BEFORE THE MARYLAND HEALTH CARE COMMISSION

IN THE MATTER OF THE APPLICATION OF MEDSTAR FRANKLIN SQUARE MEDICAL CENTER FOR A CON TO ESTABLISH A KIDNEY TRANSPLANT PROGRAM AT FRANKLIN SQUARE CAMPUS IN ROSEDALE	Docket No. 17–03–2405

INTERESTED PARTY COMMENTS OF THE JOHNS HOPKINS HOSPITAL IN OPPOSITION TO MEDSTAR FRANKLIN SQUARE MEDICAL CENTER'S APPLICATION FOR A CERTIFICATE OF NEED TO OPEN A THIRD KIDNEY TRANSPLANT PROGRAM IN THE LIVING LEGACY FOUNDATION DONOR SERVICE AREA

In accordance with COMAR 10.24.01.08F(1)(a)&(b), The Johns Hopkins Hospital requests interested party status in this matter and submits these comments in opposition to the application by MedStar Franklin Square Medical Center and MedStar, Inc. (collectively "MedStar") for a certificate of need to open a new kidney transplant program in Baltimore County.

Introduction

The University of Maryland Medical System and The Johns Hopkins Hospital both operate kidney transplant programs in the donor service area known as the Living Legacy Foundation ("LLF DSA"). These competitive programs operate efficiently and perform a high volume of kidney transplants in the LLF DSA. MedStar, which operates a kidney program in the Washington Regional Transplant Center DSA ("WRTC DSA") at Georgetown University Hospital, has applied to open

a third kidney transplant program within the LLF DSA at Franklin Square in Rosedale, Maryland.

MedStar bases its application on its claims that it can improve on the high volume programs in the LLF DSA by reducing demand for kidney transplants and by increasing the supply of kidneys. MedStar proposes to reduce demand by better managing kidney disease throughout the region. MedStar proposes to increase the supply of organs through no less than eight separate methods. But MedStar doesn't need a certificate of need to better manage kidney disease; it can do that already. And the eight-pronged approach that MedStar outlines in its Application consists of methods that are either already being performed in the LLF DSA or that MedStar has not shown will have a meaningful effect on the supply of kidneys available for transplantation.

Even if MedStar were capable of improving functions in the LLF DSA, MedStar has not even attempted to a show a need for a third program. COMAR 10.24.15(B)(1) & COMAR 10.24.01.08G(3)(b). Nor has it identified any barriers to access, COMAR 10.24.15(B)(3)(b), or sufficiently analyzed the impact that a third program would have on the existing two programs, COMAR 10.24.15(B)(5)(d) & 10.24.01.08G(3)(f). Because MedStar has failed to demonstrate the need for a new kidney transplant program in the LLF DSA, has not shown the existence of any barriers to access, and has not addressed the impact of a new low-volume kidney transplant program, MedStar's application should be denied.

Furthermore, while the University of Maryland has asked the Commission to defer review of both of MedStar's applications until the United Network for Organ Sharing ("UNOS") approves upcoming changes to liver allocation policy in December 2018 and kidney allocation policy in December 2019, and to allow MedStar to update its applications based on those new policies, the Commission should deny both applications without delay. The University of Maryland makes clear that MedStar has failed to show that MedStar can increase organ supply, but hypothesizes that even if MedStar were able to increase the number of donor livers or donor kidneys in the "current Baltimore-area DSA," the modified allocation policies will moot the need for additional programs at Franklin Square. UMMS Mot. 11.

But the University of Maryland misses the point. MedStar has not shown that it can increase the organ supply by opening new programs at Franklin Square. Even if MedStar had carried its burden to show that it can increase supply of either organ by establishing new transplant programs at Franklin Square—a proposition that both interested parties have demonstrated is false—it doesn't matter much what allocation policies are in place or what changes may be in the offing. Rather, MedStar rests its application almost entirely on its claim that it can increase the supply of local organs, making the scheme of allocation in place largely irrelevant. If more local organs cannot actually be procured, then local patients will see no benefit irrespective of the manner in which those organs are distributed. Because MedStar

has failed to make a credible showing that it can increase organ supplies, both of its applications should be denied—and should be denied now.

Background

Maryland is split into two DSAs: the WRTC DSA and the LLF DSA. MedStar proposes to open another kidney transplant program in the LLF DSA, which includes all Maryland counties except Prince George's County, Montgomery County, and Charles County. Those three Maryland counties, along with Washington D.C. and 14 counties in northern Virginia, makeup the WRTC DSA.

I. The Two Kidney Transplant Programs in the LLF DSA.

The LLF DSA contains a population of approximately 3.9 million people. The University of Maryland and Johns Hopkins maintain kidney transplant programs in the LLF DSA that in 2016 performed a combined 410 adult kidney transplants. Application 60, 62.[1]

Johns Hopkins operates four solid-organ transplant programs: liver, kidney–pancreas, lung, and heart. It has, for many years, performed multi-organ transplantation, including heart–lung, heart–kidney, heart–liver, lung–kidney, kidney–pancreas, and liver–kidney. The simultaneous liver–kidney transplant ("SLK" transplants) is Johns Hopkins' most common form of multi-organ transplant. The two programs in the LLF DSA perform an average of 24 SLK transplants annually. (MedStar does not disclose Georgetown's annual averages.)

[1] "Application" refers to MedStar's August 14, 2017 application, followed by the page number. "CQ.I" refers to MedStar's responses to the Commission's first round of completeness questions and "CQ.II" refers to MedStar's responses to the Commission's second round of completeness questions.

Simultaneous Liver Kidney Volume

CY	2013	2014	2015	2016	2017	Avg
JHH	13	12	15	18	15	**14.6**
UMMS	10	5	10	12	14	**10.2**
LLF TOTAL	23	17	25	30	29	**24.8**

Sources: JHH and UMMS internal data.

Both programs participate in various programs designed to match pairs of incompatible donor/recipients, such as the National Kidney Registry.

II. The Non-Military, Adult Transplant Programs in the WRTC DSA.

The WRTC DSA is larger than the LLF DSA; it covers 5.5 million people, including 2.1 million Maryland residents. The WRTC DSA is served by five kidney transplant centers within the DSA. Two of those centers perform transplants on specialized patients, not implicated by MedStar's application: Walter Reed National Military Medical Center transplants only Department of Defense healthcare beneficiaries. Children's National Medical Center is a pediatric kidney transplant program.

The remaining centers, Georgetown University Hospital, Inova Fairfax Hospital, and The George Washington University Hospital Center ("GW") predominantly perform adult, non-military kidney transplants—the type of transplants that MedStar requests to perform at Franklin Square. The table below shows the volume of these transplants between 2010 and 2017 at all five centers. (Children's occasionally performs transplants on teenagers who are categorized as adults.)

		Adult, Non-Military Kidney Transplant Volume							
		2010	2011	2012	2013	2014	2015	2016	2017
WRTC	MGUH	52	57	60	72	84	180	203	201
	WHC	128	81	70	90	69	18	0	0
	Inova	92	106	106	90	98	76	88	86
	GW	0	0	0	0	0	31	55	48
	CNMC	3	4	1	1	0	1	4	3
	TOTAL	**275**	**248**	**237**	**253**	**251**	**306**	**350**	**338**
LLF	JHH	201	209	199	225	245	248	202	185
	UMMS	209	244	295	259	244	260	208	241
	TOTAL	**410**	**453**	**494**	**484**	**489**	**508**	**410**	**426**
Differential (LLF-WRTC)		*135*	*205*	*257*	*231*	*238*	*202*	*60*	*88*

Exhibit (Sourcing Document) at 2A.

Although the WRTC DSA is larger than the LLF DSA, the total number of adult, non-military kidney transplant cases performed per year has lagged behind the total number of cases performed in the LLF DSA. While the total number of cases has converged in recent years, adjusting for the population difference in the two DSAs results in a higher transplant rate in the LLF DSA than the WRTC DSA. Exhibit (Sourcing Document) at 6A.

In short, the two existing centers in the LLF DSA perform kidney transplants on adult, non-military patients at a higher rate than the centers in the WRTC DSA.

III. MedStar's Application for a Third Program in the LLF DSA.

MedStar proposes to begin performing kidney transplants at Franklin Square in 2019. Application 88. It also proposes to open a liver transplant program for which it requires a separate certificate of need. MedStar seeks to perform kidney transplants on adult patients only—not pediatric patients (or military patients). MedStar CQ.I 2. It projects that it will perform 12 adult kidney transplants in 2019;

24 in 2020; and 44 in 2021. Application 61. MedStar states in its companion application to open a liver transplant program at Franklin Square that it will avoid "patients deemed at high risk," MedStar Liver CQ.I 35, but MedStar does not acknowledge in either application that simultaneous liver/kidney transplants are high risk. MedStar leaves unclear, therefore, whether it proposes to perform SLK transplants at Franklin Square.

MedStar's application is grounded on improvements that MedStar alleges it can make to the LLF DSA. It contends that it will lower demand for kidney transplants and claims it can increase the supply of kidneys in this region. Application 4. MedStar asserts that it can lower demand by better managing kidney disease and increase supply through eight specific methods. *Id.* MedStar is unable to quantify the number of kidneys that it can free up through these methods.

MedStar also argues that it will improve access to kidney transplants for certain minority populations in the Baltimore region. Application 14. In that regard, MedStar claims that its program at Georgetown performs transplants on minority populations (including African-American, Hispanic/Latino, and Asian patients) at rates higher than the two programs in the LLF DSA. Application 14; CQ.I 39.

In the end, MedStar rests its application on improvements rather than existing need. *See* Application 4, 8, 57, 60, 79; CQ.I 47, 50, 60, 69. And when asked by the Commission in the first round of completeness questions to explain why the existing programs in the LLF DSA cannot meet the needs of the local population, MedStar pointed only to the nationwide gap between available kidneys and those in need of a

transplant. CQ.I 35-37. In its second round of responses to completeness questions, MedStar attempted to articulate a need argument, claiming that need can be determined by using national rates of dialysis utilization. CQ.II 25. MedStar then assumes that all dialysis patients will "need" a kidney transplant. CQ.II 25. But not all patients on dialysis qualify for a kidney transplant, and some of those patients who do qualify elect not to have one. In short, calculating need in this simplified manner, without regard to the realities of the limited supply of available organs, and how that supply is allocated, suggests incorrectly that every DSA in the country is in need of infinitely more transplant centers.

Argument

I. MedStar Has Failed to Show a Need in the LLF DSA for a Third Kidney Transplant Program.

An applicant for a certificate of need must demonstrate by a preponderance of the evidence that a new organ transplant center is needed. Transplant Chapter 25, COMAR 10.24.15.04B(1).[2] To do so, an applicant must analyze historic utilization rates to show expected future trends. The applicant must also clearly define the population to be served. MedStar barely addresses these requirements, but focuses instead on other arguments that do not establish need, even apart from their deficiencies.

MedStar's principal contention is that it can improve overall performance in the LLF DSA. Application 42. It first asserts that it can reduce the need for kidney

[2] All citations to the "Transplant Chapter" refer to Chapter 15 of the State Health Plan for Facilities and Services: Specialized Health Care Services—Organ Transplant Services, which is incorporated in the Code of Maryland Regulations. COMAR 10.24.15.00.

transplants in the LLF DSA. But MedStar cannot quantify this reduction. And even putting aside the lack of quantification, proposing to reduce a need does not demonstrate a need. After all, MedStar is seeking a certificate of *need*—not a certificate of *improvement*. Indeed, MedStar doesn't require a certificate of need to improve its medical management of patients in the LLF DSA who suffer from kidney disease. Furthermore, because MedStar's eight separate proposals to increase the supply of available organs are unlikely to have any effect, MedStar's position that it will aim to reduce the need for kidney transplants in the LLF DSA conflicts with its stated goal of "increas[ing] the total number of Marylanders who receive liver or kidney transplants." Application 92.

To the extent that MedStar addresses need at all, it has failed to carry its burden. MedStar has not defined the population it proposes to serve. MedStar insists that it can increase the supply of organs through eight separate methods. Application 43. Yet in making these suggestions, MedStar fails to analyze the level of services already being provided in the LLF DSA by the two high-volume, competitive programs. Its application is devoid of a quantitative analysis of the services provided by the two existing programs. It also ignores the fact that the methods it proposes already are performed in the LLF DSA. As a result, the improvements that MedStar proposes are illusory.

A. MedStar Never Defines the Population to Be Served.

MedStar proposes to serve patients in "Central Maryland," which it defines as including Charles County. CQ.I 24. In fact, MedStar's current waitlist has the most

residents from Charles County—more than four times as many from Baltimore City (30 v. 7). But Charles County is part of the WRTC DSA—not the LLF DSA.

On this basis alone, MedStar's application should be denied.

B. MedStar Has Not Shown That It Will Increase Organ Supply.

MedStar identifies eight methods by which it proclaims it will increase the supply of kidneys in the LLF DSA.

1. Active OPO Participation.

MedStar assures the Commission that it already supports the LLF OPO, but contends that if the Commission allows it to open a new kidney transplant program at Franklin Square, it will focus "greater attention" on supporting the LLF OPO. Application 44. There is nothing preventing MedStar from either actively participating in the LLF OPO or from focusing greater attention on the LLF OPO, however. The question whether MedStar's donor hospitals "actively" support the LLF OPO does not address whether a new organ transplant center is needed. Nor does it speak to the level of participation by the existing organ transplant programs in the LLF DSA, which MedStar leaves unaddressed.

2. Ongoing Work to Expand Donor Criteria.

MedStar asserts that its researchers at Georgetown are currently working on ways to expand the universe of eligible kidney donors. Application 45. MedStar also asserts that Georgetown does a good job of accepting kidney donors when compared with all of the programs in Region 2 and in the nation. Application 45-46; CQ.I 37. MedStar also touts Georgetown's "aggressive" use of organs from outside of the

WRTC DSA. Application 47. It contends that Georgetown's "clinical expertise and practices that have resulted in [Georgetown's] superior rate of utilization of high [risk] organs," can be replicated at Franklin Square. Application 48.

At no point, however, does MedStar address the acceptance rates or utilization rates of the two existing programs in the LLF DSA. Instead, MedStar compares its program at Georgetown to regional and national metrics, and suggests that a new organ transplant program at Franklin Square can rival the program at Georgetown. Yet even if Georgetown's program can be replicated in Baltimore County, MedStar's approach tells us nothing about need in the LLF DSA, let alone confronts how the existing programs already are meeting that need.

MedStar elides the fact that Johns Hopkins already is making the most of local liver availability. In fact, between 2012 and 2017, Johns Hopkins imported between 47% and 62% of the kidneys it has transplanted.[3] These include kidneys that were turned down by other transplant programs. Accordingly, Johns Hopkins is meeting the need of the local population by consistently importing a significant number of kidneys from other parts of the country and making optimal use of marginal organs.

3. Living Donor Kidney Transplants

MedStar argues that it will increase the supply of kidneys in the LLF DSA by performing live donor kidney transplants at Franklin Square. Application 49; CQ.I 37. MedStar trumpets Georgetown's trend in performing live kidney transplants in comparison with all of the centers located in Maryland, including one located in the WRTC DSA (MedStar Washington Hospital Center). MedStar concludes that this

[3] Source: LLF OPO.

comparable growth pattern means that a new program at Franklin Square will result in "effectively increasing the supply of donor organs for Marylanders." Application 50.

Yet again, MedStar has brushed over any analysis of what is actually being done in the existing programs within the LLF DSA. MedStar selects a five and half year period, and concludes that Georgetown's numbers show a favorable growth trend. But during this same time period, the University of Maryland and Johns Hopkins performed 331 more adult, non-military live kidney transplants than the WRTC centers. That's an average of 55.2 additional live donor transplants per year than the WRTC, despite the fact that the WRTC has 1.6 million more residents and three kidney transplant programs which perform adult, non-military kidney transplants. (GW opened in 2015.)

Adult, Non-Military Living Donor Kidney Transplants									
DSA	2012	2013	2014	2015	2016	2017	TOTAL	Differential	Avg Annual Differential
WRTC TOTAL	86	79	98	106	110	125	604	-	-
LLF TOTAL	184	189	163	167	116	116	935	331	55.2

Note 1: WRTC Adult, Non-Military volume performed at Inova, George Washington (starting in 2015), Georgetown, Washington HC (stopped transplanting live donors in 2012)

Note 2: LLF Adult, Non-Military volume performed at Johns Hopkins and UMMS

Exhibit (Sourcing Document) at 10A.

Given the disparity in actual transplants performed, it's no surprise that MedStar includes a program outside of the LLF DSA and retreats to analyzing the percentages of transplants in each DSA that are living donor transplants, as opposed to comparing total transplant volume between the two DSAs.

4. Participation in the National Kidney Registry.

The National Kidney Registry is a nonprofit organization which helps to facilitate paired kidney donations. Paired kidney donations are also known as "kidney swaps." These swaps allow for transplants between willing, but incompatible living kidney donors and intended recipients. This is achieved by swapping organs between two or more pairs of incompatible donor–recipients.

The National Kidney Registry is one of the three largest networks in the United States for identifying incompatible pairs for kidney swaps. The other two are the Alliance for Paired Donation and the New England Program for Kidney Exchange. Until 2013, Johns Hopkins maintained its own network. In 2013, Johns Hopkins joined the National Kidney Registry, and has performed 76 transplants through the National Kidney Registry.[4] About 88% of Johns Hopkins' exchanges take place through the National Kidney Registry. The University of Maryland also participates in the National Kidney Registry, and has, on occasion, engaged directly with Johns Hopkins in kidney swaps.

In light of the fact that the two existing programs in the LLF DSA already participate in the National Kidney Registry, it's difficult to see what material advantage Franklin Square's anticipated participation provides. Patients who list with either Johns Hopkins or the University of Maryland already have access to the National Kidney Registry and other paired exchange programs.

MedStar's assertion that "surgical unavailability declines" resulted in "turndowns of otherwise medically suitable kidneys for patients awaiting

[4] Internal JHH data.

transplant," Application 52, is false. These so-called "turndowns" resulted from the unavailability of an operating room on a particular day. Paired exchanges involve live kidney donors, and require significant coordination, and they sometimes need to be rescheduled. No "medically suitable kidneys" are ever turned away when a paired exchange is rescheduled. To the contrary, each and every one of the transplants referenced in this report was rescheduled and performed with the same participants. Any suggestion by MedStar to the contrary is disingenuous.

5. Desensitization Protocols

A "sensitized" transplant patient is a patient who carries antibodies that will attack foreign tissue, such as a transplanted kidney. Around 30% of transplant patients have been sensitized through a prior exposure to foreign tissue. MedStar asserts that Georgetown is "one of the few programs in the nation that offers desensitization protocols." Application 53; CQ.I 37.

But once again, MedStar breezes by any discussion of the existing programs in the LLF DSA. In fact, both the University of Maryland and Johns Hopkins perform desensitization protocols. In fact, Johns Hopkins pioneered methods of desensitization utilizing plasmapheresis through which the antibodies are removed, allowing for kidney compatibility. These seminal protocols were published in the New England Journal of Medicine and the Journal of the American Medical Association. Montgomery, Robert A., *et al.*, Desensitization in HLA-Incompatible Kidney Recipients and Survival, N. Engl. J. Med 318 (July 28, 2011); Montgomery, Robert A., *et al.*, Clinical Results from Transplanting Incompatible Live Kidney

Donor/Recipient Pairs Using Kidney Paired Donation, JAMA 1655 (Oct. 5, 2005). It is, accordingly, improbable that MedStar's implementation of desensitization protocols at Franklin Square will add anything to what already exists in the area or change the supply of kidneys in the LLF DSA.

6. Implementation of Paired Kidney Exchanges.

As noted above in Part II.A.4, concerning the National Kidney Registry, paired kidney exchanges, or "kidney swaps," allow for transplants between willing, but incompatible living donors and intended recipients. This is achieved by swapping organs between two or more pairs of incompatible donor–recipients. MedStar states that Georgetown maintains a paired kidney exchange program for the Washington metropolitan area, and suggests that Franklin Square will establish a similar program "for Marylanders." Application 56; CQ.I 37.

But both of the programs in the LLF DSA already operate kidney exchange programs and participate in the National Kidney Registry. As a result, a MedStar program at Franklin Square will have no benefit to residents of the LLF DSA. Put simply, a third program is not needed.

7. The National Consensus Conference.

For its seventh method to increase the supply of kidneys in the LLF DSA, MedStar describes the attendance list and planning efforts related to a conference concerning organ utilization in transplantation. Application 56. The conference was held in Baltimore. Beyond the location of the conference, there is no connection to

the LLF DSA, and this conference has nothing to do with whether a third kidney transplant program is needed in the LLF DSA.

8. MedStar's Expectations for Future Research.

Finally, MedStar reports that Georgetown performs interdisciplinary kidney-related research. Application 57-58. MedStar asserts in its Application—without elaboration or support—that "[Georgetown] expects ongoing research to produce future innovations that will further increase the supply of donor organs for patients at [Franklin Square]." Application 58; CQ.I 38.

As with the seven other purported methods through which MedStar claims it can increase the supply of kidneys in the LLF DSA, MedStar's expectation that future research might somehow, some way, increase supply someday, is unaccompanied by analysis of the ongoing research efforts in the LLF DSA, quantification, or anything resembling analytical rigor.

In sum, the Commission should dismiss MedStar's contention that MedStar will increase the availability of donor organs through eight separate methods. MedStar has failed to show how any one of the eight methods will have any effect whatsoever on the supply of organs in the LLF DSA.

C. Dialysis Treatment.

In its responses to the Commission's second set of completeness questions, MedStar calculates that in 2017, there was a need for 5,740 kidney transplants in the LLF DSA. CQ.II 25. (MedStar's table is included below)

Table 5. Kidney Transplant Need in the LLF OPO Geography
Historical Trends & Projection

	Historic				Forecast	
Metric	CY2010	CY2015	CY2016	CY2017	CY2021	CY2025
Population[1]	3,791,804	3,890,944	3,914,075	3,937,205	4,031,891	4,133,066
Renal Dialysis Use Rate/1000 Pop.[2]	1.458	1.458	1.458	1.458	1.458	1.458
Transplant Need	5,528	5,673	5,707	5,740	5,878	6,026

[1]Source: LLF OPO population (All Maryland excluding Charles, Montgomery and Prince Georges County): 2017 Total Population Projections for Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Other and Hispanic by Age and Gender (August 2017), Prepared by the Maryland Department of Planning, Projections and State Data Center
[2]Source: U.S. Population: https://www.census.gov/quickfacts/fact/table/US/PST045216; National Kidney Dialysis Utilization: https://www.niddk.nih.gov/health-information/health-statistics/kidney-disease.

MedStar arrives at this stunning conclusion by assuming that every dialysis patient would benefit from a kidney transplant. While it is true that some dialysis patients could benefit from a kidney transplant, MedStar's analysis is out of touch with how patients are selected for kidney transplants. The Transplant Chapter requires that an applicant establish need based on real world data, specific to the health planning region in which the proposed organ transplant service will be located (LLF DSA)—not unrealistic assumptions using national rates. For that reason, the Commission should reject MedStar's unsupported analysis out of hand.

MedStar's Methodology Applied to the WRTC DSA and USA			
Population	CY2017	Renal Dialysis Use Rate/1000 Assumption	Kidney Transplants "Needed"
LLF DSA	3,937,205	1.458	5,740
WRTC DSA	5,559,847	1.458	8,106
USA	325,139,271	1.458	474,053

If the Commission were to take MedStar's methodology seriously, it would establish that in 2017, 8,106 kidney transplants were needed in the WRTC DSA,

compared to the 338 adult, non-military transplants that were actually performed. This suggests a gap of 7,768 transplants per year, which would require 77 additional kidney transplants centers in the WRTC, performing 100 transplants per year. Nationally, the methodology would establish that in 2017, 474,053 kidney transplants were needed in the U.S., compared to the 19,849 that were performed and in a country where only 95,226 people are on the national waiting list. Because MedStar's analysis produces absurd results, it must be rejected.

In sum, MedStar's proposals to offer improvements to the kidney transplant services already offered in the LLF DSA do not demonstrate a need for a third program. In any event, the improvements that MedStar claims it can achieve are illusory, while its attempt to show need by proposing to perform a transplant on every dialysis patient is unsupported, unexplained, and unrealistic.

II. MedStar Fails to Identify Barriers to Access.

MedStar concedes that it cannot identify barriers to access in the LLF DSA. Application 67. Rather, in keeping with its suggestions about how to improve the LLF DSA, MedStar asserts that a third program in the LLF DSA would allow for "additional access." Application 67. MedStar incorporates by reference the access arguments it made in its liver application. In that application, MedStar stated that it can improve access for: (a) MedStar patients in the LLF DSA; (b) patients who require simultaneous liver and kidney transplants; (c) all patients who cannot obtain a transplant because of the national shortage of available organs; and (d) minority populations in Baltimore City. MedStar Liver Application 73.

Yet it is not enough for an applicant to suggest ways to improve access. Rather, an applicant must present "evidence to demonstrate that barriers to access exist," and "a credible plan to address those barriers." Transplant Chapter 27, COMAR 10.24.15.04B(3)(b). MedStar fails to deliver either. An analysis of MedStar's access improvement arguments shows that there are no barriers to address.

A. There is No Barrier to Access for Children or Multi-Organ Transplant Patients.

MedStar states in its Application that the addition of a kidney transplant program will address a "[g]ap in access for . . . underserved populations such as children and those requiring multi-organ transplant." Application 65.

First, MedStar does not substantiate its claim that children face an access barrier in the LLF DSA. Even if it had, MedStar is not proposing to perform transplants on children at Franklin Square.

Second, both existing programs in the LLF DSA provide liver-kidney transplants. MedStar eschews any quantitative analysis of these procedures and never addresses how many kidney–liver transplants it will provide at Franklin Square—if any—despite the fact that the combination of these transplants is a purported cornerstone of its dual applications to open liver and kidney transplant programs at Franklin Square. CQ.I 7. Even more puzzling is that in its liver application, MedStar states that high risk liver transplant cases will be transferred to Georgetown—never acknowledging that simultaneous liver–kidney transplants are high risk.

B. MedStar Cannot Resolve Any National "Organ Availability" Barrier.

MedStar cites the limited national supply of organs as a barrier. CQ.I 26. MedStar points to Georgetown's supposed track record of optimal organ use to suggest that it can make better use of that limited supply than either Johns Hopkins or the University of Maryland. But in making this claim, MedStar offers no data concerning organ use, either by the centers in the LLF DSA or by Georgetown. The data that MedStar does offer, concerns the number of liver transplants performed in Maryland—not kidneys. CQ.I 27.

C. There is No Barrier to Access for Minority Patients in the LLF DSA.

MedStar claims that "minorities in Baltimore receive transplants at lower rates than non-minorities." Application 92. MedStar is wrong. The populations of the two DSAs differ by 1.6 million people (3.9 million and 5.5 million respectively). Minority patients are transplanted at a higher rate in the LLF DSA than the WRTC DSA. The following chart shows the rate of transplant broken down by race and ethnicity. It shows that African-American patients are transplanted at a rate of 113.8 PMP in the WRTC DSA and 214.5 PMP in the LLF DSA. This means that—contrary to MedStar's claims—African Americans are transplanted at nearly twice the rate in the LLF DSA as they are in the WRTC DSA.

Centers	Adult, Non-Military Kidney Recipient Ethnicity	2017 Adult, Non-Military Kidney Transplants	2017 Percent of Total Adult, Non-Military Kidney Transplants	2017 DSA Population	2017 DSA Population Percent of Total	2017 Transplant Rate Per Million DSA Population
MGUH Inova GW CNMC	All Ethnicities	338	100%	5,559,847	100%	60.8
	White	88	26%	2,348,818	42%	37.5
	Black	166	49%	1,458,935	26%	113.8
	Hispanic	51	15%	930,477	17%	54.8
	Asian & Pacific Islander	30	9%	626,213	11%	47.9
	Am. Indian/Alaska Native*	1	0%	195,404	4%	-
	Multiracial*	2	1%			-
JHH UMMS	All Ethnicities	426	100%	3,924,235	100%	108.6
	White	187	44%	2,445,569	62%	76.5
	Black	204	48%	951,216	24%	214.5
	Hispanic	17	4%	227,092	6%	74.9
	Asian & Pacific Islander	16	4%	189,640	5%	84.4
	Am. Indian/Alaska Native*	1	0%	110,718	3%	-
	Multiracial*	1	0%			-

* Population "All Others"

Exhibit (Sourcing Document) at 14A.

Accordingly, there is no barrier to access for African Americans in the LLF DSA.

III. MedStar Fails to Meaningfully Analyze the Impact of a Third Program.

MedStar claims that its proposed third program "will result in very modest volume shifts from the two transplant centers that serve Maryland residents." Application 60. MedStar reasons that because the University of Maryland and Johns Hopkins perform well in excess of the minimum volume thresholds, a shift in volume from the existing centers will be immaterial. Application 60; CQ.I 51. But MedStar has estimated volume shifts based on the number of MedStar patients referred to the University of Maryland or Johns Hopkins. Application 60. And yet MedStar does not maintain data on those referrals, so it was only able to guess the number. Nor does MedStar ever make clear how the number of referrals relates to

the number of transplants performed. Rather, its analysis is based on guesswork. And it's not even clear that MedStar is guessing at the right number.

MedStar assumes, without any basis, that it "would expect that the existing programs would be able to replace the small number of cases with additional transplant volume." CQ.I 46, 50. And when asked directly by the Commission whether it projects to serve patients who are not currently receiving transplants, MedStar does not say one way or the other. CQ.I 41. Its non-response is a tacit admission that it cannot project that its proposed new program will meet any need in the LLF DSA that is not already being served.

On top of that, MedStar's proposal to add a third program that would perform transplants on a small scale and at a fraction of the number of transplants currently being performed by the two existing programs in the LLF DSA is inconsistent with the State Health Plan. That is because the State Health plan favors a small number of high volume organ transplant programs. State Health Plan 13.

In the end, MedStar's impact analysis falls short, and its application should be denied on this independent basis.

Conclusion

MedStar's application fails to meet the fundamental requirements for a certificate of need. MedStar does not demonstrate need under either COMAR 10.24.15(B)(1) or COMAR 10.24.01.08G(3)(b). Rather it attempts to show the potential for making modest improvements. But even the marginal improvements it describes prove to be illusory. Accordingly, MedStar's application must be denied.

Even if MedStar had shown a need for a third kidney transplant program in the LLF DSA, MedStar's application should be denied for additional, independent reasons: MedStar hasn't shown the existence of barriers to access in the LLF DSA under COMAR 10.24.15(B)(3)(b), and it has failed to sufficiently analyze the impact that a third program would have on the existing kidney transplant programs maintained by the University of Maryland and The Johns Hopkins Hospital as required by COMAR 10.24.15(B)(5)(d) and 10.24.01.08G(3)(f).

For each of these reasons, MedStar's application should be denied.

Dated: October 15, 2018
Baltimore, Maryland

Respectfully submitted,

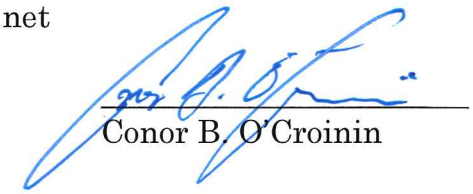
CONOR B. O'CROININ
MARTIN S. HIMELES, JR.
Zuckerman Spaeder LLP
100 East Pratt Street, Suite 2440
Baltimore, Maryland 21202

Counsel for Johns Hopkins Hospital

Certificate of Service

I certify that I caused a copy of the foregoing interested party comments to be served by electronic and first class mail on:

Patricia G. Cameron
Director, Regulatory Affairs
MEDSTAR HEALTH
10980 Grantchester Way
Columbia, Maryland 21044
patricia.cameron@medstar.net



Conor B. O'Croinin

AFFIRMATION

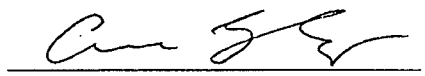
I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.

Spencer Wildonger
Director of Health Planning
Health Care Transformation and Strategic Planning
Johns Hopkins Health System

10/15/2018
Date

AFFIRMATION

I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.



10/15/2018

Anne Langley
Senior Director, Health Planning and Community Engagement
Health Care Transformation and Strategic Planning
Johns Hopkins Health System

Date

AFFIRMATION

I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.

Terry Langbaum
Administrative Director
Johns Hopkins Comprehensive Transplant Center

10/15/18
Date

AFFIRMATION

I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.

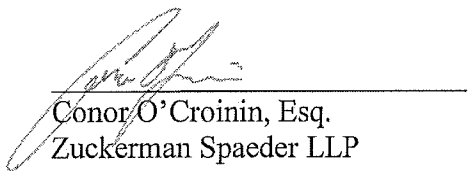
October 15, 2018

Benjamin Philosophe
Surgical Director
Johns Hopkins Comprehensive Transplant Center

Date

AFFIRMATION

I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.



Conor O'Croinin, Esq.
Zuckerman Spaeder LLP

15 Oct 2018
Date

AFFIRMATION

I hereby declare and affirm under the penalties of perjury that the facts stated in these comments and its attachment are true and correct to the best of my knowledge, information, and belief.

Martin S. Himeles, Jr. Esq.
Zuckerman Spaeder LLP

10/15/2018
Date

Exhibit

Data Sourcing

Adult, Non-Military Kidney Transplant Volume

		Adult, Non-Military Kidney Transplant Volume							
		2010	2011	2012	2013	2014	2015	2016	2017
WRTC	MGUH	52	57	60	72	84	180	203	201
	WHC	128	81	70	90	69	18	0	0
	Inova	92	106	106	90	98	76	88	86
	GW	0	0	0	0	0	31	55	48
	CNMC	3	4	1	1	0	1	4	3
	TOTAL	**275**	**248**	**237**	**253**	**251**	**306**	**350**	**338**
LLF	JHH	201	209	199	225	245	248	202	185
	UMMS	209	244	295	259	244	260	208	241
	TOTAL	**410**	**453**	**494**	**484**	**489**	**508**	**410**	**426**
Differential (LLF-WRTC)		*135*	*205*	*257*	*231*	*238*	*202*	*60*	*88*

Source:
OPTN Build Advanced Website:
https://optn.transplant.hrsa.gov/data/viewdata-reports/build-advanced/

Methodology:
Step 1: For "Choose a data category", Select "Transplant"
Step 2: For "Choose report columns", Select "Transplant Year (30 items)"
Step 3: For "Choose report rows", Select "Transplant Center (343 items)"
For "Organ", Select "Kidney"
For "Area of Center", Select "Maryland"*
For "Recipient Age", Select "Adult"
To run the report, click "Go" blue button

*Repeat all steps above, substituting "District of Columbia" and "Virginia" for "Maryland", to produce a volumes report for the WRTC Centers. Exclude military cases.

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = Maryland, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	11,061	333	426	410	508	489	484	494	453	410	495	379	422	438	392	393	350	436	555	596	508	362	311	276	233	195	187	144	106	88	86	102
MDBC-TX1 Johns Hopkins Bayview Med Ctr	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	32	31	35	33	24	19	26	26
MDJH-TX1 Johns Hopkins Hospital	4,450	166	185	202	248	245	225	199	209	201	242	161	175	193	175	160	161	169	157	156	156	110	110	64	58	49	46	35	40	57	37	59
MDNI-TX1 Warren Grant Magnuson Clinical Ctr	148	0	0	0	0	0	0	0	0	0	0	0	5	16	16	18	8	17	21	25	22	0	0	0	0	0	0	0	0	0	0	0
MDSG-TX1 Shady Grove Adventist Hosp	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	5	2	2	0	0	0	0	0	0
MDUM-TX1 Univ of Maryland Med System	6,191	167	241	208	260	244	259	295	244	209	253	218	242	229	201	215	181	250	377	415	330	249	198	176	141	113	106	76	42	12	23	17

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = District of Columbia, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	5,887	227	299	310	258	176	187	159	165	199	225	178	155	207	216	174	178	171	162	162	198	196	130	152	161	158	148	198	204	166	176	192
DCCH-TX1 Children's National Medical Ctr	46	1	3	4	1	0	1	1	4	3	2	1	1	4	0	0	0	1	4	3	2	1	0	0	1	0	2	0	3	1	2	0
DCGU-TX1 Georgetown Univ Med Ctr	1,876	159	201	203	180	84	72	60	57	52	72	41	32	47	38	38	38	47	38	47	65	48	15	25	27	32	21	25	31	19	31	31
DCGW-TX1 George Washington University Hospital	225	40	48	55	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7	3	4	13	6	6	10
DCHU-TX1 Howard University Hospital	216	0	0	0	0	0	0	0	0	1	13	8	4	13	11	9	9	6	4	5	10	9	6	7	7	10	14	13	15	11	14	17
DCWH-TX1 Washington Hospital Center	2,750	0	0	0	18	69	90	70	81	128	110	100	98	109	135	96	109	97	99	99	109	94	82	94	102	98	87	131	121	107	106	111
DCWR-TX1 Walter Reed National Military	774	27	47	48	28	23	24	28	23	15	28	28	20	34	32	31	22	20	17	8	12	44	27	25	23	11	21	25	21	22	17	23

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = Virginia, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	9,786	397	498	421	392	360	361	412	391	410	409	425	415	450	423	377	360	338	319	290	259	265	279	244	196	199	173	160	146	188	123	106
VACH-TX1 Children's Hosp of King's Daughters	15	2	2	2	1	0	1	0	0	1	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VAFH-TX1 Inova Fairfax Hosp	1,968	76	86	88	76	98	90	106	106	92	84	92	96	75	74	77	85	98	92	85	67	50	49	40	30	30	19	7	0	0	0	0
VAHD-TX1 Henrico Doctors' Hospital	1,214	17	41	25	22	22	35	53	47	52	48	48	39	58	58	57	47	58	65	60	46	49	54	56	40	40	28	25	17	7	0	0
VAMC-TX1 MCV Hospitals	2,682	148	143	150	152	125	121	133	122	128	135	108	102	105	111	95	98	80	67	61	50	52	51	37	28	34	40	36	30	56	45	39
VANG-TX1 Sentara Norfolk General Hospital	1,810	85	94	58	62	62	52	60	45	73	66	77	79	110	90	85	66	44	45	33	38	50	46	30	30	41	36	44	48	71	44	46
VARM-TX1 Carilion Roanoke Memorial Hosp	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	19	18	20	11	0	0	0	0	0
VAUV-TX1 Univ of Virginia HSC	2,021	69	132	98	79	53	62	60	71	64	74	98	99	102	88	63	64	58	50	51	58	64	71	62	50	34	39	48	51	54	34	21

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Adult, Non-Military Live Donor Kidney Transplant Volume

Adult, Non-Military Living Donor Kidney Transplants									
DSA	2012	2013	2014	2015	2016	2017	TOTAL	Differential	Avg Annual Differential
WRTC TOTAL	86	79	98	106	110	125	604	-	-
LLF TOTAL	184	189	163	167	116	116	935	331	55.2

Note 1: WRTC Adult, Non-Military volume performed at Inova, George Washington (starting in 2015), Georgetown, Washington HC (stopped transplanting live donors in 2012)

Note 2: LLF Adult, Non-Military volume performed at Johns Hopkins and UMMS

Source:
OPTN Build Advanced Website:
https://optn.transplant.hrsa.gov/data/viewdata-reports/build-advanced/

Methodology:
Step 1: For "Choose a data category", Select "Transplant"
Step 2: For "Choose report columns", Select "Transplant Year (30 items)"
Step 3: For "Choose report rows", Select "Transplant Center (343 items)"
For "Organ", Select "Kidney"
For "Area of Center", Select "Maryland"*
For "Recipient Age", Select "Adult"
For "Donor", Select "Live Donor"
To run the report, click "Go" blue button

*Repeat all steps above, substituting "District of Columbia" and "Virginia" for "Maryland", to produce a volumes report for the WRTC Centers. Exclude military cases.

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = Maryland, Recipient Age = Adult, Donor Type = Living Donor, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	4,161	106	116	116	167	163	189	184	148	146	168	148	151	201	183	195	174	184	220	242	228	180	167	104	83	52	51	38	14	12	14	17
MDBC-TX1 Johns Hopkins Bayview Med Ctr	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	8	6	3	8	4	1	1	6
MDJH-TX1 Johns Hopkins Hospital	1,873	52	39	50	66	86	88	83	78	89	94	85	95	129	111	98	93	86	77	72	74	59	53	24	25	18	14	6	4	9	7	9
MDNI-TX1 Warren Grant Magnuson Clinical Ctr	103	0	0	0	0	0	0	0	0	0	0	0	2	10	12	16	7	13	15	18	10	0	0	0	0	0	0	0	0	0	0	0
MDSG-TX1 Shady Grove Adventist Hosp	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	1	0	0	0	0	0	0
MDUM-TX1 Univ of Maryland Med System	2,131	54	77	66	101	77	101	101	70	57	74	63	54	62	60	81	74	85	128	152	144	119	113	68	49	27	34	24	6	2	6	2

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = District of Columbia, Recipient Age = Adult, Donor Type = Living Donor, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	2,307	101	110	96	83	57	45	44	54	89	107	77	78	89	88	84	109	97	92	103	115	102	40	61	54	52	55	65	57	47	31	25
DCCH-TX1 Children's National Medical Ctr	14	0	0	1	1	0	0	1	0	1	0	0	0	3	0	0	0	1	0	1	1	1	0	0	1	0	1	0	1	0	0	0
DCGU-TX1 Georgetown Univ Med Ctr	761	77	77	66	62	47	39	24	26	31	46	23	12	16	12	11	13	13	11	23	41	28	7	10	7	2	4	11	9	7	4	2
DCGW-TX1 George Washington University Hospital	59	13	18	14	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1	0	0
DCHU-TX1 Howard University Hospital	63	0	0	0	0	0	0	0	0	0	7	3	3	6	2	3	2	2	3	1	7	4	1	1	1	1	4	2	1	5	2	2
DCWH-TX1 Washington Hospital Center	1,207	0	0	0	0	0	0	14	20	53	50	46	54	54	60	58	86	70	72	75	63	53	28	46	42	47	41	52	43	34	25	21
DCWR-TX1 Walter Reed National Military	203	11	15	15	12	10	6	5	8	4	4	5	9	10	14	12	8	11	6	3	3	16	4	4	3	0	4	0	1	0	0	0

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Build Advanced

Transplant : Transplant Year by Transplant Center

U.S. Transplants Performed : January 1, 1988 - September 30, 2018

For Organ = Kidney, State = Virginia, Recipient Age = Adult, Donor Type = Living Donor, Format = Portrait

Based on OPTN data as of October 11, 2018

	To Date	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
All Centers	3,508	108	149	132	114	133	124	138	149	138	156	160	161	182	200	191	172	163	163	158	117	88	81	76	68	43	29	31	17	27	23	17
VACH-TX1 Children's Hosp of King's Daughters	10	2	1	2	1	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VAFH-TX1 Inova Fairfax Hosp	904	29	30	30	36	51	40	48	53	42	39	38	41	36	33	36	46	49	60	63	27	20	20	12	12	6	3	4	0	0	0	0
VAHD-TX1 Henrico Doctors' Hospital	445	6	18	14	7	11	14	24	21	14	22	21	16	24	27	27	16	23	36	28	19	10	9	10	7	5	3	9	1	3	0	0
VAMC-TX1 MCV Hospitals	785	29	33	34	35	44	40	35	40	34	35	30	27	30	34	46	46	38	24	23	24	17	11	10	11	10	6	3	5	11	9	11
VANG-TX1 Sentara Norfolk General Hospital	613	20	28	25	19	16	12	17	19	27	29	28	36	45	64	52	35	18	14	12	20	17	16	11	12	7	1	4	1	5	2	1
VARM-TX1 Carilion Roanoke Memorial Hosp	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	11	10	9	9	0	0	0	0	0
VAUV-TX1 Univ of Virginia HSC	705	22	39	27	16	11	17	14	16	21	30	43	41	47	40	30	29	35	29	32	27	24	18	22	16	6	7	11	10	8	12	5

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Adult, Non-Military Live Donor Kidney Transplant Volume

Centers	Adult, Non-Military Kidney Recipient Ethnicity	2017 Adult, Non-Military Kidney Transplants	2017 Percent of Total Adult, Non-Military Kidney Transplants	2017 DSA Population	2017 DSA Population Percent of Total	2017 Transplant Rate Per Million DSA Population
MGUH Inova GW CNMC	All Ethnicities	338	100%	5,559,847	100%	60.8
	White	88	26%	2,348,818	42%	37.5
	Black	166	49%	1,458,935	26%	113.8
	Hispanic	51	15%	930,477	17%	54.8
	Asian & Pacific Islander	30	9%	626,213	11%	47.9
	Am. Indian/Alaska Native*	1	0%	195,404	4%	-
	Multiracial*	2	1%			-
JHH UMMS	All Ethnicities	426	100%	3,924,235	100%	108.6
	White	187	44%	2,445,569	62%	76.5
	Black	204	48%	951,216	24%	214.5
	Hispanic	17	4%	227,092	6%	74.9
	Asian & Pacific Islander	16	4%	189,640	5%	84.4
	Am. Indian/Alaska Native*	1	0%	110,718	3%	-
	Multiracial*	1	0%			-

* Population "All Others"

Adult, Non-Military Living Donor Kidney Transplants									
DSA	2012	2013	2014	2015	2016	2017	TOTAL	Differential	Avg Annual Differential
WRTC TOTAL	86	79	98	106	110	125	604	-	-
LLF TOTAL	184	189	163	167	116	116	935	331	55.2

Note 1: WRTC Adult, Non-Military volume performed at Inova, George Washington (starting in 2015), Georgetown, Washington HC (stopped transplanting live donors in 2012)

Note 2: LLF Adult, Non-Military volume performed at Johns Hopkins and UMMS

Source:
OPTN Build Advanced Website:
https://optn.transplant.hrsa.gov/data/viewdata-reports/build-advanced/

Methodology:
Step 1: For "Choose a data category", Select "Transplant"
Step 2: For "Choose report columns", Select "Transplant Year (2016 - 2017)"
Step 3: For "Choose report rows", Select "Transplant Center (343 items)", Select "Recipient Ethnicity (9 items)"
For "Organ", Select "Kidney"
For "Area of Center", Select "Maryland"*
For "Recipient Age", Select "Adult"
To run the report, click "Go" blue button

*Repeat all steps above, substituting “Region 2” for “Maryland”, to produce a volumes report for the WRTC Centers. Exclude military cases.

Population data sourced to Truven Health Analytics

Build Advanced

Transplant : Transplant Year (2016 - 2017) by Transplant Center, Recipient Ethnicity

U.S. Transplants Performed : January 1, 1988 - August 31, 2018

For Organ = Kidney, State = Maryland, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of September 23, 2018

		2017	2016
All Centers	All Ethnicities	426	410
	White	187	187
	Black	204	191
	Hispanic	17	13
	Asian	15	15
	American Indian/Alaska Native	1	2
	Pacific Islander	1	1
	Multiracial	1	1
MDJH-TX1 Johns Hopkins Hospital	All Ethnicities	185	202
	White	82	100
	Black	83	82
	Hispanic	8	11
	Asian	10	6
	American Indian/Alaska Native	1	1
	Pacific Islander	1	1
	Multiracial	0	1
MDUM-TX1 Univ of Maryland Med System	All Ethnicities	241	208
	White	105	87

		2017	2016
	Black	121	109
	Hispanic	9	2
	Asian	5	9
	American Indian/Alaska Native	0	1
	Multiracial	1	0

Data subject to change based on future data submission or correction.

Organ Procurement & Transplantation Network

Build Advanced

Transplant : Transplant Year (2016 - 2017) by Transplant Center, Recipient Ethnicity

U.S. Transplants Performed : January 1, 1988 - August 31, 2018

For Organ = Kidney, Region = Region 2, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of September 23, 2018

		2017	2016
All Centers	All Ethnicities	2,390	2,329
	White	1,132	1,095
	Black	884	921
	Hispanic	199	190
	Asian	153	112
	American Indian/Alaska Native	8	4
	Pacific Islander	3	3
	Multiracial	11	4
DCCH-TX1 Children's National Medical Ctr	All Ethnicities	3	4
	White	0	1
	Black	2	2
	Hispanic	1	1
DCGU-TX1 Georgetown Univ Med Ctr	All Ethnicities	201	203
	White	54	50
	Black	114	124
	Hispanic	20	19
	Asian	11	10
	American Indian/Alaska Native	1	0
	Multiracial	1	0
DCGW-TX1 George Washington University Hospital	All Ethnicities	48	55
	White	9	8
	Black	32	38
	Hispanic	3	7
	Asian	3	2
	Multiracial	1	0
DCWR-TX1 Walter Reed National Military	All Ethnicities	47	48
	White	13	14
	Black	26	28
	Hispanic	3	3
	Asian	4	3
	Multiracial	1	0
DEAI-TX1 Alfred I duPont Hospital for Children	All Ethnicities	1	0
	Asian	1	0
DECC-TX1 Christiana Care Health Services	All Ethnicities	28	24
	White	18	11
	Black	7	12
	Hispanic	1	1
	Asian	1	0
	American Indian/Alaska Native	1	0
MDJH-TX1 Johns Hopkins Hospital	All Ethnicities	185	202
	White	82	100

		2017	2016
	Black	83	82

Data subject to change based on future data submission or correction.

Transplant : Transplant Year (2016 - 2017) by Transplant Center, Recipient Ethnicity

U.S. Transplants Performed : January 1, 1988 - August 31, 2018

For Organ = Kidney, Region = Region 2, Recipient Age = Adult, Format = Portrait

Based on OPTN data as of September 23, 2018

		2017	2016
	Hispanic	8	11
	Asian	10	6
	American Indian/Alaska Native	1	1
	Pacific Islander	1	1
	Multiracial	0	1
MDUM-TX1 Univ of Maryland Med System	All Ethnicities	241	208
	White	105	87
	Black	121	109
	Hispanic	9	2
	Asian	5	9
	American Indian/Alaska Native	0	1
	Multiracial	1	0
NJBI-TX1 Newark Beth Israel Med Ctr	All Ethnicities	2	6
	White	2	5
	Black	0	1
NJHK-TX1 Hackensack University Medical Center	All Ethnicities	57	38
	White	13	15
	Black	17	7
	Hispanic	13	10
	Asian	14	6
NJLL-TX1 Our Lady of Lourdes Med Ctr	All Ethnicities	33	38
	White	9	11
	Black	15	18
	Hispanic	7	8
	Asian	2	1
NJRW-TX1 Robert Wood Johnson University Hosp	All Ethnicities	31	59
	White	10	26
	Black	11	18
	Hispanic	7	10
	Asian	3	5
NJSB-TX1 St Barnabas Medical Center	All Ethnicities	331	287
	White	141	129
	Black	108	99
	Hispanic	49	41
	Asian	33	17
	Pacific Islander	0	1
PAAE-TX1 Albert Einstein Med Ctr	All Ethnicities	81	67
	White	11	16
	Black	45	33
	Hispanic	8	6
	Asian	12	12

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		2017	2016
	American Indian/Alaska Native	3	0
	Multiracial	2	0
PAAG-TX1 Allegheny General Hosp	All Ethnicities	98	102
	White	74	73
	Black	21	28
	Hispanic	1	0
	Asian	2	1
PACC-TX1 Crozer-Chester Medical Center	All Ethnicities	14	12
	White	5	4
	Black	9	7
	Multiracial	0	1
PACH-TX1 UPMC Children's Hosp. of Pittsburgh	All Ethnicities	1	4
	White	1	2
	Asian	0	1
	American Indian/Alaska Native	0	1
PACP-TX1 Childrens Hosp of Philadelphia	All Ethnicities	3	1
	White	2	0
	Black	1	1
PAGM-TX1 Geisinger Medical Center	All Ethnicities	49	39
	White	46	34
	Black	2	3
	Hispanic	1	2
PAHE-TX1 Penn State Milton S Hershey Med Ctr	All Ethnicities	24	25
	White	21	20
	Black	1	3
	Hispanic	1	2
	Asian	1	0
PAHH-TX1 UPMC Pinnacle	All Ethnicities	35	41
	White	26	31
	Black	6	2
	Hispanic	1	5
	Asian	2	2
	Multiracial	0	1
PAHM-TX1 Hahnemann University Hospital	All Ethnicities	53	44
	White	15	12
	Black	30	27
	Hispanic	5	4
	Asian	3	1
PALH-TX1 The Lankenau Hospital	All Ethnicities	21	40
	White	12	18
	Black	7	21

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		2017	2016
	Asian	1	1
	Pacific Islander	1	0
PALV-TX1 Lehigh Valley Hospital	All Ethnicities	94	88
	White	64	65
	Black	15	9
	Hispanic	10	10
	Asian	3	3
	Multiracial	2	1
PAPH-TX1 UPMC Hamot	All Ethnicities	9	1
	White	7	1
	Black	2	0
PAPT-TX1 Univ of Pittsburgh Med Ctr	All Ethnicities	188	199
	White	144	143
	Black	40	52
	Hispanic	3	1
	Asian	1	3
PATJ-TX1 Thomas Jefferson Univ Hosp	All Ethnicities	113	82
	White	66	44
	Black	39	28
	Hispanic	3	6
	Asian	4	4
	American Indian/Alaska Native	1	0
PATU-TX1 Temple Univ Hospital	All Ethnicities	41	53
	White	10	6
	Black	20	32
	Hispanic	10	12
	Asian	1	3
PAUP-TX1 The Hosp of the Univ of PA	All Ethnicities	191	179
	White	106	87
	Black	56	72
	Hispanic	7	14
	Asian	20	5
	American Indian/Alaska Native	0	1
	Multiracial	2	0
PAVA-TX1 VA Pittsburgh Healthcare System	All Ethnicities	53	56
	White	18	22
	Black	31	32
	Hispanic	1	1
	American Indian/Alaska Native	1	0
	Pacific Islander	1	1
	Multiracial	1	0

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Based on OPTN data as of September 23, 2018

		2017	2016
VAFH-TX1 Inova Fairfax Hosp	All Ethnicities	86	88
	White	25	28
	Black	18	30
	Hispanic	27	14
	Asian	16	16
WVCA-TX1 Charleston Area Medical Center	All Ethnicities	28	36
	White	23	32
	Black	5	3
	Asian	0	1

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Organ Procurement & Transplantation Network