Program Summary

Center: UAMS Medical Center (ARUA)
Organ: HR: Heart

Center Activity (01/01/2009-12/31/2009)	Center	Region	United States	Tables for More Information
Deceased donor transplants (n=number)	0	314	2,212	07C,08C,09C
On waitlist at start (n)	0	0	0	01,02,03
On waitlist at end (n)	0	0	0	01,02
Number of new patient registrations (n)	0	0	0	01,02

Waiting List Outcomes (01/01/2009-12/31/2009)	Observed	Expected	Statistical Significance of Difference	Tables for More Information
Transplant rate (from deceased donors) among waitlist patients	NA	NA	.	03,04,05,06
Mortality rate while on waitlist	NA	NA	.	03,04

Post-transplant Outcomes (01/01/2007-06/30/2009)	1 Year			Tables for More Information
	Observed	Expected	Statistical Significance of Difference	
Adult graft survival (%)	NA	NA	NA	10
Adult patient survival (%)	NA	NA	NA	11
Pediatric graft survival (%)	NA	NA	NA	10
Pediatric patient survival (%)	NA	NA	NA	11

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
Note: Tables referring to small sample sizes should be treated with caution. Sample sizes can be found in the table referenced in the last column.
NA=Not Applicable.

A Guide to Reading and Understanding the Center-Specific Reports (CSRs) Prepared by the Scientific Registry of Transplant Recipients (SRTR)

Center: UAMS Medical Center (ARUA)
Organ: HR: Heart

Overview:

These Program-Specific Reports contain a wide range of useful information about transplant programs operating in the United States. The information includes many features of the transplant program, such as the number of transplants performed in recent years, waiting time and waiting list outcomes, and post-transplant experience of patients served by this program. The statistics are arranged to allow comparisons to national averages, as well as to the experience for similar patients at other programs in the country. This report is based largely on data submitted by this transplant program for patients on the waiting list and those transplanted within the last five years.

Table 1 provides a picture of the volume and type of waiting list and transplant activity at this program. UAMS Medical Center (ARUA) had no patients on the waiting list in the last two years, so this table is not produced. More about the activity at this program and the types of patients served is found in the Table Details section below and in Tables 1 and 2 (waiting list) and Tables 7, 8, and 9 (transplant).

Waiting times for transplantation differ from facility to facility and also from person to person, depending upon many factors. Half of the patients listed at this program had received a transplant as of 2.4 months after being placed on the waiting list; in the nation it took 4.8 months to reach the same fraction of patients transplanted. The other half of the patients were either still waiting or removed from the waiting list for reasons including death. Tables 3 through 5, which focus on other characteristics of waiting list and waiting time (including risk-adjusted comparisons) are discussed in the details section below.

At UAMS Medical Center (ARUA), 100.00 percent of adult patients were alive three years after transplant, compared to the 86.43 percent that would be expected based on the characteristics of these patients. However, the p-value of 0.715 indicates that the difference between these rates is not statistically significant. Similar comparisons may be made for shorter-term (1 month and 1 year) survival, also in Table 11, as well as for graft survival (Table 10). Further discussion of actual, expected, and national survival rates may be found in the Table Details section below.

Specific circumstances at each program may affect many of the measures reported in these reports. Frequently, staff from transplant programs make public comments regarding these reports, made available in the comments page. We encourage all readers of these reports to consider these comments and to contact the program directly for further information.

Table Details:

The above overview provides most readers with a quick look at some of the statistics that help describe a transplant program. The following section, for the more interested reader, provides a more detailed accounting of each table and how figures are defined and calculated.

Tables 1 through 6 focus on characteristics of the waiting list process at this program. Table 1 provides an overview of the waiting list activity at this program: not just the size of the waiting list at a given point in time, but also how many people have moved on to and off of this waiting list, and for what reasons. This table is not produced if there is no waiting list activity during this period.

The waiting time at a given transplant program is affected by many factors, including the medical condition and characteristics of the patients listed with this program (Table 2), the availability of organs in the Donation Service Area served by the OPO, and decisions by medical professionals and other patients about organ acceptance. Some of the variability in waiting time may be accounted for by local availability of organs, in which case other programs in the Donation Service Area served by Arkansas Reg. Organ Recovery Agency may have similar waiting times.

Tables 3 through 6 provide different measures of looking at waiting list outcomes. Table 3 shows a 'risk-adjusted' comparison of two outcomes from the waiting list: transplant rate and death rate. For some organs, an 'expected' rate is not calculated because the characteristics influencing the expected rate are not well known.

These waiting list rates are measured as the number of transplants (or deaths) per year that any patient spends on the waiting list. It is possible for these rates to be above 1, as would be the case if 2 patients each spent 3 months on the waiting list, and one received a transplant: 1 transplant divided by .5 year = transplant rate of 2.

While Table 3 provides a waiting list outcome rate that allows easy comparison of risk-adjusted outcomes, statistics from tables 4 through 6 may be more interpretable at a patient level. Table 4 answers the questions: 'What has been the outcome for patients at this program 6 months after being placed on the waiting list? What about at 12 or 18 months?' The table also examines post-transplant outcomes: at 12 months, for example, the table tells if the patient is still on the waiting list, was transplanted and is still alive, or died after transplant.

Table 5 provides another way to look at how quickly patients receive transplants at this program, this time looking at many different kinds of patients. At this program, 11.1 percent of patients placed on the heart waiting list had received transplants as of 30 days after being placed on the waiting list. Those not transplanted, the other 88.9 percent, were either still waiting or removed from the waiting list for reasons including death. At one year after placement on the waiting list, 100.0 percent of patients at this program had been transplanted; this figure was 63.2 for all the programs in the nation. The table also shows similar figures for subgroups of patients, such as by age, disease, or medical urgency, allowing the reader to see if specific groups of patients have experienced longer waiting times.

Table 6 shows the time it takes for a given percentage of patients at this facility to receive a transplant. This is the 'time-to-transplant' among all wait-listed patients, including those who never receive a transplant. Half of the patients placed on the waiting list at this program had received a transplant as of 2.4 months after listing; in the nation it took 4.8 months to reach the same fraction. The other half of the patients were either still waiting or removed from the waiting list, for reasons including death. (Another common statistic, 'median waiting time,' differs in that it is often calculated only among patients who actually received a transplant. The two are often correlated, but different in magnitude. While median waiting time reflects time waiting among successful candidates, time-to-transplant incorporates a measure of the probability of success in receiving an organ.)

The remainder of the tables, 7 through 11, focus on transplants performed at UAMS Medical Center (ARUA) and their outcomes. Tables 7-9 describe the characteristics of transplant recipients, donors, and operations at this program. This program performed no deceased donor heart transplants in the last year (01/01/2009-12/31/2009), so these tables are not produced.

Tables 10 and 11 show post-transplant outcomes. Table 10 shows the survival experience of grafts (transplants) in patients transplanted by this program. Table 11 shows the survival experience of these patients themselves. These may be different because a patient may continue survival after a graft fails through means such as a new transplant, or, for kidney patients, dialysis. For each outcome, these tables show an actual (observed) survival for the program, an actual (observed) survival for the nation, and an expected survival for the program. Each survival number measures the percentage of patients who have a functioning graft (Table 10) or who are alive (Table 11) at 1 month, 1 year, and 3 years after transplant.

The expected survival rate for a given program is the percentage of grafts functioning (or patients alive) that would be expected for the patients served by this program, given their characteristics (age, disease, blood type, etc.) and the experience of similar patients in the entire country. At this program, the expected three-year patient survival rate of 86.43 may be different from the national average of 81.08 if patients transplanted at this program have characteristics that would make us expect a different survival rate than the average.

At UAMS Medical Center (ARUA), 100.00 percent of adult patients were alive three years after transplant, compared to the 86.43 percent that would be expected based on the characteristics of these patients. However, the p-value of 0.715 indicates that the difference between these rates is not statistically significant. Similar comparisons may be made for shorter-term (1 month and 1 year) survival, also in Table 11, as well as for graft survival (Table 10). Further discussion of actual, expected, and national survival rates may be found in the Table Details section below.

Table 5
Percent Transplanted for Waitlist Patients (excludes recipients of transplants from living donors *)
Patients placed on waitlist at this center between 01/01/2004 and 12/31/2006
Center: UAMS Medical Center (ARUA)
Organ: HR: Heart

	Percent transplanted at time periods since waitlisting									
	This Center					United States				
Characteristic	**N**	**30 day**	**1 year**	**2 years**	**3 years**	**N**	**30 day**	**1 year**	**2 years**	**3 years**
All	9	11.1	100.0	100.0	100.0	8,754	24.1	63.2	67.6	68.9
Ethnicity/Race [+]										
White	5	0.0	100.0	100.0	100.0	6,011	23.0	62.9	67.8	69.3
African-American	4	25.0	100.0	100.0	100.0	1,641	24.7	62.8	66.7	67.8
Hispanic/Latino	0	-	-	-	-	762	28.0	63.3	66.3	67.2
Asian	0	-	-	-	-	253	33.6	73.9	75.1	75.1
Other	0	-	-	-	-	87	25.3	58.6	63.2	63.2
Unknown	0	-	-	-	-	0	-	-	-	-
Age										
<2 years	0	-	-	-	-	568	25.4	56.9	57.2	57.4
2-11 years	0	-	-	-	-	426	30.3	66.2	68.5	70.7
12-17 years	0	-	-	-	-	399	35.3	71.7	74.9	76.2
18-34 years	0	-	-	-	-	973	23.3	61.4	65.4	66.6
35-49 years	3	0.0	100.0	100.0	100.0	1,795	20.2	60.8	65.3	66.7
50-64 years	6	16.7	100.0	100.0	100.0	3,858	22.9	62.9	68.5	70.1
65+ years	0	-	-	-	-	728	30.1	71.3	74.9	75.3
Other (includes prenatal)	0	-	-	-	-	7	14.3	71.4	71.4	71.4
Gender										
Male	6	16.7	100.0	100.0	100.0	6,343	23.1	62.9	67.8	69.2
Female	3	0.0	100.0	100.0	100.0	2,411	26.5	63.9	67.1	68.2
Blood Type										
O	2	0.0	100.0	100.0	100.0	3,918	15.8	53.2	59.3	61.2
A	4	25.0	100.0	100.0	100.0	3,309	29.8	70.9	74.0	75.0
B	3	0.0	100.0	100.0	100.0	1,149	28.9	70.7	73.8	74.5
AB	0	-	-	-	-	378	44.7	76.5	78.6	78.8
Previous Transplant										
Yes	0	-	-	-	-	454	20.0	51.1	55.9	57.3
No	9	11.1	100.0	100.0	100.0	8,300	24.3	63.8	68.2	69.6
Medical Urgency Status at Listing										
Old Status 1	0	-	-	-	-	0	-	-	-	-
Status 1A	0	-	-	-	-	2,237	39.4	66.7	68.0	68.1
Status 1B	0	-	-	-	-	2,461	30.1	74.2	77.0	77.2
Status 2	9	11.1	100.0	100.0	100.0	3,720	11.7	54.9	62.4	65.3
Unknown	0	-	-	-	-	336	14.3	50.6	53.3	53.3
Primary Disease										
Cardiomyopathy	5	20.0	100.0	100.0	100.0	4,105	26.4	66.6	70.8	71.9
Coronary Artery Disease	4	0.0	100.0	100.0	100.0	3,091	21.9	62.5	67.9	69.5
Retransplant/Graft Failure	0	-	-	-	-	395	20.3	51.6	56.2	57.7
Valvular Heart Disease	0	-	-	-	-	190	22.1	58.4	60.5	63.2
Congenital Heart Disease	0	-	-	-	-	864	23.0	56.5	58.9	60.0
Other	0	-	-	-	-	109	21.1	56.9	58.7	60.6
Missing	0	-	-	-	-	0	-	-	-	-

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
* Patients removed from waitlist with removal code indicating transplant from a living donor were excluded from this analysis.
Note: Population totals equal for each characteristic.
[+] Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100 percent.
Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 6
Time to Transplant for Waitlist Patients**
Patients registered on the waitlist between 01/01/2004 and 06/30/2009
Center: UAMS Medical Center (ARUA)
Organ: HR: Heart

	Months to Transplant*			
Percentile	**Center**	**OPO/DSA**	**Region**	**U.S.**
5th	0.2	0.1	0.2	0.2
10th	0.2	0.2	0.3	0.3
25th	1.4	0.8	1.0	1.1
50th (median time to transplant)	2.4	2.0	4.2	4.8
75th	4.9	9.1	>72	>72

* Censored on 12/31/2009; Calculated as the months after waitlisting, during which the corresponding percent of all patients initially waitlisted had received a transplant.

** If cells contain ">72" fewer than that percentile of patients had received a transplant.
Note: Includes deceased and living donor transplants at any center.
The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 10
Graft Survival by Age at Transplant and by Time since Transplant
For Patients Transplanted between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between 07/01/2004 and 12/31/2006 for the 3 Year Model
Center: UAMS Medical Center (ARUA)
Organ: HR: Heart (Single-Organ Transplants Only)
Note: Deaths and retransplants are counted as graft failures

	Graft Survival by Time since Transplant					
	This Center			United States		
	1 Month	1 Year	3 Years	1 Month	1 Year	3 Years
Adult (Age 18+)						
Transplants (n=number)[1]	-	-	7	4,402	4,402	4,447
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center[2]	-	-	85.71	95.16	88.35	80.32
Expected, based on national experience[3]	-	-	86.05			
Graft Failures During Follow-up Period						
Observed at this center	-	-	1	213	488	875
Expected, based on national experience[4]	-	-	1.05	213	488	875
Ratio: Observed to Expected (O/E)	-	-	0.95	1.00	1.00	1.00
(95% Confidence Interval)[5]	(---)	(---)	(0.02-5.28)			
P-value (2-sided), observed v. expected[6]	.	.	0.999			
How does this center's survival compare to what is expected for similar patients?	.	.	Not Significantly Different (a)			
Follow-up days reported by center (%)[7]	-	-	98.5	99.9	98.5	97.6
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n)[1]	-	-	-	860	860	768
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center[2]	-	-	-	95.00	88.11	80.34
Expected, based on national experience[3]	-	-	-			
Graft Failures During Follow-up Period						
Observed at this center	-	-	-	43	98	151
Expected, based on national experience[4]	-	-	-	43	98	151
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval)[5]	(---)	(---)	(---)			
P-value (2-sided), observed v. expected[6]	.	.	.			
How does this center's survival compare to what is expected for similar patients?	.	.	.			
Follow-up days reported by center (%)[7]	-	-	-	99.5	96.8	96.7
Maximum Days of Follow-up (n)	-	-	-	30	365	1,095
Transplant Time Period	**01/01/2007-06/30/2009**	**01/01/2007-06/30/2009**	**07/01/2004-12/31/2006**	**01/01/2007-06/30/2009**	**01/01/2007-06/30/2009**	**07/01/2004-12/31/2006**

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
NA=Not Applicable.

[1] Transplants of this organ during the time period indicated in the last row of the table.

[2] Observed graft surival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. This statistic represents graft failure rates among patients still being followed by the facility. If the followup percent is low, this statistic may not be representative of outcomes for all patients at this facility. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

[3] The graft survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

[4] The number of graft failures that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of graft failures reflects the expected number of graft failures only during the time the patient is alive with a functioning graft and actually followed; therefore, it accounts for differences in the time that elapses from transplant until graft failure.

[5] The 95% confidence interval gives a range of values for the true ratio of failures at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

[6] A p-value less than or equal to 0.05 indicates that the difference between the actual and expected graft survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

[7] Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting by this center for these transplants. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.

Table 11
Patient Survival by Age and by Time since First Transplant of This Organ Type
For Patients Receiving their First Transplant of this type between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between 07/01/2004 and 12/31/2006 for the 3 Year Model
Center: UAMS Medical Center (ARUA)
Organ: HR: Heart (Single-Organ Transplants Only; Re-transplants excluded)

	Patient Survival by Time since First Transplant					
	This Center			United States		
	1 Month	1 Year	3 Years	1 Month	1 Year	3 Years
Adult (Age 18+)						
Transplants (n=number)[1]	-	-	7	4,263	4,263	4,312
Percent (%) of Patients Surviving at End of Period						
Observed at this Center[2]	-	-	100.00	95.47	88.88	81.08
Expected, based on national experience[3]	-	-	86.43			
Deaths During Follow-up Period						
Observed at this center	-	-	0	193	450	816
Expected, based on national experience[4]	-	-	1.03	193	450	816
Ratio: Observed to Expected (O/E)	-	-	0.00	1.00	1.00	1.00
(95% Confidence Interval)[5]	(---)	(---)	(0.00-3.59)			
P-value (2-sided), observed v. expected[6]	.	.	0.715			
How does this center's survival compare to what is expected for similar patients?	.	.	Not Significantly Different (a)			
Percent retransplanted	-	-	14.3	0.3	0.3	0.7
Follow-up days reported by center (%)[7]	-	-	97.2	99.8	98.4	97.2
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n)[1]	-	-	-	804	804	711
Percent (%) of Patients Surviving at End of Period						
Observed at this Center[2]	-	-	-	95.52	89.02	81.72
Expected, based on national experience[3]	-	-	-			
Deaths During Follow-up Period						
Observed at this center	-	-	-	36	85	130
Expected, based on national experience[4]	-	-	-	36	85	130
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval)[5]	(---)	(---)	(---)			
P-value (2-sided), observed v. expected[6]	.	.	.			
How does this center's survival compare to what is expected for similar patients?	.	.	.			
Percent retransplanted	-	-	-	0.9	1.4	1.4
Follow-up days reported by center (%)[7]	-	-	-	99.1	96.0	96.1
Maximum Days of Follow-up (n)	-	-	-	30	365	1,095
Transplant Time Period	**01/01/2007-06/30/2009**	**01/01/2007-06/30/2009**	**07/01/2004-12/31/2006**	**01/01/2007-06/30/2009**	**01/01/2007-06/30/2009**	**07/01/2004-12/31/2006**

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
NA=Not Applicable.

[1] Transplants during the time period indicated in the last row of the table.

[2] Observed surival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

[3] The survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

[4] The number of deaths that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of deaths reflects the expected number of deaths only during the time the patient is alive and actually followed; therefore, it accounts for differences in the time that elapses from transplant until death.

[5] The 95% confidence interval gives a range of values for the true ratio of deaths at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

[6] A p-value less than or equal to 0.05 indicates that the difference between the actual and expected patient survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

[7] Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting at this center for these transplants. Additional follow-up days included in survival may be covered by SSDMF data. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.