

Chapter XI

Annual Facility Survey of Providers of ESRD Therapy

Key Words:

Dialysis facility

VA facilities

ESRD network facilities

Hemodialysis treatments

Disinfectant

Transplant center

Dialysis certification

Dialysis stations

Dialyzer reuse

The Annual Facility Survey conducted, by HCFA, is the source of all the results presented in this chapter. Note that the data for 1995 are preliminary and may be subject to minor revisions. The facility survey contains summary data on facility characteristics for all Medicare approved dialysis and transplant units reporting patients at the end of the year. The Annual Facility Survey is designed to include most non-Medicare dialysis patients while the USRDS patient database generally does not¹. (Commencing with Wave I of the DMMS, non-Medicare patients are included in the USRDS Special Studies).

ESRD Units: Number and Location

Since Medicare extended coverage to patients with ESRD in 1973, there has been sustained growth in the number of institutions providing ESRD services for patients covered by Medicare. For example, Figure XI-1 shows that there were 2,064 units counted in the Facility Survey in 1990. By 1995 the number had grown to 2,894, representing a 7.0 percent annual compound growth. During the same interval, the number of kidney transplant centers grew from 224 to 239, a smaller annual compound growth of 1.3 percent. These facility counts, as well as other facility counts in this chapter, not only exclude

facilities that failed to complete the Facility Survey, but they also do not include units not having any dialysis or transplant patients as of the end of the year.

This overall growth in the number of dialysis and transplant units in this five year period averaged 40 percent and varied greatly among the 18 ESRD networks, as Figure XI-2 shows. The number of units in the Upper Midwest (Network 11), the Northwest (Network 16) grew by 59 percent from 1990 to 1995, whereas New York (Network 2) only had 20 percent or less growth in the same time period. The national growth in the number of dialysis and transplant patients over the same period was by 54 and 59 percent, respectively (see chapters II and III).

ESRD Patients: Treatment Locale and Number

As is expected, there is also substantial growth in the number of patients from 1990 to 1995; however, there is slightly less variation from network to network. Networks 6, 14, and 7 had the most growth, respectively; all three had an increase in number of patients that exceeded 60 percent in the five year span. Network 4 (PA) had the least growth, with only a 50 percent increase in patients from 1990 to 1995 (see Figure XI-3).

Number of Dialysis and Transplant Units 1990 and 1995

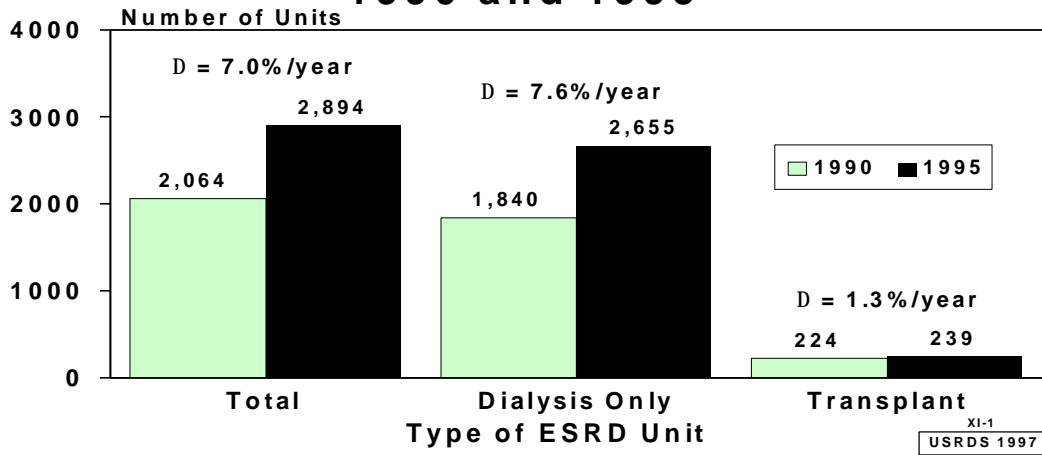


Figure XI-1

Number of "dialysis only" units and transplant units in the U.S. for 1990 and 1995, with annual compound rate of change (delta percent). The "Transplant" category includes both transplant centers and units which provide dialysis services in addition to transplants. All units that complete the Annual Facility Survey and report having dialysis and/or transplant patients at the end of the year are included. Source: Reference Table I.2.

HCFA has defined a number of different types of ESRD units² for reporting purposes:

- Hospital facilities are dialysis units attached to or located in a hospital which are approved to furnish outpatient dialysis service(s) directly to ESRD patients.
- Hospital centers are dialysis units attached to or located in hospitals which are approved to furnish the full spectrum of diagnostic, therapeutic, and rehabilitative services required for the care of ESRD dialysis patients (including inpatient and outpatient dialysis furnished directly or under

Five Year Growth in Number of Facilities, by Network, between 1990 and 1995

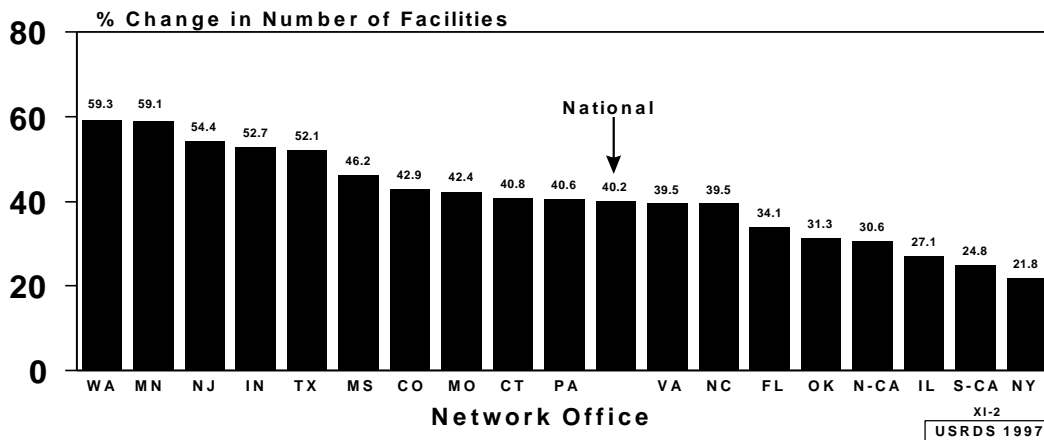


Figure XI-2

Total percentage growth in number of facilities from 1990 to 1995, by Network. Includes all facilities reporting having any dialysis/transplant patients at the end of the year. See Figure II-7 for a Network key. "National" is the national average. Source: Reference Tables I.4.

Five Year Growth in Number of Patients, by Network, between 1990 and 1995

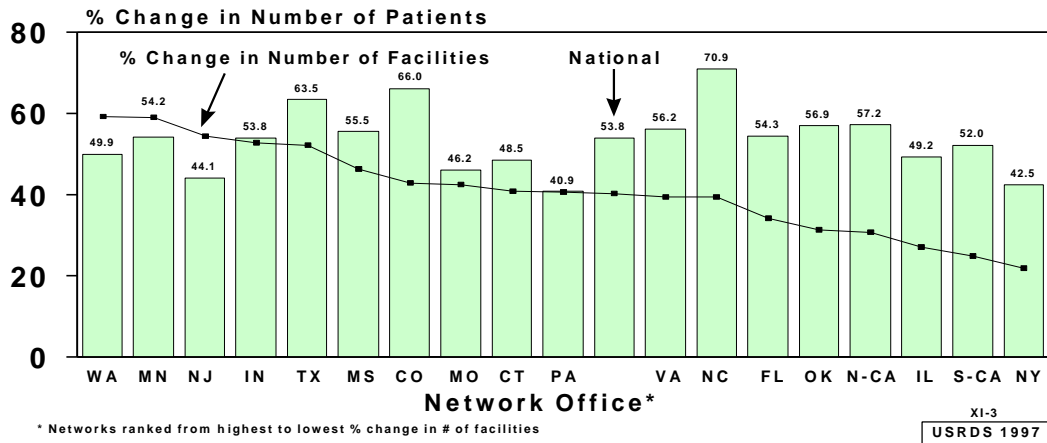


Figure XI-3

Number of end-of-year point prevalent patients from 1990 to 1995, by Network. Includes all facilities reporting having any dialysis/transplant patients at the end of the year. See Figure II-7 for a Network key. "National" is the national average. Source: Reference Tables I.6.

arrangement).

- Freestanding units, sometimes called independent units, provide outpatient and home maintenance dialysis only.
- Transplant centers are hospital units which are approved to furnish transplantation and other medical and surgical specialty services for the care of ESRD transplant patients, including inpatient dialysis furnished directly or under

arrangement.

- Dialysis and transplant centers combine the functions of a dialysis center and a transplant center.

In general, for the analyses presented in this chapter, the categories of "transplant center" and "dialysis and transplant center" are combined into one group and referred to as "transplant units." The remaining units are combined and referred to as

Percentage of Dialysis Patients Treated in Each Type of ESRD Unit, 1990 and 1995

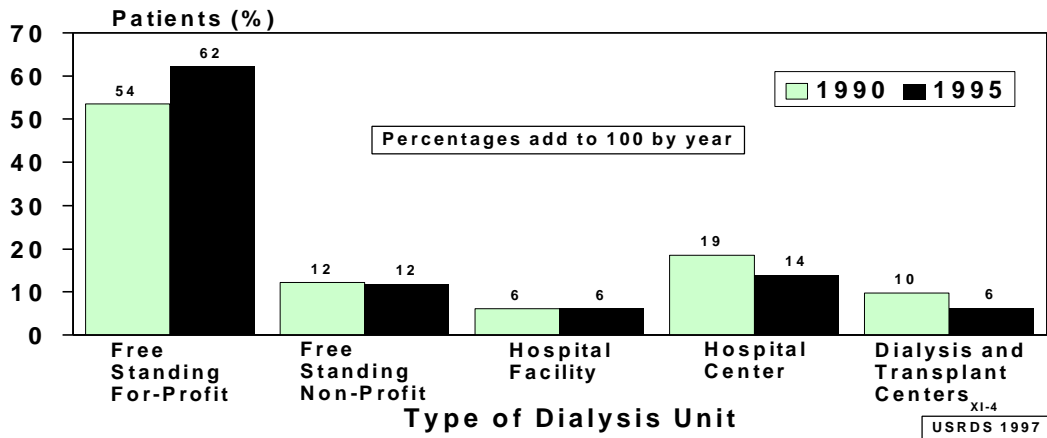


Figure XI-4

Distribution (percent) of dialysis patients by type of dialysis unit for end of the year point prevalent patients, 1990 and 1995. Source: Reference Table I.13.

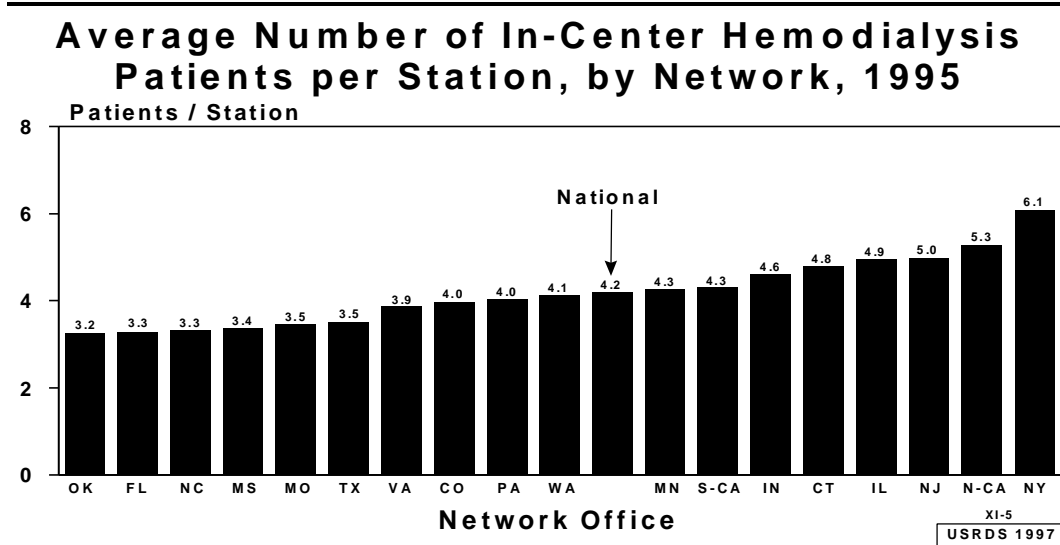


Figure XI-5

Average number of in-center hemodialysis patients per station, by Network, for 1995. See Figure II-7 for a Network key. "National" is the national average. Source: Special Analysis.

"dialysis only" units.

The distribution of dialysis patients by type of dialysis unit (and profit status for the freestanding units) is presented in Figure X-4 for 1990 and 1995. In 1990, freestanding, for-profit units treated 54 percent of outpatient dialysis patients. By 1995, this percentage had grown to 62 percent. Hospital dialysis centers treated 25 percent of the patients in 1990, and by 1995 this had fallen to 20 percent. There is also a smaller percentage of patients in non-profit dialysis

and transplant centers in 1995 than there were in 1990. This pattern is indicative of a greater increase in for-profit facilities in recent years.

The number of in-center hemodialysis patients per station, by ESRD Network in 1995, is shown in Figure XI-5. Nationally, on average there were 4.2 patients per station. As in 1993 and 1994, Network 13 (AR, LA, OK) had the smallest number (3.2), while ESRD Network 2 (NY), had the largest number of patients per station (6.1). These patterns probably

Total Number of In-Center Hemodialysis Treatments by Network, 1995

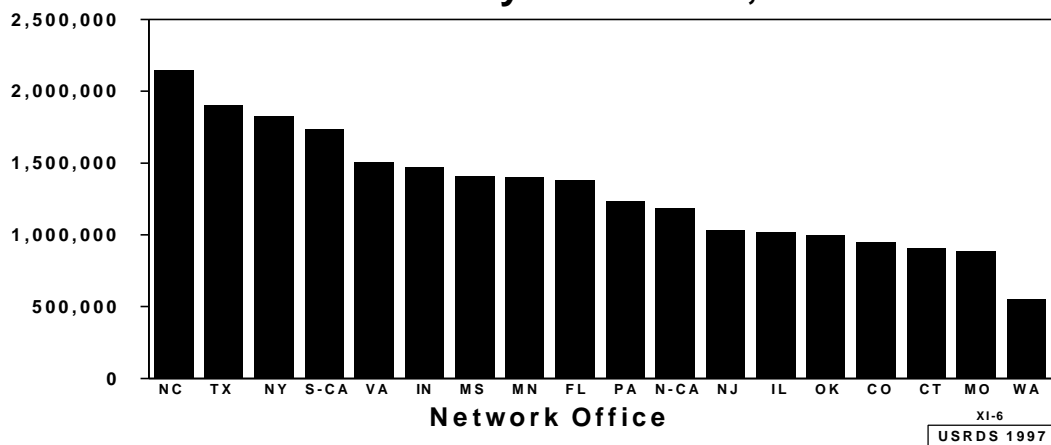


Figure XI-6

Total number of hemodialysis treatments given in each Network in 1995. See Figure II-7 for a Network key. Source: Special Analysis.

Facilities and Types of Dialysis, Hemodialysis vs. Peritoneal Dialysis, 1995

	Total	Hemodialysis Only	Peritoneal Dialysis Only	Both
Median # of Patients per Facility	-	39	27	84
Count	2,805	1,356	73	1,376

Table XI-1
USRDS 1997

Table XI-1

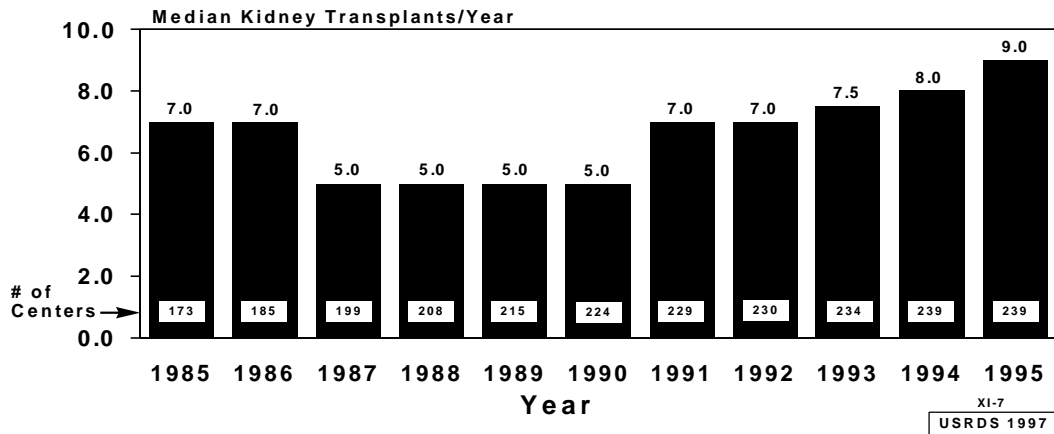
Number of dialysis units and distribution of hemodialysis and peritoneal dialysis among those facilities. Includes all facilities reporting dialysis patients at the end of 1995. Source: Special Analysis.

reflect state "Certificate of Need" laws as well as population distributions. The other Networks tend to vary from the national average similarly both on the low end and high end, with the exception of New York. A comparison of the results for 1995 with the previous 3 years (not shown) reveals that national averages for patients per station have remained relatively constant.

Number of Treatments

Figure XI-6 shows the total number of hemodialysis treatments administered to patients in each of the networks in 1995. The two Networks with largest percent increase in patient counts from 1989 to 1994 (Networks 6 and 14; see Figure XI-3) also provided the most treatments in 1995. The Northwest Network (16) administered less than one-

Median Number of Living Related Transplants per Center per Year, 1985-1995



XI-7
USRDS 1997

Figure XI-7

Median number of living related kidney transplant operations per year, 1985-1995. Includes all certified transplant centers. Source: Special Analysis.

Median Number of Cadaveric Transplants per Center per Year, 1985-1995

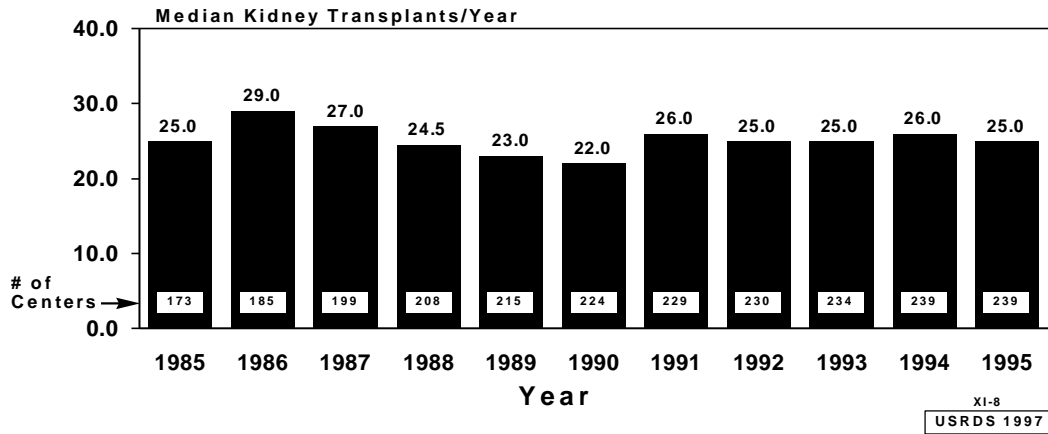


Figure XI-8

Median number of cadaveric kidney transplant operations per year, 1985-1995. Includes all certified transplant centers. Source: Special Analysis.

third as many hemodialysis treatments as the two Networks mentioned above.

units treated only PD patients, and 1,356 (48 percent) units only treated hemodialysis patients.

Facility

As Table XI-1 shows, a total of 2,805 units were treating dialysis patients at the end of 1995. Peritoneal dialysis (PD) patients were treated in 52 percent and hemodialysis (HD) patients were treated in 97 percent of these units. Seventy-three (3 percent)

Transplant units vary considerably in size, with more than a few centers performing no transplants in a given year. The largest centers perform approximately 200 renal transplants per year. As shown in Figure XI-7, between 1985 and 1990 the median number of living related transplant operations per unit per year has remained fairly consistent over a range between 5 and 7. From 1991 (7 transplants)

Percentage of Facilities Reusing Dialyzers by Network, 1993

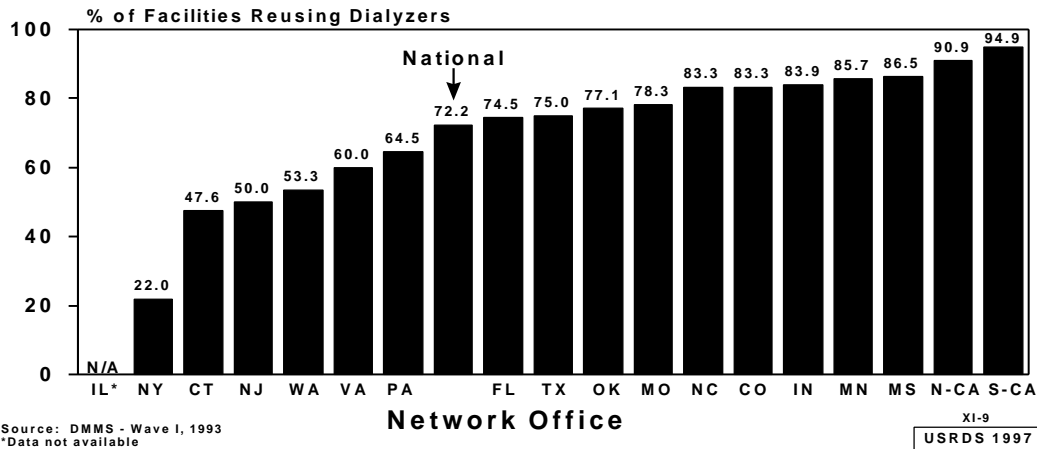


Figure XI-9

Percentage of facilities in DMMS Wave I (1993) reporting reuse of dialyzers by Network. Source: Special Analysis.

Percentage of Facilities Reusing Dialyzers by Network, 1996

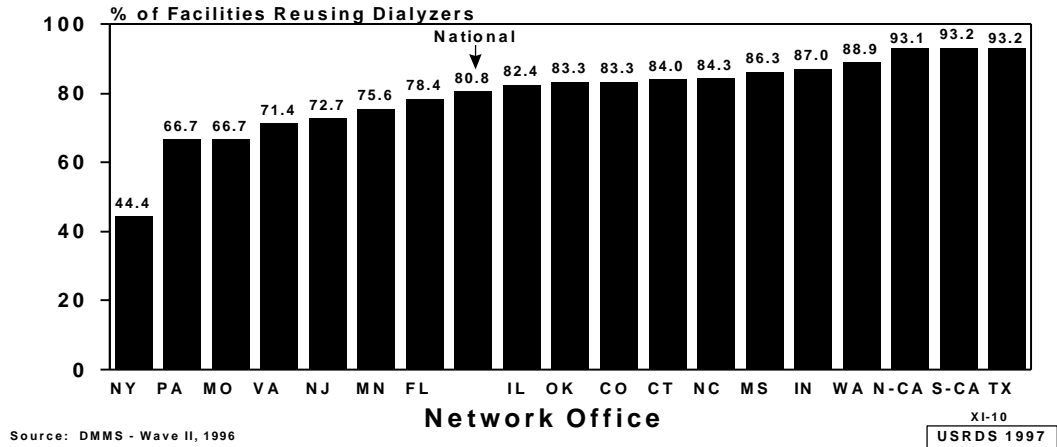


Figure XI-10

Percentage of facilities in DMMS Wave II (1996) reporting reuse of dialyzers by Network. Source: Special Analysis.

to 1995 (9 transplants) there appears to be an upward trend in the median number of living related transplants per center. The median number of cadaveric transplants per center from 1985 to 1995 is shown in Figure XI-8. With the exception of a high point in 1986 (29 transplants) and a low point in 1990 (22 transplants), the median number remains relatively constant around 25 cadaveric transplants per unit per year from 1985 to 1995.

DVA Reporting

Before 1982, Department of Veterans Affairs³ (DVA) dialysis units did not complete the HCFA Facility Survey. Since 1982, between 12 and 17 Medicare certified DVA units have completed the facility survey each year. Beginning in 1990, there are survey data for some DVA units that are not certified by Medicare. Data from these VA facilities

Type of Disinfectant Used Among Facilities Reusing Dialyzers

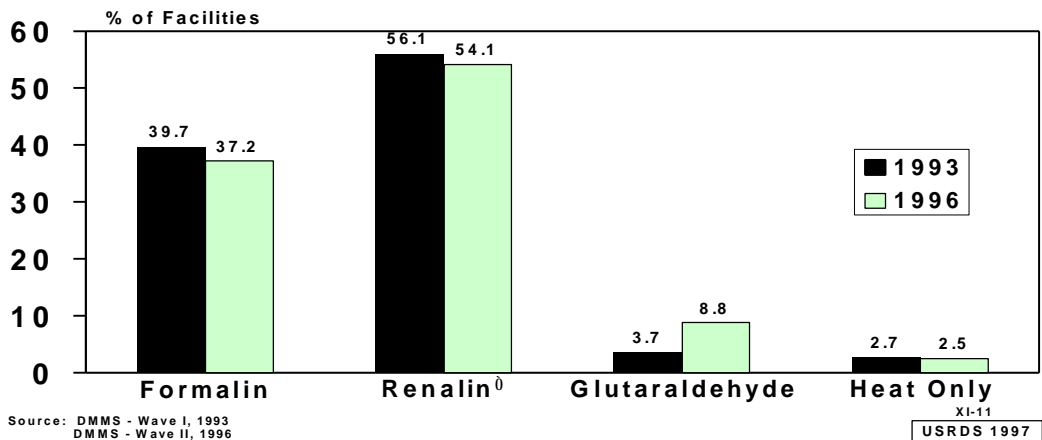


Figure XI-11

Type of disinfectant used among facilities reusing dialyzers in DMMS Waves I and II. Source: Special Analysis. Note: percentages do not add to 100% as some facilities use more than one disinfectant.

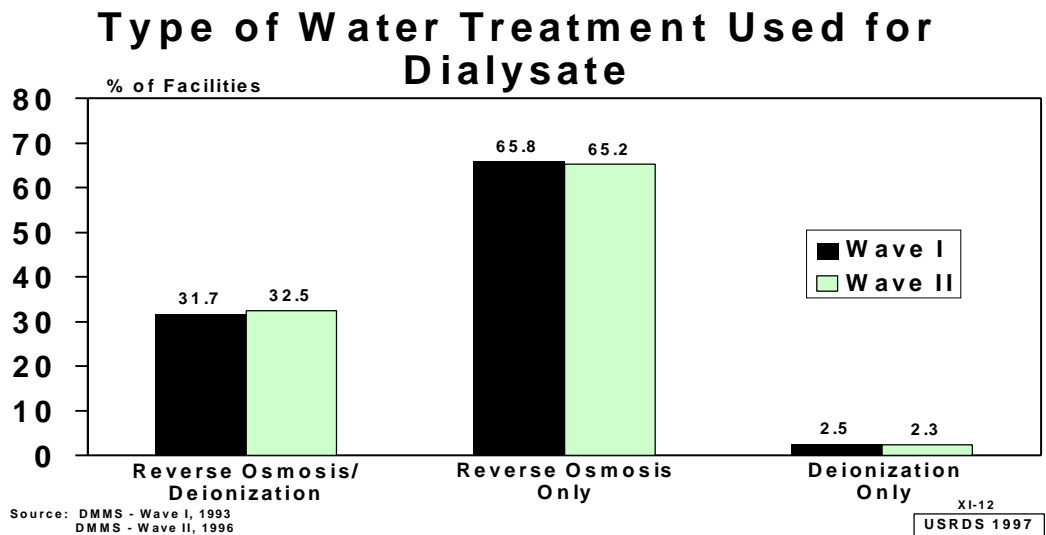


Figure XI-12

Water treatment used for dialysate in all facilities in DMMS Waves I and II. Source: Special Analysis.

are excluded from HCFA reports,⁴ but patients from these units are included in counts shown in this chapter if any patients were present at the end of a given year. According to the VA dialysis census, there were 104 DVA facilities in 1995⁵; 67 of these reported patients in the 1994 and 1995 Facility Surveys.

Dialyzer Reuse

The Dialysis Mortality and Morbidity Study (DMMS) includes a facility survey for each of its 4 waves. For the DMMS facilities were drawn at random for each of the waves. Figure XI-9 shows the percent of facilities reporting reuse of dialyzers in Wave I of the DMMS and Figure XI-10 shows the percent in Wave II. In 1993 approximately 70 percent of the facilities reported reusing dialyzers. The range of reuse reported across networks ranged from a low of 20 percent in Network 2, New York, to a high of 97 percent in Network 18, Southern California. By 1996, 80 percent of the facilities in the survey reported reuse of dialyzers. The percent ranged from a low of 42 percent in Network 2 to a high of 96 percent in Networks 17, 18, and 14.

Figure XI-11 illustrates the type of disinfectant used to sterilize dialyzers in facilities which reuse dialyzers. Among facilities reusing dialyzers Paracetic Acid (Renalin^R) was the most common type of disinfectant used with 56.1 percent of facilities in 1993 (DMMS Wave I) and 54.1 percent in 1996 (DMMS Wave II). The use of Glutaraldehyde

climbed dramatically from 3.7 percent in 1993 to 8.8 percent in 1996. Formalin was the disinfectant of choice for 39.7 percent of the reuse facilities in 1993 and for 37.2 percent of the facilities in 1996. Only 2.7 percent in 1993 and 2.5 percent in 1996 reported using heat alone as the disinfectant for dialyzer reuse.

Figure XI-12 shows the type of water treatment used by all dialysis facilities. Approximately 32 percent of all facilities used both reverse osmosis and deionization for treating the water to be used as dialysate in both 1993 and 1996. Sixty-five percent of all facilities used reverse osmosis only and probably because of the added cost only 2.4 percent used only deionization.

End Notes

1. See Chapter I for more detail on differences between the Annual Facility Survey and the USRDS patient database. See Reference Tables, Section I for more detail on the information presented in this chapter.
2. For more information on the classification of dialysis unit type please refer to either the Health Care and Financing Administration's *Instruction Manual for Renal Providers* or the *National Listing of Medicare Providers Furnishing Dialysis and Transplant Services*, Superintendent of Documents, U.S. Government Printing Office.

3. For more information about the DVA dialysis population please contact the Department of Veterans Affairs, Veterans Health Administration, Washington, D.C.
4. HCFA Bureau of Data Management and Strategy. Health Care Financing Research Report: End.
5. End Stage Renal Disease, 1992. Department of Health and Human Services, September 1994.
6. Amis Report, June 30, 1993. Memo from Department of Veterans Affairs.

