



Sanjay Nagral, MB, BS, MS and Thomas F. Mueller, MD, PhD

Sanjay Nagral, MB, BS, MS^{1,2} and Thomas F. Mueller, MD, PhD^{2,3}

You both have an “international” background, having been educated around the world. What motivated you getting into medicine/surgery?

SN: I wish I could give a lofty-sounding reason. In reality, when I was growing up in the 80s in India as a middle-class kid, one largely made one of 2 career choices: medicine or engineering (computer science had not arrived yet!). In India, doctors have a lot of social capital. Also, my parents were doctors, and at that time, it was common for children to follow suit. As for my choice of surgery, I am not sure but it was likely a male thing, in addition to peer pressure. Maybe also the influence of dominant surgical personalities that walked the corridors of the hospital I studied. Early in my career in Mumbai's King Edward Memorial Hospital, I was exposed to surgery for portal hypertension. My chief Prof Mathur visited Henri Bismuth's unit in Paris to study liver transplantation. He came back and we started performing liver transplants in dogs (now banned in India). I watched my first liver transplant in 1992 at the New England Deaconess Hospital in Boston. In 1996, I was awarded a scholarship to travel to England for training in liver surgery and transplantation where I spent 2 years at King's College Hospital and the

Royal Free Hospital. I returned to initiate a liver transplant program in a Mumbai hospital.

TFM: My main interests at school were politics, psychology, literature, and ethnology—all not secure options! Medicine included a lot of all the above. During medical school in Marburg, Germany, I had to do night shifts on a peritoneal dialysis unit, primarily changing the dialysate fluid. I vividly remember the excitement of everyone when we heard the telex machine announcing a kidney offer via Eurotransplant. This together with an inspiring lecture series on renal pathophysiology by the clinic director Prof Lange got me hooked on kidney transplantation.

You both have a strong academic interest, in addition to your clinical work. Could you share insights into your research interests and how this work impacts your clinical practice?

SN: I started my career before the internet became a real thing, hunting through big bound volumes in the library. Honestly, there is very little lab research in Indian surgery and I have been mainly involved with clinical studies. My publications are basically case reports and series. I was also guiding the thesis work of surgical trainees and had an interest in teaching. I had the opportunity to travel to big centers in India and the West, which stimulated me. Indian surgery is largely about performing large volumes so even if one is doing some data collection, teaching, and publishing, one becomes an “academic” in a relative sense. I now work in the private sector where extreme monetization can result in a restricted mental bandwidth. I think my work has become more fulfilling because of my involvement in teaching, research, and writing. Besides informing my practice with evidence, it expands my worldview of what is happening in global medicine and surgery. In the last few years, I have been writing on matters of public health, ethics, equity, and corruption in medicine.

TFM: I know it sounds like musings of a megalomaniac. I really think a lot was driven by Hannah Arendt's “*I want to understand*,” everything has to be doubted, if it is true, it should be simple and there must be a unifying theory of all.... Clinical observations in patients I knew very well,

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¹ Department of Surgical Gastroenterology, Jaslok Hospital and Research Centre, Mumbai, India.

² Declaration of Istanbul, Custodian Group.

³ Department 1, Clinic of Nephrology, University Hospital Zurich, Switzerland.

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Correspondence: Thomas F. Mueller, MD, PhD, University Spital Zürich, Rämistrasse 100, 8091 Zürich, Switzerland. (thomas.mueller@usz.ch).

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together with monitoring of long-term changes in lymphocyte subsets after T-cell depletion were instrumental for my academic pathway. I learned about homeostatic proliferation. At the time, we were the only center with long-term data using antithymocyte globulin. I was a young nephrologist but had the opportunity to visit and speak about our findings in many centers around the world and had an opportunity to meet people, I only read about. I made close contacts with inspiring clinicians and translational scientists including Bruce Kaplan and Valeria Mas and had an opportunity to do a research fellowship at the Brigham and Women's Hospital, Boston, for me really the "Athena of the New World." Here I met my wife and through our soccer team, the famous Eurovision, some of my best friends. At the Brigham and Women's Hospital, the exposure to Barry M. Brenner and his unifying theory of hyperfiltration as well as learning with David Perkins about transcriptomics spurred my lifelong interests in physiology and immunology. This experience brought me to Edmonton and the Genome Canada project, led by "THE" Phil Halloran. The translation of these research topics into the clinic, learning from the deep insights and wisdom of our patients with chronic disease, and the dialogue with them are among the most rewarding experiences in my clinical life.

You cochair the Declaration of Istanbul Custodian Group (DICG). What motivated you to take this task on?

SN: I had a longstanding engagement with healthcare ethics and social justice since I was a medical student. Returning to India after training in liver transplantation, I got involved with setting up protocols and creating awareness of brain death. I became joint secretary of the local Organ Procurement Organisation and helped set up deceased donor protocols. I gave several public talks on organ donation and was often asked whether the organs would be sold to the rich. I realized that the image of transplantation had been sullied by the kidney trade that was rampant in India at one time. Soon I was writing in journals as well as newspapers on the need for ethics, equity, and transparency in transplantation. I had heard about the Declaration of Istanbul (DOI). I spoke at a meeting in Karachi on the challenges created by the history of organ trade in South Asia. I was invited by colleagues active in the DICG who were in the audience to become a member. I was soon on the executive committee. It was heartening to know that there were coprofessionals from across the world who were concerned about transplant commercialism and that The Transplantation Society (TTS) and International Society of Nephrology (ISN) had created a group like the DICG to keep the DOI alive. I saw many in the DICG were sticking their necks out on sensitive issues when they could afford to stay silent. This was very inspiring. I became more intimately involved with the DICG and was nominated as Cochair in 2021. I am aware that we are just carrying forward the legacy of very committed and courageous individuals. It is not an easy task as it may not always go down well with colleagues.

TFM: I think my love for transplantation medicine, the global engagement of my wife for the vulnerable, the possibility to go back to my political roots, the belief in solidarity and altruism of so many, and working the last 20 y in living donor programs are all parts that motivate me to work for

the DICG. And as Sanjay beautifully describes, a privilege to work together with people from all over the world who share a common goal to support donation and transplantation by preventing transplant tourism and organ trafficking.

Fifteen years after the publication of the DOI, what do you consider as its main achievements and challenges?

SN AND TFM: The DOI is fundamentally a statement by transplant professionals against transplant commercialism, emphasizing the protection and rights of vulnerable populations against coercion and inducement for donation. This was important because, in some parts of the globe, transplant professionals were either ambivalent or even colluding in unethical acts. By now the DOI has become an influential document, which is seen not only as just another Declaration but a guide to action. The creation of a Custodian group to keep the DOI alive was a critical step from its parent organizations, TTS and ISN. The DOI has informed policy making in several countries. On the practical front, the DICG has intervened in many countries and has used both peer pressure and lobbying with governments and regulators. One of its major interventions was in China, which had to change its policy on the use of death row prisoners as donors. Intervention of DICG has led to curbing organ trafficking in several countries including the Philippines, Costa Rica, and Colombia. We have led interventions in India, Pakistan, and Sri Lanka in the recent past.

Because the DICG does not have direct power of investigation and regulation, it must work through local agencies who do not always respond. Also, the severe lack of self-sufficiency in transplantation in several countries of the world means that a large number of individuals travel for transplantation. Although this often involves legitimate travel, it can be a cover for trafficking. If the local regulators are not keen to act, it can be challenging for the DICG to intervene. The DOI 2008 declaration and its 2018 revision, however, remain an important reference point for all stakeholders. And it should be underlined that in a world that is again regressing to nationalism and borders and beset by conflicts and migration, we as transplant professionals from all across the globe, from diverse religions, cultures, and backgrounds defend basic ethical principles and equity. This is one worthy goal we learn from transplantation—"tolerance" is better than "rejection"!

Looking at the "historic" picture of the DOI's constituting members, not only have faces changed, but also our field has evolved during the last 15 y. How is this "dynamic" picture of transplantation reflected in the activities of the DICG?

SN AND TFM: The dynamic nature of transplantation as well as global events demand that positions of the DICG must be flexible without compromising basic principles. Moreover, actions need to respond to the challenges of global crises that affect transplantation as well as newer developments in the field. For example, we have recognized the impact of migration and conflict on transplantation activities. The DICG is also increasingly addressing emerging areas like paired exchange, donation

after circulatory death, and live donor liver transplantation. In the future, the DICG may also need to address ethical challenges and commerce in xenotransplantation. Globally, inequality, privatization in medicine, commercialization of life, and criminal activities are increasing. All those developments impact transplantation. We are pushing for more collaboration with international organizations including the World Health Organization, United Nations Office on Drugs and Crime, and the Council of Europe as well as nongovernmental organizations. With support from ISN and TTS, we also try to exert peer pressure on their members. The DICG must remain alive on 2 fronts defending fundamental ethical principles with effective interventions on the ground.

You both come from different backgrounds both culturally and professionally. How do you synergize your efforts in your roles as cochairs?

SN: You are right we come from very different cultures, countries, and health systems. We meet online once a week and discuss issues. Sometimes the differing backgrounds are what make it interesting and perhaps even balance out our joint approach.

TFM: Yes, a key question. The accident of birth, my moral baggage as a German, the history of colonialism, and the extreme privileged position to live and work in Switzerland. I often feel that it is better to listen, step back a little bit, and learn from Sanjay, who I realize is in a far more vulnerable position for what we do.

In your daily work, interacting with students and young colleagues, how do your ethical principles impact communication and mentoring?

SN: That is a challenge. It is a difficult tightrope walk between not imposing one's views or taking the moral high ground and yet making young colleagues aware of important issues. Our daily work offers so many ethical conundrums, which in India includes the challenge of

working in a highly inequitable society. We often tend to gloss over them or pretend that they do not exist. I try to articulate them on patient rounds and in other discussions. I am now regularly writing in the lay press. All this may single me out as an "impractical" "idealist, which I constantly reflect on.

TFM: Well, I try to live the work ethic and aim to bring in a global perspective, but most of all I want to show my young colleagues how lucky and right they were to choose to be a physician and that at least for some time they should fully immerse themselves into this triad of patient, teaching, and research.

Although work at your institutions and for the DICG keeps you busy, how do you recharge and enjoy your time away from work?

SN: My way of retreating into a different environment is through books and reading. I am also a connoisseur of world cinema, and the internet has opened so many possibilities for watching them. For many years, I have been writing a column for a prominent Indian newspaper.

TFM: Books (no Kindle allowed) and biking to work ... and these far too rare but so precious moments of closeness and exchange with my wife.

