webster parochial school, she blamed it on job-related stress initially. But over time the feelings started to occur when she was not particularly stressed, and they got worse. Coughlin saw a doctor.... He referred her to Leway Chen M.D., a cardiologist at the University of Rochester Medical Center who founded URMC's Program in Heart Failure and Transplantation in 2001 and has served as its director since then. Read full article →

Frank Downey, MD
Aurora St. Luke's Medical Center
Milwaukee, Wisconsin, USA

Aurora St. Luke's performs 800th heart transplant
Journal Sentinel, 23 Aug 2013
Aurora St. Luke's Medical Center has performed its 800th heart transplant, a milestone exceeded by only 14 of the 330 medical centers in the country with heart transplant programs. Heart transplants—once the medical equivalent of putting a man on the moon—now have become a common procedure: Aurora St. Luke's did 39 heart transplants last year and 52 in 2011. "It's to the point where you are expected to survive," said Frank Downey, a heart surgeon and surgical director of the cardiac transplant program. Aurora St. Luke's and other programs could perform more heart transplants if more donor organs were available. "We have the patients waiting," Downey said. "It's all about the organ donors." Read full article →

John C Mullen, MD, FRCSC
University of Alberta Hospital
Edmonton, CANADA
Edmonton woman undergoes rare life-changing transplant, with help from mother and sister
Global News, 21 Aug 2013
An Edmonton woman has been given a new lease on life thanks to two family members and a procedure so rare that it's only been performed eight times in the last 12 years in Canada, each time at the University of Alberta hospital.... Human lungs have five lobes—three on the right and two on the left. Because Lorna is so small, doctors felt two people donating one lobe each would be enough. So her mother and sister stepped up. "I was a little reluctant at first because of the sister having four young children. Because literally she's putting her life on the line," said cardiothoracic surgeon Dr. John Mullen. "There was a one per cent chance that she could have died with an operation like this, and even a one per cent chance is a big thing when a person has four young children." Read full article →

Timmy Au, MD
Queen Mary Hospital
HONG KONG

Relief as transplant gives heart boy a new life
The Standard, 22 Aug 2013
A 14-year-old boy has won a new lease of life after a successful heart transplant at Queen Mary Hospital yesterday.... Before the transplant, Kelvin was fitted with a mechanical heart, but doctors said it would buy him only limited time. The Berlin heart ventricular assist device—an external blood-pumping machine—was fitted in July. It costs close to HK$2 million, and was the only one in the SAR. It works for only about a year. Lai said the doctor in charge of the transplant, chief of cardiothoracic care Timmy Au Wing-kuk, told him that Kelvin's transplant was very successful. Read full article →

G Alec Patterson, MD
Washington University in St Louis
St. Louis, Missouri, USA

First adult liver-double lung transplant patient celebrates milestone
Barnes Jewish Hospital Blog, 20 Aug 2013
William Drabant II recently celebrated a major milestone with members of his care team. In August 2012, he became the first adult to receive a liver-double lung transplant at the Washington University and Barnes-Jewish Transplant Center.... G. Alexander Patterson, MD, Washington University chief of cardiothoracic surgery, performed the lung transplantation portion of the procedure. Read full article →

Christof Schmid, MD
Klinikum der Universität
Regensburg, GERMANY
'Not many heart donors, globally'
Deccan Chronicle, 18 Aug 2013
He has so far conducted 300 heart transplantations and has implanted left ventricular assist devices (artificial hearts) in 400 patients and also done extracorporeal membrane oxygenation in over 800 patients - the three advanced and most complex procedures in heart care today. But an unassuming Prof Dr Christof Schmid, director of Klinikum der Universitat, one of the largest hospital complexes in Germany, who is in Kochi to attend the annual conference of the Society for Heart Failure and Transplantation, stresses that he is out to spread an important message: the message of organ donation. Read full article →

Robert S D Higgins, MD, MSHA and Bryan A Whitson, MD
Ohio State University Wexner Medical Center
Columbus, Ohio, USA

Ohio State University Wexner Medical Center Re-Starts Lung Transplant Program
10TV.com, 16 Aug 2013
Doctors at the Ohio State University Wexner Medical Center performed their first lung transplant in four years. OSU transplant surgeons Dr. Robert Higgins and Dr. Brian Whitson stopped by to see Rebecca Cason on Friday. Cason is the first patient at OSU to get a new set of lungs since the medical center re-started its lung transplant program earlier this year.... The surgery took four hours, and Dr. Higgins says Rebecca did well. Read full article →

Holger W Buchholz, MD
Stollery Children's Hospital
Edmonton, Alberta, CANADA

Canadian girl makes history with heart device
Ottawa Citizen, 2 Aug 2013
One year ago, a five-year-old Muskaan Grewal couldn't take a few steps without becoming exhausted. She was so weak, the little girl's parents would often carry her, even for short distances such as from the car to the house. But after visiting the Stollery Children's Hospital in Edmonton, Muskaan's life drastically changed.... Dr. Holger Buchholz, director of the pediatric artificial heart program, said the artificial pump was the best way to give Muskaan a normal life while she waited. Read full article →

Jamil G Bashir, MD
St. Paul's Hospital
Vancouver, British Columbia, CANADA

Heart pumps work as 'bridge to transplant'
Vancouver Sun, 1 Aug 2013
To support a failing heart, there are two general types of ventricular assist devices, long-term and short-term. Two cardiac surgeons—along with four other cardiologists—at St. Paul's Hospital perform all implantations of long-term devices in the province, under the B.C. Acute Heart Failure
Program. The devices, which are "essentially mechanical heart pumps," can be used in patients with advanced heart failure, whether from a congenital defect in children or from an infection, heart disease or artery blockages in older people. "The problem is that if someone gets sick we can't just pull a heart off the shelf and give it to them," said cardiac surgeon Dr. Jamil Bashir, who estimates about 100 VAD surgeries are done a year at 10 centres in Canada. Read full article →
EDITOR’S CORNER: English, Communication and Confusion

Vincent Valentine, MD
Links Editor-in-Chief

When examining our performances as healthcare providers we follow the premise that there is little success without failure. We don’t intentionally fail, but we do make mistakes. When there is a problem or a consequence we must act and doing nothing at times may be a prudent part of the act. We improve ourselves through morbidity and mortality conferences and with quality assessment and performance improvement plans. We also heed the advice of our great American and Communicator, Benjamin Franklin, “an ounce of prevention is worth a pound a cure.” When we learn to write we make mistakes with our pencils. To correct these mistakes in the United States we use an eraser. In England they use a rubber. However, in the U.S. some of us use a rubber to prevent our mistakes.

When examining the various Englishes across the globe, one begins to wonder whether it’s worth it. What’s the point? It’s the same language. Given that communication may be the single most common problem that leads to any confrontation that has ever existed between individuals or peoples, and if the two contenders or groups or individuals speak the same English, one would think communication should be less of a problem and perhaps less confusion. Far from the truth, don’t you think? There is inter- and intra-regional variation, differing dialects and slangs that are very likely going to add to the confusion. To get to the meat of the matter, if you will, the following comparisons show some of the common differences in American English and British English. There is elevator for lift, apartment for flat, cash point for ATM, petrol for gas, take out for take away, wrench for spanner, and rookie for newcomer. I refer you to the internet for more: Englishclub.com and fionalake.com.au.

Is there a reason for these differences? Time and space will not allow me to recapitulate history and colonization in its entirety but to summarize I will start with this rhetorical question and provide you a recipe. Is there just one English or are there several Englishes? Put great distances of bodies of water between different English worlds and mix the incessant changes of all languages added to the various British, American, and Australian dialects, sprinkled with time and interminable exposure to new languages and new circumstances without ignoring the sensibilities that came with arriving to a new place and establishing a new country, guarantee the development of American English, Canadian English and Australian English, not to mention South African English, New Zealand English and Indian English just to name a few others.

Because of my American English tendencies or biases and because I have to start somewhere, allow me to propose that British English seems educated or fancy and maybe a bit haughty, high-browed or supercilious to some people, aka “The Queen’s English,” and Australian English can be seen as cool or adventurous. Why? Media, the movies, motion pictures, cine and flicks may have been responsible for such distinctions maybe, or just maybe a lame example. Disney pictures, from the 1930’s to today, have some tendencies but have greatly influenced us. The Jungle Book, great
movie, is set in the jungles of India with a British English speaking villain, Shere Khan the tiger, voiced by George Sanders, specifically chosen by Walt Disney himself because of his heavy English accent and bass voice. But of course the four vultures (cool rockers) in this great Disney movie produced in 1967 clearly represent a parody of the Beatles and the British invasion bursting into the American scene. There is the British speaking villain, Edgar (the butler did it), voiced by Roddy Maude-Moxby in The Aristocats and there is another British speaking villain, Scar, voiced by Jeremy Irons, found in The Lion King. Crocodile Dundee splashed onto the American scene and single-handedly defined Australian English as cool along with the subtleties from other movies on how cool and adventurous a faraway land can be. I have to point out the strong reference to Australia in Disney’s Finding Nemo. For more on this check out this link, if you dare have the time on other influences in children’s animated films. Who is shaping our languages and biases today, at least in America?

Admittedly, Australian English is fun, but understand there are loans from aboriginal languages being spoken in Australia, including boomerang, dingo (which is a wild dog), kangaroo, koala, wallaby and wombat. In America, some women may have been had at “hello.” In Australia, a sheila might have been had at g’day. The well-known Australian good day (g’day) should be part of our lexicon in the ISHLT thanks to our many colleagues from down under, especially our incumbent President of the ISHLT. There is the widely spread outback from this cool and exciting group who were laughing when the Americans were going to root for their teams during the 2000 Olympics in Sydney. I certainly enjoy when I hear words like chunder (vomit) from down under, grizzle (to complain) and the earbashing from one who never seems to stop talking. How about the expression for being confused, when you are up a gum tree, and the slang expression of being a shingle short when someone is “not playing with a full deck.”

To bring us back to Britain, a biscuit is a generic term for something sweet or not sweet, but is always crispy. In America, biscuits are not sweet and are not crispy. If it is sweet and crispy, it’s a cookie. If it’s not sweet but crispy, it’s a cracker. All of these edibles are roughly the same size.

Finally, if you want to get nothing out of this dissertation on raising our awareness of the nuances of the various Englishes to improve communication let me share with you that in both British English and American English, there is zero, nothing, and null. In Britain there is nil, naught, nought and nowt and in the U.S. there is zilch and zip. How about nix derived from the German word ‘nichts’ meaning nothing, and one must always remember diddy-squat. There is love in tennis and duck in cricket for no score, zero or nothing. My final anecdote “oh” also stands for zero in American English in reference to numbers. My grandmother’s street address, no not part of any of my passwords, was 2905, twenty-nine oh five. And of course we have James Bond 007, double-oh seven, not double naught seven, unless perhaps you’re Allan from Australia.

Disclosure statement: The author has no conflicts of interest to report.

References:
McArthur, “English World-Wide in the Twentieth Century.”
Trudgill and Hannah, International English.
http://australianenglish1.narod.ru/