IN THE SPOTLIGHT: Abstract Deadline Day has passed...Now all the best content awaits you at ISHLT 2016!

Andrew J. Fisher
2016 Program Chair
A.j.fisher@ncl.ac.uk

Another key milestone in our preparations for the Annual Meeting 2016 in Washington DC has been completed!

The abstract submission deadline saw over 1500 abstracts submitted for presentation. I won’t deny that 24 hours before the abstract deadline I was feeling very concerned that there wouldn’t be enough content, as only 300 completed abstracts had been received. However, I should have realized that many were adding finishing touches to their best work; at the last minute another 1200 came in, most in the final 6 hours!

Already our army of almost 300 reviewers has scored them all, readying them for the program committee to build oral, mini-oral and poster sessions. It’s at this time where the impressive level of engagement from our membership with the Annual meeting becomes clear. A substantial percentage of members will play a part in delivering the meeting as speakers, chairs, moderators and presenters, as well as the huge efforts made by the reviewers and the program committee.

Please keep an eye out for our promotional emails, which will highlight different parts of the program every few weeks and give you a list of not to be missed presentations. You should also have recently received the preliminary program by mail, which highlights what a fabulous venue Washington DC will provide for our Annual Meeting.

It’s never too early to start planning your trip, so go ahead and secure your meeting registration, accommodation and travel for what will be a memorable meeting in a brilliant venue. All you need can be found on the Annual Meeting page of the website.

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Wait, you have what in Missouri? Infections on the Move

Michele Estabrook, MD
St. Louis Children’s Hospital
St. Louis, MO, USA
Estabrook_m@kids.wustl.edu

Having worked in California for many years, coccidioidomycosis was always on my radar but not in St. Louis where I now live. That’s why a recent MMWR report “Coccidioidomycosis in a State Where it is not known to be Endemic – Missouri, 2004-2013” definitely got my attention. The impetus for the report was national data showing not only a dramatic increase in total cases reported in the endemic states of Arizona, California, Nevada, New Mexico and Utah but also in many other states (28 in all). The Missouri Department of Health identified 93 cases of confirmed cocci between 2004 and 2013 with a significant increase in incidence over those years. The median age was 58, 46% were hospitalized and 9% died. The most common manifestations were symptomatic lung lesions/pneumonia in 40% and flu-like illness in 33%. When they looked at travel history, 26% had never been to an endemic area. Four of these individuals were diagnosed by positive culture, the gold standard, strongly suggesting acquisition from Missouri soil, a novel finding. I’m sure this will be an evolving story but Valley Fever seems to be on the move.

*Coccidioides immitis* is a fungus that grows in soil and is acquired by inhalation of airborne arthroconidia when the soil is disturbed such as with construction, dust storms and earthquakes. Solid organ donor derived infection is uncommon but reported. More than half of infections are asymptomatic but clinical manifestations include fever, cough, fatigue, chest pain and arthralgia that can last weeks to months. Chest x-ray can be normal or have infiltrates, cavitary lesions or nodules. In a normal host, disease is self-limited without treatment. The fearsome form of this infection is disseminated disease that occurs with suppression of cellular immunity such as solid organ transplantation, HIV infection, chemotherapy or high dose steroids. The fungus can spread to any site but generally goes to bone, skin and joints and the CNS. Diagnosis is by culture or serology. Treatment is with fluconazole or itraconazole for a very long time.

Lesson learned: consider cocci for community acquired pneumonia not responding to usual antibiotics even in Missouri. And of course, always get a careful travel history.

The other emerging infection that caught my attention is Chikungunya Virus. Something else I wouldn’t expect in the middle of the country. Yet in 2014, Missouri had 16 cases. There were over 2,700 travel associated cases in the U.S. that year with New York and Florida leading the count with 803 and 476 respectively. Even more interesting was the first report of locally transmitted cases, all 11 in Florida. The mosquito vectors for this virus, *Aedes aegypti* and *Aedes albopictus* are both found in southern and eastern states so stay tuned. This is a relatively new virus first described in Tanzania in 1952. The first reported case in the Americas was 2013 and a year later the first imported and locally acquired cases were reported in the continental U.S. The virus is now widespread throughout the world in warmer climates. Most people who get Chik virus are symptomatic with acute onset of high fever and severe, bilateral, symmetric arthralgia or arthritis. Non-specific viral symptoms are
headache, myalgia, conjunctivitis, diarrhea, and maculopapular rash. Lab findings are also non-specific with lymphopenia, low platelets, and elevated hepatic transaminases. Most people feel horrible for 7-10 days and then recover without treatment. Complications are rare but “itis” can occur in any organ system and those at highest risk are neonates exposed intrapartum, older adults, and those with underlying medical conditions. Diagnosis is by RT-PCR or serology and treatment is supportive.

The important point about Chikungunya however, is the clinical similarity and its vector to the Dengue Virus. Same mosquito vectors, much more concerning infection. This virus has four sub types that are endemic in the tropics and sub tropics of much of the world with 50 – 100 million cases and 22,000 deaths annually. Local transmission has not been maintained yet in the continental U.S. but all 48 states report travel associated infections year round. There is no cross protective immunity between the sub types and sequential infections increase the risk of the most severe forms of Dengue, hemorrhage fever and shock syndrome. Clinical presentation can be undifferentiated fever usually in children with their first infection that resolves. Classic Dengue Fever is heralded by severe, retro-orbital headache, high fever, and extreme muscle and joint pain (break-bone fever). Petechial rash, leukopenia, and low platelets occur. This lasts for 2-7 days followed by defervescence and recovery. Or not. For some people, resolution of fever is followed by the hemorrhagic form with or without shock syndrome marked by hemorrhage and plasma leak into pleural and abdominal cavities, disseminated intravascular coagulation, and cardiovascular collapse. Diagnosis is PCR from blood, CSF, or other body fluid; immunoassay for antigen in serum; cell culture; and serology. Treatment is supportive.

Lesson learned: consider mosquito born viruses Chikungunya and Dengue for compatible illnesses even in Missouri. And of course, always get a careful travel history.

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

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2. Coccidioidomycosis in a state where it is not known to be endemic – Missouri, 2004-2013. MMWR 2015;64:636-639.
Influenza Vaccine Update 2015-2016

Grant Paulsen, MD
Cincinnati Children’s Hospital Medical Center
Cincinnati, OH, USA
Grant.Paulsen@cchmc.org

If you haven’t noticed by now, for those of us in the northern hemisphere, influenza season is upon us. It’s also generally accepted that influenza infection can be troublesome in heart and lung transplant recipients. And, as they say, an ounce of prevention is worth a pound of cure.

Seasonal influenza activity is reported by the CDC on a weekly basis, available at http://www.cdc.gov/flu/weekly/summary.htm. Based on last year’s influenza surveillance, peak activity occurred during the last week of the year, so we are likely far from the end of influenza season and it is not too late to stress the importance of vaccination.

In general, influenza vaccination is recommended for all solid organ transplant (SOT) recipients [1]. If you read no further into this article than this, you just got the most important point. For those that do not need convincing that influenza vaccination is beneficial, a few specifics follow.

Trivalent vaccines contain hemagglutinin (HA) from 2 influenza A strains and 1 influenza B strain. Quadrivalent vaccines contain HA for one additional influenza B strain. Based on the influenza seen last year, the vaccines for 2015-2016 contain HA that is different for two strains [2]: one of the influenza A strains (H3N2) and the influenza B strain. The trivalent vaccine this year contains:

- A/California/7/2009 (H1N1)
- A/Switzerland/9715293/2013 (H3N2)
- B/Phuket/3073/2013

The influenza A (H1N1) component is unchanged and the second influenza B strain in the quadrivalent vaccine is also unchanged (B/Brisbane/60/2008-line (Victoria lineage) [3].

Based on CDC virus characterization through Sept 30, 2015, all influenza A strains were similar to A/California or A/Switzerland, 62% of the flu B were similar to B/Phuket and 38% to B/Brisbane. All of which are components of the 2015-2016 Northern Hemisphere quadrivalent flu vaccine.

However, in the post-transplant population there is more to consider than how good the vaccine match is that year. There are two broad types of flu vaccine: inactivated (IIV) and live attenuated (LAIV). As with all other live attenuated vaccines, LAIV is contraindicated in immunocompromised individuals. Since there is a theoretical risk of transmission following receipt of LAIV, it is also recommended to give the inactivated flu vaccine to people in close contact with SOT patients [1].

The optimal timing of flu vaccination following SOT has not been determined, and practices vary based on local consensus. Guidelines from the American Society of Transplantation Infectious
Diseases Community of Practice recommend vaccinating SOT recipients 3-6 months after transplant [4]. In general, while some studies have found significantly decreased responses to vaccination [5], many have reported acceptable response rates to vaccination, and often correlate response with time from transplant. In a series of 51 liver transplant recipients, more than 55% of patient vaccinated 4-12 months after transplant had adequate seroconversion [6]. Another more recent study in 798 adult SOT recipients found similar seroprotection rates in those vaccinated within 6 months compared to those vaccinated more than 6 months after transplant [7], with protection rates of 67% or greater for all vaccine strains in both groups. The same findings were reported when patients vaccinated during the first 3 months following transplant were analyzed as well.

Inactivated flu vaccine is generally well tolerated and regarded as safe in SOT patients. Concerns have been raised regarding possible effects of influenza vaccination on graft dysfunction, either via T cell cross reactivity with allogenic HLA molecules or humoral responses. While two studies have reported increased incidence of anti-HLA antibodies following the 2009 adjuvanted pandemic influenza vaccine [8, 9], neither demonstrated an association with acute rejection. Additionally, multiple other studies have failed to find clinical evidence for allograft dysfunction after influenza vaccination [6, 10-12]. To date, there is no clear evidence that inactivated vaccines contribute to allograft dysfunction, and vaccination remains strongly recommended.

The pediatric SOT group is another population that warrants attention. Children are eligible for the influenza vaccine from 6 months of age and older. Children 6 months through 8 years receiving the flu vaccine for the first time should receive a second dose, 4 weeks after the first dose. If the child has ever received 2 or more total doses, even during non-consecutive flu seasons, then they need only one dose [3]. Children 9 years and older also only need one dose, regardless of prior vaccination. Children less than 3 years old are given the 0.25 mL dose, which is ½ of the standard dose.

In summary, based on current information, the strains selected for this year’s flu vaccine appear to be well matched to those circulating nationally and while vaccine responses are variable and may be blunted in SOT patients, there is clear benefit to vaccinating this population.

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References:
Pediatric Infectious Disease Pre-Transplant Evaluation: An Opportunity to Optimize and Educate

Blanca E. Gonzalez, MD
Cleveland Clinic
Cleveland, OH, USA
Gonzalb3@ccf.org

The main goal of the Infectious Disease pre-transplant evaluation is to identify factors that have the potential to negatively impact the outcome of the transplant and that can be prevented by treatment, vaccination or prophylaxis. It also serves as an opportunity to educate the family regarding environmental exposures and behaviors that may result in infection acquisition post transplantation.

A thorough review of the child’s infectious disease history and screening for latent and active infections is performed during the evaluation. Lung transplant candidates with conditions such as cystic fibrosis are often colonized (or infected) with multi drug resistant bacteria (i.e. *S. aureus, Pseudomonas spp, Alcaligenes, Stenotrophomonas* among others) fungi (*Aspergillus spp*) and nontuberculous Mycobacteria (NTM) all which represent a risk for infections in the post-transplant period. Therefore, prophylaxis regimens need to be individually tailored based on microbiological and susceptibility data [1,2]. Colonization with *B. cenocepacia* has been associated with poor outcomes after lung transplant and many centers will consider it a contraindication to transplant [3]. Careful screening of patients for tuberculosis is of extreme importance as the diagnosis and treatment of this infection post-transplant is challenging, and treatment should be provided beforehand. Screening in children is usually with a PPD but interferon gamma release assays (IGRA’s) can be used in children as young as 2 years of age, especially in foreign born children vaccinated with BCG [4,5].

Heart transplant candidates are at high risk of bacterial infections in the pre transplant period as the use of central lines is common as well as the use of ventricular assist devices as bridge to transplant. LVAD infections are not a contraindication to transplant as it is difficult to clear infections until the device is explanted, but aggressive therapy is required [6].

CMV reactivation or primary infections are a significant cause of morbidity and mortality in the cardiothoracic transplant recipient. Knowledge of the recipient child’s CMV status, along with the donor’s status, is required to select the appropriate antiviral preventive strategy. In infants younger than 18 months, this is tricky as serology may reflect maternal immunity requiring additional test such as CMV culture from urine and saliva to prove infection [7]. Other viruses screened for in the evaluation include HSV and EBV. Many young transplant candidates, depending on country of residence, may be EBV naïve and are therefore at high risk of primary infections and of PTLD, especially if the donor is EBV positive [8].

Based on the child’s exposure history, screening may also be performed for less common conditions. In the case of heart transplant candidates for example, parasitic infections with *T. cruzi* can reactivate in the graft, and therefore, screening patients with dilated cardiomyopathy who have lived in Chagas...
endemic countries is warranted [9]. When there are outdoor cats in the household screening for toxoplasmosis becomes important.

Many patients will have lists of allergies in their past that need to be clarified before the transplant. Minor rashes or medication side effects may have been labeled as allergies and often parents may have misconceptions of what constitutes and allergic reaction. When in doubt, a referral to allergy for skin testing may be needed keeping in mind that reliable testing is not possible for all antimicrobials or allergy types. Alternatives regimens for treatment and prophylaxis should be crafted at this time. We often see children whose parents relate events consistent with an allergic reaction to sulfa for which alternative Pneumocystis jiroveci prophylactic regimens must be used (dapsone or pentamidine in the G6PD deficient patient).

Documenting evidence of vaccination and vaccine immunity is pivotal [10]. In industrialized nations, vaccination refusal in the community is increasing with infections such as measles and varicella making a comeback. Missed opportunity for protection through vaccination may result in high morbidity including graft loss. This is the time to catch up with vaccines as doing so post-transplantation may not result in effective immunity. Serologies should be obtained so that in the event of an exposure a prophylactic plan can be established and to determine if re administration of certain vaccines is required. This is also the time to discuss “cocooning” with the families making sure all members of the household are up-to-date with their immunizations as an indirect way of protecting the transplant recipient. Live viral vaccines are contraindicated following transplants. Physicians may have a window of opportunity to provide live viral vaccines before the transplant if they are certain that the interval to transplant will be greater than 1 month. An often forgotten opportunity is to provide MMR to children over the age of 6 months, even if the vaccine will not count toward the primary series.

We want our children to lead as normal life as possible after the transplant, and this includes allowing them to participate in everyday childhood activities such as playing outside, riding bikes and having pets, tweaked, of course, for their safety. A thorough discussion of safe living after transplantation should take place [11].

Pet ownership should be thoroughly discussed with the family at this time. Although for the most part we do not recommend that “fluffy the cat” take an indefinite vacation we do emphasize certain aspects of pet care. Some of the key aspects to review are: washing hands after playing with animals, placing cat litters in safe places away from young children or areas where food is usually prepared, discouraging older children cleaning litters, cages or fish tanks, cats should be kept indoor to minimize risk of toxoplasmosis, sick pets need to be seen by a veterinary doctor immediately (diarrhea in a pet may be due to Cryptosporidium, Giardia, Salmonella, and Campylobacter). We have seen children who have acquired severe diarrheal disease from cryptosporidium after they cared for sick calves on the farm, or fungal lung infections related to raking hay in a horse barn. There are some pets that pose a significantly increased risk to the transplanted patient. We do recommend that families find a caring home for turtles and other reptiles before the transplant. These animals are “salmonella factories” and not recommended as pets for any child by the American Academy of
Other risky pets are exotic animals such as monkeys, chicks and ducklings. For lung transplant candidates, birds may pose an additional risk.

The household needs to be prepared for the child coming home post transplantation. Avoiding construction projects when the patient returns home is prudent as this poses a risk for invasive fungal infections, such as *Aspergillus*. In houses with well water, the system should be tested frequently for bacteria, and patients should be encouraged to drink bottled water.

Infectious diseases pose a significant risk to transplanted patients, but a pre-transplant consult can help reduce these and ensure a successful transplant.

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References:
Vaccination Prior to Organ Transplantation

Ranny Goldwasser, MD
University Children’s Hospital Heidelberg
Heidelberg, Germany
Ranny.goldwasser@med.uni-heidelberg.de

The prevention of systemic viral and bacterial infections through vaccination is one of the basic and most important tasks in the field of pediatrics. In the field of organ transplantation, where the young children are immunosuppressed in order to avoid allograft rejection, avoiding infection through vaccination plays even a more crucial role.

To prevent a graft rejection patients usually need a lifelong immunosuppression medication, which is causing a reduced cell-mediated immunity and a limited antibody production. Besides the increased risk of infections, transplanted patients receive a sometimes life-threatening course of the disease.

The prevention of infections due to vaccination is the least invasive and at the same time the most cost effective approach both to reduce the rate of infection, as well as to reduce the morbidity and mortality rate of the transplanted patients.

Due to the young age of the recipient, the urgent need of a new organ due to cardiac insufficiency, and due to the poor health condition of the pediatric patient, the vaccination status of the patients is mostly prior to transplantation incomplete. Furthermore many patients do not have enough time developing antibodies’ titers. Hereto comes, that transplanted patient, as a result of the immunosuppressive therapy, often have inadequate vaccination response or loss of their antibodies’ titers. Live attenuated vaccinations are usually contraindicated in this population.

**Vaccinations before heart transplantation**

If possible before transplanting a patient, physicians should make sure that the vaccination status is fully complete and up to date as using live attenuated vaccination post-transplantation is not recommended and the effect of the passive vaccinations post-transplantation are reduced due to the side effect of the immunosuppressive drugs the patient is receiving [1].

It should also be advised that as the patient’s health status is rapidly worsening, one should take into consideration vaccinating the patient in an accelerated schema without waiting for a full vaccination titer.

Basically it is important that prior to transplantation, each patient should be completely vaccinated according to his country own health ministry recommendations. In Germany for example we follow the recommendation of the vaccination commission of the Robert Koch institute [2]. The American society of transplantation (AST) furthermore advice to vaccinate against hepatitis A and influenza [1,3]. In addition, according to the AST, in case of exposition after analysing the risk-benefit usage, a vaccine against rabies or with BCG should be taken into consideration.
The success of vaccination should be, if possible, be done by measuring the antibodies in serum but not earlier than four weeks after the vaccination was given. Transfusions of red blood cells and intravenous immunoglobuline transfusion may cause a false result of the antibody titer, it is advised to wait 3 months before checking the titer after a transfusion is given to the patient. Other than that, it is recommended, if possible, that after a live attenuated vaccination, a period of four weeks should elapse before transplanting the patient [1,3].

**Vaccination from contact persons and pets**

Family members of the transplanted patients should have a complete vaccination status and be advised to receive the annually suggested vaccination early in the evaluation. The AST recommends that family members should be vaccinated against measles, mumps and rubella as well as against varicella in order to prevent transplanted patients to be infected by wild type of viruses.

Following a rotavirus vaccination, approx. 50-90% of the vaccinated children can excrete viral antigens in the stool up to two weeks following the vaccination and theoretically transmit the disease to the transplanted patient [4]. Thus the importance of prudent hygiene.

It is also advised that family members and medical personal treating those patients receive annual vaccinations against influenza and hepatitis A and B [1].

The pets of those patients should also have a fully up to date vaccine status including the dangerous zoonoses such as: bordetella, leishmania, leptospiira, borrelia, clostridium and rabies virus.

**Special vaccination**

**HPV-Vaccine**

Human papilloma viruses (HPV) type 16 or 18 are responsible worldwide for approx. 70% of all cervix carcinoma in women [5]. That’s why in Germany it is recommended to vaccinate all girls from ages 9-14 [2]. There are few vaccines available on the market. Till today there remains scant information information concerning the vaccination of transplanted women against HPV.

**Meningococcal vaccine**

If possible it is advised that the meningococcal tetravalent vaccine (against serotypes ACWY) be given prior to transplantation (1-3). In Germany, this vaccination is approved from the age of one year but in the USA it is already approved for use from the age of three months. The AST recommends for the paediatric transplant to receive the tetravalent meningococcal vaccine.

**Pneumococcal vaccine**
In order to prevent the infection caused by pneumococcus, there are two different types of vaccines available: one which is a conjugate vaccine to 13 serotypes and the other is a polysaccharide vaccine to 23 serotypes of pneumococcus. The AST recommend that patients younger than two years of age to receive the conjugate vaccine vaccine and those older than 5 years of age to receive the polysaccharide vaccine to the 23 serotypes [1]. Basically following transplantation the pneumococcal vaccine titer should be checked annually.

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References:
Travel Vaccine Recommendations after Pediatric Heart Transplantation

Martin Schweiger, MD
Children’s Hospital Zurich
Zurich, Switzerland
Martinschweig88@hotmail.com

If one is to believe the great German poet Johann Wolfgang Goethe, the wise man obtains the best education while traveling. It seems this message has been heard by a great number of people worldwide, when one looks at international travel statistics—which reported more than one billion tourist arrivals globally in 2013.

Heart transplantation is a life-saving treatment, and intends to improve quality of life and reintegration into social life. This might even be truer for children and teenagers, as traveling across different countries adds to their personal development. However, the need for continuous immunosuppressive therapy may result in restrictions on some social and recreational activities, including traveling. Nonetheless, immunocompromised patients are traveling at increasing rates. In a survey, published in 2008, of adult patients who had undergone solid organ transplantation at the Mayo Clinic—with regard to their travel behavior—it was revealed that over 25% traveled outside the US, with the majority traveling to destinations at low risk for infectious disease. Though the report showed that generally, transplant recipients were able to travel safely, travelers to destinations at high risk for infection (defined as Asia, Central and South America, Africa, Middle East in this article) had a significant rate of illness. The authors revealed a low number of counseling sessions and interventions prior to travels [1]. Therefore, physicians caring for (pediatric) transplant recipients must be knowledgeable about pre-travel consultations, and recognize when referral to an infectious disease specialist is warranted. Consultation of the patient should begin several months ahead of departure.

In general, inactive vaccines after transplantation may be considered safe, while the use of live attenuated vaccines is contraindicated. Therefore, every effort should be made to vaccinate prior to transplantation. It is pointed out that different countries will have slightly different recommendations for immunization of solid organ transplant candidates, as already emphasized in the article by Ranny Goldwasser in this issue of the LINKS newsletter.

A well-written summary concerning (travel) vaccination in solid organ transplantation was published by the AST infectious diseases community [2]. Two of the diseases that most frequently occur while traveling are diarrhea and cholera. There are oral inactive vaccines providing short-term protection against cholera and Enterotoxigenic E. coli. Likewise, there is an inactive vaccine for Japanese encephalitis. If traveling to a country where typhoid (Salmonella serotype Typhi) is common, the patient should be vaccinated against it. The live oral typhoid vaccine is contraindicated. Instead, the killed parenteral Vi polysaccharide vaccine should be administered [3].
No monitoring of vaccine titers is necessary for the immunizations named. For planned travel to high-risk areas of hepatitis A and B, vaccination status of the recipient should be checked prior to the journey (in all children on heart transplantation waiting list, hepatitis A/B vaccination is recommended). Vaccination status for tetanus should be checked as well (hepatitis A/B and tetanus are inactivated vaccines). Rabies vaccination is not routinely administered; it should be addressed individually, in accordance with the risk of exposure.

Nevertheless, it has to be stated that travel to certain destinations may not be recommended. Recipients planning to travel to destinations that present true risk of yellow fever (some countries of Africa and South America) should strongly be discouraged. Vaccination for yellow fever is a live attenuated vaccine, and the subject should be vaccinated prior to transplantation. If this is done, long-term persistence of antibodies to yellow fever (at least in renal and liver transplant recipients) has been observed [4].

Finally, the potential risks of poor vaccine responses have to be taken into account, especially in immunosuppressed patients.

We wish you a safe journey.

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References:
Would You Take This Donor?

Monica M. Colvin-Adams, MD
University of Michigan Health Systems
Ann Arbor, MI, USA
Mmcolvin@med.umich.edu

Selecting the appropriate donor for a given recipient is perhaps the most crucial factor in determining post-transplant outcomes. Conferences, statements, and manuscripts abound yet still have not clarified the nuances of optimal donor and recipient matching.

With little data to guide us, we often formulate decisions based on prior experience and use the multiple hit theory to provide rationale when a donor just doesn’t seem right, “Well...it’s a female into a male, she used cocaine three years ago, and was hypertensive. One small hit is ok, but three small hits? Maybe we shouldn’t take it.” Then we poll additional colleagues, “Would you have taken this donor?”

The HFTX Council is launching a Donor Dilemmas blog to allow exchange of experience and expertise within the broader heart transplant community. We anticipate this to be a highly engaging and informative forum. Presenters will post a case only with donor and recipient information. Participants will be asked to discuss the case and vote on whether they would accept the donor. The outcome of the case will be posted after the voting period.

Bojan Vrtovec, Education Workforce Leader, and Michael Pham, Vice-Chair, are working diligently to develop this into an interactive and engaging learning experience. Video clips and real time voting are currently being investigated.

The launch for this site is set for December 1 and cases will be posted every other month. We hope all will participate in the discussions, and we are seeking brave volunteers to provide cases. These can be forwarded to Bojan Vrtovec (bojan.vrtovec@gmail.com).

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Pyotr Ilyich Tchaikovsky was born on May 7, 1840 in Votkinsk, Russia some 800 miles and 1200 miles east of Moscow and St Petersburg, respectively heading toward the Ural Mountains. His father was Ilya Petrovich Tchaikovsky of lesser nobility and his mother, Alexandra Andreyevna of French descent. She played the piano and sang while the young Pyotr Tchaikovsky worshipped her and her hands. Along with his mother, the most influential people in his life were all women: his governess, his sister, his wife and most importantly, his patroness. Alexandra preferred the cultured life of St Petersburg therefore she was unhappy in the “exiled” city of Votkinsk. Her unhappiness must have affected Pyotr profoundly where he found solace in the piano. His musical talents were not
encouraged for in 19th century Russia the music profession was not an acceptable career. The family later moved to St Petersburg where Pyotr was enrolled in the Imperial School of Jurisprudence. His mother died of cholera. Her death may be one of the sources of his depression consistently expressed in his music.

While at the School of Jurisprudence, Pyotr discovered two things. According to him, Mozart’s Don Giovanni inspired his musical career and the discovery of his homosexuality. He graduated and in 1862, Tchaikovsky enrolled at the newly developed St. Petersburg Conservatory founded by the Polish-born pianist and composer Anton Rubinstein. After graduating in 1866, he moved to Moscow and taught at the new Moscow Conservatory which was founded by Anton’s brother, Nicholai Rubinstein. His musical career truly began with the instant success of his Overture in F. Several of his works premiered in 1868, then it was in 1869 when his position as a promising native composer was consolidated in Russia and his reputation established in Europe by his first masterwork: Overture-Fantasy Romeo and Juliet, “Love Theme,” dedicated to his lover, Eduard Zak, a fifteen-year-old student. Tchaikovsky’s musical style possessed romantic expression and classical structure while hovering between Russian emotional excess and Germanic intellectual control. His music was criticized on two fronts: by the academics, he was too Romantic and by the Romantics, he was too academic. For the Russian nationalists, he was too German and for the Germans, he was too Russian. Listen and immerse yourself into his next great successes: Symphony No. 2 in C Minor, Op. 17, Little Russian, Movement 4, Theme and Piano Concerto No. 1 in B Flat Minor, Op. 23, Movement 1, Introduction. He had been considered the only Russian composer to blend the best of Western European technique with his own Russian heritage. Yet for Tchaikovsky, success brought forth depression; post-success depression was typical for him. Perhaps, it’s the journey, not the goal. Nevertheless, as he was becoming a popular composer, his depression deepened and his anxiety increased especially over public discovery of his homosexuality. Moreover, he blamed his depression on his homosexuality. This led to his feeling of being alienated from others which seemingly forced him to become introspective into a deeper world of self-expression that he might not have discovered had he felt less isolated. The result mostly for us was great music. In 1877, the premiere of Tchaikovsky’s first ballet score, Swan Lake, Op. 20, Act. 1: No. 9 Finale was not a success, however it revolutionized the art of ballet music by giving substance to the dancers, dramatic action, mood and the story. It later became an enduring success. Rather than suppressing his creativity, emotional crises stimulated his creative urges. In the summer of 1876 as a result of Ottoman-Turkish massacres of Christians in the Balkans, Montenegro and Serbia declared war on the Ottomans. Russian volunteers gathered to support their fellow Slavs. By the fall, it appeared that Russia would be drawn into war. Nicholai Rubinstein commissioned Tchaikovsky to write an orchestral piece for the Russian Musical Society Concert to benefit the wounded Serbian veterans and equip the Russian volunteers. In five days, Tchaikovsky wrote the “Serbo-Russian March,” today known as the Marche Slav. It was a superb, inspirational and patriotic piece comprising Serbian folk tunes for its themes and Russia’s national anthem, God Preserve the Tsar. It premiered in Moscow on November 17, 1876 with a rapturous and an ecstatic response. “The entire audience was on its feet with many standing on their seats. There was an encore followed by more pandemonium. It was one of most stirring moments in 1876, many were in tears.”
In a letter to his brother in 1876 Tchaikovsky declared it was time for him to enter matrimony with anyone who would have him. During this mind set, Tchaikovsky was asked to write an opera based on the popular novel written in verse *Eugene Onegin* by Alexander Pushkin. He was attracted to this tragic tale of unrequited love because of the poetry, drama and psychological aspects of its story and characters that resonated with his own life. This novel was about lost love and lost opportunity with the “letter scene” inspiring Tchaikovsky where Tatyana pours her heart out in a love letter to Onegin. Tchaikovsky identified with Tatyana. By happenstance, while composing this opera, he received a love letter from a former student, Antonina. They eventually met, Tchaikovsky proposed a platonic relationship, she misunderstood that he was a homosexual as a result their marriage was disastrous from the outset. At the same time and separated just three months from their marriage, he began exchanging letters with a very wealthy widow that he would never meet, Nadezhda von Meck. Von Meck became his patroness and provided him an annual subsidy of 6,000 rubles for fourteen years. She was the widow of Karl Otto Georg von Meck, a Russian railway tycoon, and ecstatic about Tchaikovsky’s music. She was unconcerned about his homosexuality and probably considered it an asset knowing she would never lose him to another woman. Her devotion to his music resulted in one of the most bizarre relationships in music history with nearly thousands of letters exchanged. Tchaikovsky’s Fourth Symphony inspired by Beethoven’s Fifth was dedicated to von Meck with an idea of “fate knocking at the door.” *Symphony No. 4 in F minor, Op. 36*. Then he composed one of his most widely acclaimed works, the *Violin Concerto in D Major, Op. 35* in 1878. This was the right stuff that Bill Conti appropriated some 100 years later for his score for the movie *The Right Stuff* which earned Conti an Academy Award for Best Original Score in 1984. Compare *Yeager’s Triumphal March* with Movement 1 of the Violin Concerto in D Major above. And why not, Tchaikovsky had appropriated from Beethoven and if you do steal other ideas, why not from the greatest. After completing his Violin Concerto Tchaikovsky had written that he had completely recovered from his “madness.” In May 1877 he had decided to marry Antonina, in June wrote an entire opera, in July got married, in September ran away from his wife. “I was not myself, but another Pyotr Ilyich Tchaikovsky. Only now, especially after my marriage, have I finally come to conclude that there is nothing more pointless than wanting to be anything other than what I am by nature.” Upon returning to Moscow for the fall semester at the conservatory in 1878, he read a lurid article about the affairs of professors with their female students and those of another nature. He resigned in fear of exposure of his homosexuality. Nadezhda von Meck took delight in this because she believed his teaching position yoke his creative capabilities and genius.

For the next decade, he felt free and produced: another masterwork, *Serenade for Strings in C Major, Op. 48; Capriccio Italien;* and the 1812 *Overture*. He became an international celebrity as his music was performed in North America, Europe and Russia. Also, he became a popular composer and finally overcame his fear of conducting when he conducted the premiere of his opera, *The Enchantress*. In 1888, he completed his Fifth Symphony, *Symphony No. 5 in E Minor, Op. 64* which is a catharsis composition starting dark with a tragic theme in a minor key as heard in the clarinet and ends brilliantly in a major key. After this decade of liberated productivity, Tchaikovsky’s final years were extremely productive and the happiest he had ever been. He met Anton Chekov who dedicated his book *Gloomy People* to Tchaikovsky. But he lost his patroness, von Meck, his soul mate. She had sent an entire years pay in advance, something not done before and in her last surviving letter, she wrote him that her children were bankrupting her. Perhaps, von Meck’s family
threatened to expose Tchaikovsky’s homosexuality if she continued to support him. He was devastated and embittered. He went on a successful and very popular conducting tour in the United States, returned to Russia and among many of his last compositions: the ballets *Sleeping Beauty* and *The Nutcracker*, the opera *Queen of Spades*, and the concert overture *Hamlet*. Perhaps as a substitute to the loss of von Meck, Tchaikovsky fell in love with his nephew Vladimir Davidov (nicknamed Bob) and dedicated his final works, Symphony No. 6, to him, the son of his sister Sasha. *Symphony No. 6 in B Minor, Op 74* represented the peak of Tchaikovsky’s life, career and creativity. It mirrored the juxtaposition of his life ranging from magnificent and celebratory comfort and pleasure (movement 3) to profound and pathetic despair (movement 4), a reflection of his struggle with his public and private life. Finally, his funeral took place on November 9, 1863 in the Kazan Cathedral. It was the largest funeral St Petersburg had and still today has ever experienced.

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Woodrow Wilson was born in Staunton, Virginia on December 29, 1856. He grew up son of a Presbyterian minister during the Civil War and its reconstruction. He graduated from Princeton and after completing law school at the University of Virginia, he practiced law in Atlanta, Georgia. He pursued an academic career and taught history and political science at Bryn Mawr College in Pennsylvania and Wesleyan University in Connecticut. He earned a Ph.D. in political science from Johns Hopkins in 1886. He became a professor of political science at Princeton in 1890 and was elected president of Princeton in 1902. He held this position until he was elected governor of New Jersey in 1910. He was known for his progressive social and economic platforms and was chosen as the Democratic candidate for President in 1912. When the Republican vote was divided between incumbent Taft and for President Teddy Roosevelt of the "Bull Moose" Party, Wilson secured an Electoral College victory despite winning only 42% of the popular vote. He became the 28th President of the United States. Because he was the first President to have earned a Ph.D and the first to come from an academic background, he was nicknamed, "Professor." In August 1914, two events influenced Wilson. His wife, Ellen died and the Great War in Europe had begun. The latter was easy, Wilson insisted that America’s role was to stay out of conflict and continue to work for peace. However, his wife’s death was more intriguing. Gossip and rumors had spread during the engagement and marriage to Edith Bolling Galt, a widower and 15 years his junior. There were rumors that Wilson cheated and even murdered his first wife. Adding to all this ruckus was one of the most embarrassing typographical errors in newspaper history by the Washington Post, or was it intentional? In reporting on an evening of the couple, the Washington Post intended to write “...the President spent the evening entertaining Mrs Galt” but instead wrote “Rather than paying attention to the play, the President spent the evening entering Mrs Galt.” (See it here) Nevertheless, they were married.

Later, he was re-elected in 1916 because "He kept us out of war"; however, the U.S. entered the Great War on April 6, 1917 after Germany sank several U.S. merchant ships and the revealing Zimmerman Telegram. Wilson offered his "Fourteen Points" in January 1918 to assure peace which included the establishment of the League of Nations. He went to Paris to negotiate the Treaty of Versailles after Germany signed the armistice “...on the 11th hour of the 11th day of the 11th month of 1918.” Although the severity of his disability was concealed, Wilson suffered a major stroke in October 1919 while rallying support for the treaty. He won the 1919 Nobel Peace Prize for his efforts in securing world peace. He was the first President to serve two full consecutive terms since Ulysses S Grant. During his terms some of the most important events occurred in 20th-century America. There was the establishment of the Federal Reserve in 1913, opening of the Panama Canal in 1914, emergence of the movie industry, a law prohibiting child labor, America’s participation in World War I and women gaining the right to vote in 1920. The "Roaring Twenties" and the "Jazz Age" transformed the United States before he died of complications related to his stroke on February 3, 1924.
Warren Harding’s nickname was **WG**, which stood for Warren Gamaliel. He was born on his family farm near Marion, Ohio on November 2, 1865. After attending Ohio Central College, he became a teacher and an insurance salesman before becoming a newspaper publisher. Because of his success, popularity and political savviness, he was elected state senator and lieutenant governor of Ohio. WG emerged as a prominent Republican, delivered the nomination speech for Taft at the 1912 party convention and was elected to the U.S. Senate in 1914. Next, he chaired and delivered the keynote address during the 1916 Republican convention. Because of his “return to normalcy” promise to war-weary America after World War I, he was elected the 29th President of the United States. Yet even his friends said that his only qualification for the highest office was that he looked like a President. He supported prohibition and the woman’s right to vote. WG led the drive for international disarmament which accompanied post-war peace agreements. During his Presidency, the U.S. restricted immigration, cut taxes and created high tariffs to protect American manufacturers. WG dedicated the Lincoln Memorial in Washington, D.C. and the Tomb of the Unknown Soldier in Arlington National Cemetery. He was the first President to broadcast a speech over the radio. During a campaign visit to San Francisco in 1923, he died suddenly of a heart attack on August 2. His presidency was tarnished by the Teapot Dome scandal whereby high-ranking officials accepted bribes in exchange for government oil leases. Many of his appointees took bribes and stole millions in public funds. He had remarked that his enemies were no bother, but his friends kept him awake at night. When he died in office less than two and half years into his term (881 days), his Presidency became the fourth-shortest in history after William Henry Harrison (31 days), James A Garfield (199 days) and Zachary Taylor (492 days). His most memorable quote was - “**Our most dangerous tendency is to expect too much of government and at the same time do for it too little.**”

John Calvin Coolidge, son of a Vermont storekeeper, was born in Plymouth, Vermont on July 4, 1872. He graduated with honors from Amherst College in Massachusetts, earned a law degree and began practicing law in Northampton, Massachusetts. A casual interest in politics evolved into a career. He was elected to the Massachusetts House of Representatives, its Senate and mayor of Northampton before serving as lieutenant governor of Massachusetts. Coolidge was elected governor in 1918. In 1919, the Boston police went on strike protesting their inability to join a union. Coolidge stepped and called in the National Guard, declaring that the police had no right to strike against public safety. Along with rebuking Samuel Gompers, founder of the American Federation of Labor, Coolidge’s decisive action brought him national attention earning him the Republican Vice Presidential nomination in 1920. Following the death of WG, Coolidge took the oath of office on the early morning of August 3, 1923 at his family home when he was sworn in as the 30th President of the United States by his father, a notary public. He was the sixth of nine Presidents never elected in their first term which included: John Tyler, Millard Fillmore, Andrew Johnson, Chester A. Arthur, Theodore Roosevelt, Calvin Coolidge, Harry S. Truman, Lyndon B. Johnson and Gerald Ford. Roosevelt, Coolidge, Truman and LBJ were the only nonelected Presidents elected for a second term. Ford is the only person to serve as Vice President and President without ever being elected.

At the outset of his tenure, Coolidge’s honest reputation helped restore confidence in the Presidency amid the Harding scandals. During his Presidency, America enjoyed the excesses and prosperity of the “Roaring Twenties.” With the booming economy, he called for tax cuts, American isolationism
and he “quietly” trimmed $2 billion from the national debt. Because of his laconic demeanor, he stood back and attracted little attention with the conviction that “the business of America is business.” This earned him the nickname, "Silent Cal." His taciturnity was legendary with an old saying when someone at a party stated. “I bet I can make you say more than three words.” Without hesitation or cracking a smile, Coolidge shot back, “you lose.” With America’s high productivity and low unemployment, he was reelected under the slogan, “Keep Cool with Coolidge.” However, he was out of step with the Jazz Age as bootlegging, corruption, and stock-market speculation became rampant. Nevertheless, the dour and frugal teetotaler preferred to lead by example which left us with the quote attributed to Alice Roosevelt, “Silent Cal looks as though he’s been weaned on a pickle.” The largest event during his Presidency was his opening of the Sesquicentennial Exposition in Philadelphia in 1926 to celebrate the 150th anniversary of American Independence. He left office in 1928 stating, “One of the most important accomplishments of my administration has been minding my own business.” He retired in Northampton and died rather suddenly of what appeared to be acute coronary thrombosis on January 5, 1933. His most enduring quote was, “To live under the American Constitution is the greatest political privilege that was ever accorded to the human race.”

Herbert Clark Hoover was born in West Branch, Iowa on August 10, 1874 as the son of a Quaker blacksmith. Hoover was orphaned by the age of nine, raised by relatives in Oregon and championed self-reliance and discipline demanded by his austere childhood. He was urged to attend college at the new tuition free university in California founded by the American tycoon, “Captain of Industry” and U.S. Senator, Amasa Leland Stanford, as a memorial to his only son who died of typhoid fever in Florence, Italy. Hoover’s desire to attend college without completing high school coincided with Stanford’s need for students. Hoover was among the youngest of 500 or so students comprising Stanford University’s “pioneer” class. He happened to be the first boy at age 16 to sleep in the Men’s Dormitory at Encina Hall before the university formally opened, therefore he had been known to be its first student. Hoover graduated with a degree in geology in 1895 and worked as a mining engineer in Europe, Australia, China, and Africa. By the age of 30, his reputation as “the great engineer” earned him international prominence. Within ten years, his engineering skills, his skill at managing people and situations, and his entrepreneurial spirit made him a millionaire. He gained more fame as an inspirational volunteer during World War I. Hoover orchestrated the evacuation of 120,000 Americans in Europe. As chairman of the Committee for the Relief of Belgium during the food crisis after the invasion by Germany in 1914, Hoover oversaw the relief of millions who were starving and suffering. Consequently, Leuven named a prominent square after him, Hooverplein. Because of his success in relief efforts, President Wilson appointed him to head the US Food Administration then later, the director general of the American Relief Agency. In 1921, President Harding appointed him Secretary of Commerce, a position he held through the Coolidge Administration. Because of Hoover’s adroitness as a mining engineer as well as efficiency and organization skills in his humanitarian work on behalf of the U.S. government and as appointed Secretary of Commerce, he acquired the nickname “Chief.” In 1927, he spearheaded the government response to the massive Mississippi River flooding in the Midwest and South which galvanized his immense popularity. When Silent Cal announced, “I do not choose to run for president in 1928,” Hoover easily defeated Democrat Alfred E Smith and became the 31st President of the United States. Hoover enjoyed only a few months as president of a prosperous nation. Less than nine months after his inauguration, on October 29, 1929, “Black Tuesday,” the stock-market crash plunged thousands of businesses and individuals into
bankruptcy which ushered in the most protracted economic downturn in American history, the Great Depression. As a result, Hoover’s popularity as the nation’s leader plummeted. He was blamed for many of the nation’s problems, and shanty towns occupied by the homeless became known as Hoovervilles. His reputation as “the great engineer” and “the great humanitarian” were forgotten and replaced with his legacy to American history – the Great Depression or the “Hoover Depression.” He was soundly beaten by Franklin D. Roosevelt in 1932, but remained active in politics. Harry S. Truman appointed former President Hoover as honorary chairman of the Famine Emergency Committee of 1946. Then, in an effort to refine post-World War II federal government to improve administrative efficiency, curb its powers and loosen excessive regulatory control of the private business sector, Truman asked him to chair the Commission on Organization of the Executive Branch. This commission became known as the Hoover Commission. Herbert Hoover died of complications related to an upper gastrointestinal bleed on October 20, 1964 in his suite on the 31st floor of the Waldorf-Astoria Towers. He left us with, “We must not be misled by the claim that the source of all wisdom is in the government.”

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