

# **U.S. Kidney Dialysis Clinics: An Industry Analysis**

**- July 2019 -**

## **Overview of Major Findings**

This report has been independently prepared by utilizing a comprehensive variety of "primary" and "secondary" information sources and techniques, including: in-depth telephone interviews, analyses of: other market surveys, trade journals and trade association research, competitor literature, government agency and other data, custom searches of business databases and the Internet, combined with original Marketdata compilations, analyses, and forecasts.

Information in this report was carefully selected to represent ONLY the most pertinent and up-to-date material for informed decision-making, forecasting, and planning... the historical, current, and projected size and growth of the U.S. kidney dialysis clinics industry--the nature and operations of the business, major industry trends, customer demographics, industry structure and size, operating ratios, and competitor profiles.

**This "off-the-shelf" report is equally applicable to:** manager or owners of kidney dialysis clinics, medical technicians and administrators, hospitals, healthcare organizations, physician groups, pharmaceutical manufacturers, analysts at brokerage firms, banks, industry consultants, industry trade groups, entrepreneurs, venture capitalists, private equity firms, and merger and acquisition candidates.

**Disclaimer:** This study does not constitute medical, managerial, legal, strategic planning or accounting advice, nor should it serve as a corporate policy guide or endorsement of specific companies, products, or services. Every attempt has been made to ensure the accuracy of the data, but Marketdata assumes no responsibility for losses or damages resulting from reliance on this material alone.

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## **Nature & Structure of The U.S. Kidney Dialysis Clinics Industry**

### **Summary...**

To be sure, dialysis has become a major growth field as diabetes and other kidney diseases have exploded. Now the seventh-leading cause of death in the nation, diabetes affects 30.3 million Americans, or more than 9 percent of the population, according to the Centers for Disease Control & Prevention, which estimates that another 84 million Americans have pre-diabetes, a condition that if not treated can lead to Type 2 diabetes within five years. More than 1.5 million new cases of diabetes are being diagnosed each year in the U.S., the CDC reports.

Treating the disease costs Medicare more than \$110 billion a year, according to government data.

Advanced chronic kidney disease, also called end-stage renal disease (ESRD), involves irreversible loss of kidney function and requires regular dialysis treatment or a kidney transplant to sustain life. Scarcity of available donor kidneys limits the number of transplants, so most ESRD patients rely on dialysis treatments. Dialysis is not a cure but a blood-filtering process that prolongs life through the removal of toxic waste products and excess fluids from the body. ESRD patients must undergo dialysis for the rest of their lives.

According to estimates by industry leading companies such as Fresenius Medical Care, the number of dialysis patients worldwide reached an estimated 3.4 million in 2018, versus 3.2 million in 2017.

The number of dialysis patients worldwide increased by about 6% in 2018. The growth rate was lower in the United States. In 2018, most dialysis patients were treated in one of approximately 43,200 dialysis centers worldwide, with an average of more than 75 patients per clinic. However, this figure varies from country to country.

According to the United States Renal Data System (USRDS), there were over 511,000 ESRD dialysis patients in the U.S. in 2016. Based on the most recent 2018 annual data report from the USRDS, the underlying ESRD dialysis patient population has grown at an approximate compound rate of 3.8% from 2000 to 2016. However, more recent preliminary data from the USRDS suggest that the rate of growth of the ESRD patient population may be declining. A number of factors may impact ESRD growth rates, including increasing transplant rates, incidence rates for diseases that cause kidney failure such as diabetes and hypertension, mortality rates for dialysis patients and growth rates of minority populations with higher than average incidence rates of ESRD. Since 1972, the

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federal government has provided healthcare coverage for ESRD patients under the Medicare ESRD program regardless of age or financial circumstances. ESRD is the first and only disease state eligible for Medicare coverage both for dialysis and dialysis-related services and for all benefits available under the Medicare program. For patients with Medicare coverage, all ESRD payments for dialysis treatments are made under a single bundled payment rate. See page 6 for further details.

In addition to the laws and regulations to which U.S. dialysis and related lab services business are subject to, the internal operations of kidney dialysis firms and their contractual relationships with healthcare providers such as hospitals, other healthcare facilities, and healthcare professionals are subject to extensive and increasing regulation by numerous federal, state, and local government entities. These laws and regulations often are interpreted broadly and enforced aggressively by multiple government agencies, including the OIG, the DOJ, and various state authorities.

### **Major Industry Developments...**

#### ***President Trump signs executive order to encourage more kidney transplants and more home treatment – July 10, 2019***

President Trump signed an executive order designed to reform the nation's kidney dialysis industry and save the U.S. government millions of dollars.

This executive order will create new payment models to encourage more kidney transplants and give incentives to seek dialysis treatment at home instead of at more expensive treatment centers, Health and Human Services Secretary Alex Azar said.

The administration is pushing for the development of artificial kidneys and earlier diagnosis of kidney disease. **Federal health officials aim to double the number of available kidneys, including artificial, by 2030**, Under the order, the administration says it will also streamline and expedite the process of kidney matching in order to help increase transplants.

This new order also follows Trump's executive order last month that directs the Department of Health and Human Services to require hospitals and insurers to disclose negotiated rates for services, as well as provide patients with out-of-pocket prices before their procedures.\

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### ***California tries to cap dialysis company profits***

Denver-based DaVita and German-owned Fresenius, report pretax operating profits in the billions and margins of 18% to 19%. Proposition 8, an initiative appearing on California's November 2018 ballot, would have capped those profits at 15% over their direct spending on health services.

Securities analysts say DaVita and Fresenius might well pull entirely out of California, where they do about 20% of their business and collect \$3 billion a year. A large number of the 68,000 state residents undergoing treatment would have to find treatment at centers far from their homes, while the state's remaining capacity would be strained beyond the breaking point.

### ***Unionization of clinic workers proposed in California***

The SEIU's effort to unionize dialysis workers. For years, the union has campaigned for higher pay at the clinics and laws mandating higher staffing, citing complaints from workers that they're overloaded and from patients that they sometimes feel rushed through a procedure that has to unfold at its own pace. A bill setting minimum staffing levels and transition times between patients passed the California state Senate last year but has stalled in the Assembly.

### ***Federal prosecutors subpoenaed DaVita and Fresenius***

This was in connection with an investigation into whether they've been steering patients away from Medicare and Medicaid, where reimbursements average a few hundred dollars per visit, and toward commercial insurers, which pay as much as ten times the government rate.

Industry leaders might be even more profitable if not for the litigation surrounding their business practices. DaVita has paid out nearly \$1 billion since 2013 to settle three whistleblower suits. In 2015, it paid \$495 million to settle a suit filed by two former employees accusing it of overbilling the Medicare and Medicaid programs. It was the largest settlement ever for a whistleblower suit where the federal government declined to intervene.

In 2016, Fresenius paid \$250 million to settle a suit regarding two supplementary dialysis products it markets and sells, a smaller yet significant profit center for it and DaVita.

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### ***Inadequate staffing issues***

According to some studies, the for-profit kidney dialysis companies generally have skimpier professional staffing than non-profit or hospital-based dialysis clinics and have had worse patient outcomes, A 2013 survey by the University of Virginia found 35% fewer registered nurses and 42% fewer practical nurses on their premises compared with nonprofit clinics, with unlicensed technicians taking up the slack.

Researchers alleged that replacing nurses with technicians might “jeopardize long-term patient outcomes,” but didn’t come to a conclusion that it did so. And a 2016 report by the government-financed U.S. Renal Data System documented that DaVita and Fresenius patients had higher mortality rates and hospitalization rates than those at non-profit and hospital-based dialysis clinics from 2011 to 2014.

### **Industry Structure...**

Total industry receipts for kidney dialysis centers rose from \$12.3 billion in 2007 to \$17.4 billion in 2012, and an estimated \$22.7 billion in 2016. This represents an 84% increase over that 9-year period, or an average annual rate of 9.3 %.

This industry employed just under 125,000 people in 2016, with an annual payroll of \$6.0 billion. Payroll costs represented 26.4% of revenues, compared with 25.2% in 2007.

Marketdata estimates that in 2016, based on data from County Business Patterns, the average “establishment” (office, branch, physical site or location) had receipts of \$3.0 million, versus \$3.1 million in 2012 and \$2.8 million in 2007.

Based on the 9.3% average annual growth in receipts posted by the industry from 2011 to 2016, **Marketdata estimates that average receipts per facility stood at about \$3.5 million in 2018. Industry receipts were an estimated \$ 22.7 billion in 2016, produced by 7,536 establishments.** Revenues per employee stood at \$182,300 in 2016, versus \$167,300 in 2012 and \$169,500 in 2007.

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***Kidney Dialysis Centers Industry Snapshot: 2016, 2012, 2007, 2002***  
*(employers with payroll statistics)*

	2002	2007	2012	2016
No. of estabs.	3,135	4,278	5,573	7,536
Industry Receipts (\$ mill.)	\$8,738	\$12,359	\$17,382	\$22,761
Annual payroll (\$ mill.)	\$2,301	\$3,116	\$4,585	\$6,009
Total employment	63,570	72,890	103,885	124,840
Avg. receipts per estab. (000)	\$2,787	\$2,889	\$3,119	\$3,020
Receipts per employee (000)	\$137.5	\$169.5	\$167.3	\$182.3
Payroll per employee (\$)	\$36.2	\$42.7	\$44.1	\$48.1
Employees per estab.	20.3	17.0	18.6	16.6

Source: U.S. Census Bureau, Marketdata calculations

**Demand Factors...**

**Economic Cycles:** The kidney dialysis clinics business is exposed to economic cycles only to a relatively small extent. Recessions do not affect the business much. Rather, the industry is impacted more by government reimbursement rates and remuneration systems. Dialysis is a vital medical service.

**Organ Donation:** For years now, the number of donated organs worldwide has been significantly lower than the number of patients on transplant waiting lists. Despite extensive efforts and initiatives to increase awareness of kidney donations and the willingness to donate, the share of patients receiving kidney transplantation compared with other treatment methods has remained relatively unchanged over the past ten years.

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**Chronic conditions** such as diabetes and cardiovascular diseases are becoming increasingly common and are responsible for nearly two-thirds of deaths worldwide. To counteract the resultant increase in cost pressures, more health care systems are starting to promote coordinated, holistic care rather than reimbursing individual services.

**Demographic change:** As average life expectancy rises worldwide, the share of older persons in the population is also growing. However, kidney function deteriorates with age. Therefore, demographic change is an important indicator for the future number of dialysis patients.

**Increase in Lifestyle Diseases:** Diseases such as high blood pressure and diabetes, and obesity, are on the rise worldwide and in the United States. They can cause damage to the entire body and often impair kidney function over the long term.

Demand for holistic care of chronic patients should continue to rise in the future. The focus when treating kidney patients will no longer be simply to offer individual dialysis products or services but also on combining all fields of application related to dialysis and coordinating them more efficiently.

### **U.S. seeks to cut dialysis costs with more home care versus clinics**

The Trump administration is working on a new payment approach for treating kidney disease that favors lower cost care at home and transplants, a change that would upend a dialysis industry that provides care in thousands of clinics nationwide.

The goal is to reduce the \$114 billion paid by the U.S. government each year to treat chronic kidney disease and end-stage renal disease, a top area of spending. The U.S. Centers for Medicare and Medicaid Services (CMS), which provides Medicare health benefits to more than 55 million Americans, is looking at a trial payment design that would improve care in the early stages of kidney disease, increase access to kidney transplants and favor home dialysis over clinic-based treatment, CMS head Seema Verma told Reuters in an interview.

They could also provide an opening for new rivals, including CVS Health Corp, which seeks to offer lower-cost home dialysis, and startups Cricket Health and Somatus, which focus on early intervention to slow progression to kidney failure.

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### **The Reimbursement Situation in The United States...**

The kidney dialysis services industry is significantly impacted by the environment for reimbursement and ancillary services. In the U.S., most patients are covered by the Centers for Medicare and Medicaid (CMS). In fiscal year 2018, about 33% of a leading competitor's revenue, Fresenius Medical Care, was accounted for by reimbursements from CMS.

Due to pressure to reduce healthcare costs, CMS has limited increases in the reimbursement rate in the past. As a result, the reimbursement rate set by CMS as part of its prospective payment system (PPS) for chronic kidney failure treatments (known as the ESRD PPS rate) barely changed year over year. The ESRD PPS rate for 2018 was \$232.37, only 0.3% higher than the 2017 base rate. A reimbursement rate of \$235.27 has been determined for 2019. This represents a 1.3% increase over the 2018 base rate.

Dialysis is so expensive — cost is about \$90,000 per year — that in the days before the Affordable Care Act, patients couldn't get insurance. As a result, Congress in 1973 allowed renal patients to enroll in Medicare at any age. The act effectively made end-stage renal disease the only condition subject to a single-payer program.

Once the Affordable Care Act came into play in 2014, and made it illegal for private insurers in the individual market to reject dialysis patients, the firms thirsted for the private insurers' higher reimbursements.

Last year, Federal prosecutors subpoenaed DaVita and Fresenius in connection with an investigation into whether they've been steering patients away from Medicare and Medicaid, where reimbursements average a few hundred dollars per visit, and toward commercial insurers, which pay as much as ten times the government rate. The companies have said they're cooperating with the investigation.

According to accusations in lawsuits and the companies' public disclosures of the federal investigation, suspicion has focused on the American Kidney Fund, which presents itself as a charity helping kidney patients pay for private insurance premiums and co-pays.

However, critics say that the fund looks like a front for DaVita and Fresenius, which have provided 78% of its revenue in recent years — a combined subsidy of more than \$200 million a year — according to the fund's annual report. A lawsuit filed last year by Aetna cites allegations that DaVita parlayed its contributions to the fund into the higher reimbursements received from private insurers by "steering" dialysis patients away from Medicare despite their eligibility. DaVita denies the accusation.

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In the U.S., reimbursement by government entities is lower than reimbursement by private insurers and managed care organizations.

The reimbursement system in the United States is also an example of a model based on qualitative criteria. For example, CMS defines quality standards for kidney dialysis clinics as part of its quality incentive program (QIP). A failure to reach these standards can lead to a reduction in annual reimbursements of 1-2%.

Dialysis providers and physicians can form entities known as ESRD Seamless Care Organizations (ESCOS), with the aim of improving the health of patients with chronic kidney failure while reducing costs for CMS.

### **Kidney Dialysis Clinic Operations...**

The centers cost \$2 million to \$3 million to build and usually span less than 10,000 square feet. In June it got approval to build facilities in Woodridge, Villa Park and the Auburn Park neighborhood of Chicago. An application to build in Waukegan was rejected in a close 4-3 vote, though the company intends to repackage its supporting evidence and come back with that plan to the board soon.

The typical dialysis patient spends four hours at a time three days a week in treatment. Bhattacharyya says that convenience is a prime consideration. "The state looks at treatment radiuses of 5 miles. At DaVita we are looking at a radius of 2 miles and less in many cases," he explains. "The state says that a new clinic is not needed until existing dialysis capacity in the area is 80 percent occupied. We contend that when a center is 80 percent occupied, then the only open appointments are likely to be at odd hours, maybe 8 o'clock at night, when some patients are not going to make the effort to show up."

The development of a typical outpatient dialysis center generally requires approximately \$2.2 million for leasehold improvements and other capital expenditures. A new outpatient dialysis center typically opens within a year after the property lease is signed, normally achieves operating profitability in the second year after Medicare certification and normally reaches maturity within three to five years. Acquiring an existing outpatient dialysis center requires a substantially greater initial investment, but profitability and cash flows are generally accelerated and more predictable.

Improvements in the U.S. economy have stimulated additional competition for skilled clinical personnel resulting in slightly higher teammate turnover, which can negatively affect productivity levels.

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The average hourly rate for a Renal Dialysis Technician ranges from \$17 to \$22 with the average hourly pay of \$19. The medical technician field will continue growing at an above average rate of 12 percent through 2026, especially as the population ages, according to the U.S. Bureau of Labor Statistics. Dialysis techs will have even better prospects if they get certified. This occupation has a median yearly wage of \$51,770 as of May 2017, meaning half of medical technicians make more and half make less. The lowest paid 10 percent made below \$29,640, but wages rose above \$79,530 for the highest earners.

### **Competition and Consolidation...**

Demand depends on the number of people who suffer from kidney disease. The profitability of individual companies is linked to efficient operations and good marketing. Large companies have economies of scale in administrative costs, which has driven consolidation in the industry. Small operators can compete successfully if they have centers in desirable locations or good relations with doctors who refer patients. The U.S. industry is **highly concentrated**: the four largest companies account for about 85% of revenue. Nevertheless, the business is still competitive.

Clinics operated by the large firms have also experienced competition from former medical directors or referring physicians who have opened their own outpatient dialysis centers.

About 700,000 people in the U.S. receive treatment for end-stage renal disease (ESRD), and about 500,000 of them receive treatment in dialysis centers. The number of people receiving dialysis grew at a compound annual rate of 3.8%.

Because most patients choose—or are assigned—to receive dialysis at facilities close to where they live, competition among dialysis providers occurs primarily at a local level. It is unknown whether national consolidation in the dialysis industry has translated into decreased market competition locally and fewer choices among competing providers available to individual patients. Growth in the number of dialysis facilities operating in the United States, combined with targeted interventions by the Federal Trade Commission to prevent certain anticompetitive mergers and force divestitures, may have preserved local competition and patient choice.

Patients living in different places may have different preferences and ability to travel a given distance for dialysis. For example, in a major metropolitan area, where transportation is cumbersome, patients may prefer to receive dialysis at facilities very close to home. In contrast, in a more rural area, patients may be more likely to have access to a car and more willing to travel farther to dialysis.

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## **Industry Size & Growth**

### **Summary...**

Since there is accurate and reliable information about the size of this industry, from the U.S. Census Bureau, our job has been made easier. The government's 5-year survey is the most comprehensive survey available, including the operations of the greatest number of physical therapy clinics one can find.

Most of the other research firms that have tracked this market peg it's size at about \$23-26 billion as of 2016 or 2017.

Marketdata's estimate agrees with others, at \$24.7 billion as of 2018.

According to an IBIS World Report...

"Stable condition: Inelastic demand and technological investments will drive industry expansion.

Dialysis centers are the lifeblood of patients with chronic kidney disease. Operators in the Dialysis Centers industry provide valuable services to patients with failing kidneys; however, dialysis does not cure kidney disease. This treatment helps patients cope with failing kidneys by emulating the functions of healthy kidneys.

The Dialysis Centers industry is expected to perform well over the five years to 2019, largely due to inelastic demand for its services. The only substitute available for dialysis treatment is a kidney transplant, which typically entails many years of waiting and uncertainty.

Over the five years to 2019, industry revenue is expected to increase at an annualized rate of 4.3% to \$26.1 billion, including 2.1% growth in 2019 alone."

The industry is exposed to the following threats and opportunities:

- Consumers that have private health insurance are more likely to use healthcare services, such as those that dialysis centers offer. Therefore, the number of people covered by private health insurance directly affects demand levels for the industry. In 2019, the number of people with private health insurance is expected to increase; however, the volatile nature of current healthcare legislation poses a threat to the industry.

11.

- Federal and state funding for Medicare and Medicaid, alongside access to these reimbursement programs, generates increased demand for dialysis centers. Consumers that have access to Medicare and Medicaid funding are more likely to be able to afford comprehensive dialysis treatment services. In 2019, federal funding for Medicare and Medicaid is expected to increase, presenting an opportunity for the industry.

According to a First Research (D&B) report...

- The global dialysis services market generates annual revenue of about \$68 billion, according to Fresenius. More than 3 million people worldwide receive dialysis treatment. Asia has the most dialysis patients. Demand for kidney dialysis services is growing in emerging economies where access to care has been historically insufficient. Countries with the highest growth include Thailand, Bangladesh, Russia, the Philippines, and Malaysia, according to the US Renal Data System.
- The U.S. kidney dialysis industry includes about 7,500 centers with combined annual revenue of about \$23 billion.

According to **NEJM Catalyst** (The Big Business of Dialysis Care, June 9, 2016): "...Medicare now shells out \$34 billion a year for dialysis care, and these patients account for an outsized portion of the program's total expenditures."

## **Market Size**

### **2016 County Business Patterns Data**

This government survey reports that in 2016, there were 7,536 kidney dialysis establishments operating nationwide, with an annual payroll of \$6.0 billion.

Comparing this to the 2012 Census payroll figure of \$4.58 billion, this means that industry payroll grew by 31% in four years – or an average of 7.7% per year.

**However, based on actual revenues of Davita and Fresenius in 2017 and 2018, we don't think that this pace was sustained. Marketdata estimates that the industry was worth \$24.68 billion last year.**

12.

Following are actual and estimated data for the size and growth rate of the industry from 2007 to 2016, based on official government surveys (5-year Census, annual County Business Patterns).

**Revenues by the Leaders: Estimated 2018 Market Share**

	No. of U.S. Clinics	Revenues (\$ mill.)	% of Total Industry
Total Industry	7,536	\$24,685	100.0
Fresenius	2,529	9,934	40.2
Davita	2,664	10,336	41.9
U.S. Renal Care	335	1,000	4.1
3-firm total:	5,528	21,270	86.2

Since the two largest companies in this industry account for such a large share of total revenues, we can use their change in revenues as a very good proxy for what happened in the industry overall.

**The top three competitors are estimated to have operated 73% of this industry's kidney dialysis centers in 2018.**

**The top three are also estimated to have captured 86% of industry revenues.**

**Fresenius and Davita capture an almost equal share of industry revenues at 40-41%.**

Marketdata took the actual U.S. dialysis revenues of the leaders in 2016, as a percent of the industry total (derived from County Business Patterns payroll data), to derive a weighted average. We then used that weighted average to derive estimates of industry growth in 2017 and 2018, based on the actual increase in company revenues.

13.

For 2017, this weighted average increase came out to 2.8%.

For 2018, this weighted average increase came out to 5.5%.

For 2019, this weighted average increase came out to 3.8%

***Historical revenues of the leaders: U.S. dialysis services, excluding products*** (\$ millions)

Year	Fresenius	Davita	Combined total	% change
2011	\$7,113	\$6,485	\$13,598	
2012	8,230	7,095	15,325	12.7
2013	8,772	7,764	16,536	7.9
2014	8,616	8,211	16,827	1.8
2015	9,050	8,743	17,793	5.7
2016	9,791	9,296	19,087	7.3
2017	10,070	9,608	19,678	3.1
2018	9,934	10,660	20,594	4.6

Source: Company 10K statements, annual reports

14.

**Size of the U.S. Kidney Dialysis Centers Industry: 2007-2016**

	No. of establishments	Annual Payroll (\$ 000)	Estd. Annual Receipts * (\$ 000)
2016	7,536	\$6,009	\$22,761
2015		5,760	21,818
2014		4,621	17,504
2013		4,696	17,788
2012 (Census)	5,573	4,585	17,382
2011		4,463	16,905
2010		4,294	16,265
2009		NA	NA
2008		NA	NA
2007 (Census)	4,278	3,116	12,359
2006		2,593	9,670

\* We can derive an estimate of those receipts by using the ratio of payroll to receipts from the 2012 Census. We know that payroll accounted for about 26.4% of industry receipts in 2012. It probably has not changed much since then, so we can just take the payroll figure from County Business Patterns and double it.

15.

**Annual Growth Rate of the Kidney Dialysis Centers Market**

	Estd. Annual Receipts (\$ billions)	Annual % change
2019 Forecast	\$25,623	3.8
2018 Est.	24,685	5.5
2017	23,398	2.8
2016	22,761	4.3
2015	21,818	24.6
2014	17,504	-1.6
2013	17,788	2.3
2012 (Census)	17,382	2.8
2011	16,905	3.9
2010	16,265	NA
2009	NA	NA
2008	NA	NA
2007 (Census)	12,359	27.8

Source: U.S. Census, County Business Patterns, Marketdata estimates and forecasts

As one can see above, revenue growth for this industry has been moderate over the last decade, with a few years of above-average growth. The latest period of 2012-2016 shows 30.9% revenue gains, or an annual average of 7.7%.

The long-term average annual growth rate from 2007 to 2016 has been 9.3%.

16.

**2018 – 2023 Estimates & Forecasts by Marketdata**

**Marketdata estimates that the kidney dialysis centers market was worth \$24.68 billion in 2018.**

**We estimate the industry to be worth \$25.62 billion in 2019.**

**We forecast the industry to be valued at \$29.72 billion by 2023. This implies 4.0% average annual gains from 2019 to 2023.**

	Estd. Annual Receipts (\$ billions)	Annual % change
2017	\$23.39	
2018	24.68	5.5
2019	25.62	3.8
2023 Forecast	29.72	4.0#

# avg. annual rate

**Rationale For Estimates & Forecasts:**

**Marketdata analysts project moderate 4.0% average annual growth in receipts from 2019 to 2023.**

We don't think that the next 4-year period will be that much different than the last period from 2016-2019, in terms of demographics, demand and Medicare reimbursement.

The health of the economy, and whether we enter a recession or not over this period, is almost irrelevant. The health of the economy is really not a factor affecting demand for this industry, since patients that need dialysis cannot postpone or go without treatment. If they do, they die.

17.

As average life expectancy rises in the U.S., the share of older persons in the population is also growing. Kidney function deteriorates with age.

The number of dialysis patients worldwide increased by about 6% in 2018. However, the growth rate was lower in the United States.

According to the United States Renal Data System (USRDS), there were over 511,000 ESRD dialysis patients in the U.S. in 2016. Based on the most recent 2018 annual data report from the USRDS, **the underlying ESRD dialysis patient population has grown at an approximate compound rate of 3.8% from 2000 to 2016.** However, more recent preliminary data from the USRDS suggest that the rate of growth of the ESRD patient population may be declining.

Although the number of ESRD (end stage renal disease) incident cases plateaued in 2010, the number of ESRD prevalent cases continues to rise by about 21,000 cases per year. The adjusted incidence rate of ESRD in the United States rose sharply in the 1980s and 1990s, leveled off in the early 2000s, and has declined slightly since its peak in 2006.

Chronic conditions such as diabetes and cardiovascular diseases are becoming increasingly common and are responsible for nearly two-thirds of deaths worldwide.

Several factors that could dampen revenue growth for dialysis clinics over the next four years includes:

- The shift toward more home dialysis care. The U.S. Centers for Medicare and Medicaid Services (CMS) is looking at a trial payment design that would improve care in the early stages of kidney disease, increase access to kidney transplants and favor home dialysis over clinic-based treatment.
- Medicare reimbursement cuts.
- Staff shortages and unionization.
- President Trump's newly signed executive order to encourage more kidney transplants and more home treatment (July 10, 2019). President Trump signed an executive order designed to reform the nation's kidney dialysis industry and save the U.S. government millions of dollars. This executive order will create new payment models to encourage **more kidney transplants** and give incentives to seek dialysis treatment at home instead of at more expensive treatment centers. In addition, Federal health officials aim to double the number of available kidneys, including artificial, by 2030.

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## **Major Competitors – Market Share**

### **Summary...**

The U.S. Census Bureau confirms that this is a very concentrated industry. The 50 largest firm captured 95% of total receipts in 2012. The top 50 operated 91.6% of all facilities. In addition, the largest firms in this industry had labor costs in line with the industry average – about 26% of sales.

### ***Industry Concentration (Market Share): 2012***

Concentration	No. of Establishments	Receipts (\$ Millions)	% of Total	Payroll as % of Receipts
All establishments	5,573	\$17,382	100.0	26.4
4 largest firms	4,714	14,982	86.2	25.8
8 largest firms	4,905	15,705	90.4	25.8
20 largest firms	5,023	16,117	92.7	25.9
50 largest firms	5,103	16,498	94.9	26.0

Source: U.S. Census Bureau

### ***Revenues by the Leaders: Estimated 2018 Market Share***

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**Fresenius and Davita capture an almost equal share of industry revenues at 40-41%.**

***Historical revenues of the leaders: U.S. dialysis services, excluding products (\$ millions)***

Year	Fresenius	Davita	Combined total	% change
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2012	8,230	7,095	15,325	12.7
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2015	9,050	8,743	17,793	5.7
2016	9,791	9,296	19,087	7.3
2017	10,070	9,608	19,678	3.1
2018	9,934	10,660	20,594	4.6

Source: Company 10K statements, annual reports

## **Reference Directory of Information Sources**

### **Trade Associations**

#### **National Kidney Foundation**

30 East 33rd Street  
New York, NY 10016

(800) 622-9010

#### **Alport Syndrome Foundation**

P.O. Box 4130

Scottsdale, AZ 85261-4130

(480-800-3510)

A non-profit organization providing a central location for information about this genetic kidney disease. Their site is designed for patients and families, to create an opportunity to meet and talk to other families who are dealing with Alport Syndrome, and to ultimately support research aimed at curing the disease.

#### **American Association of Kidney Patients (AAKP)**

14440 Bruce B. Downs Blvd.  
Tampa, FL 33613

(813-636-8100)

A membership organization with a magazine, free materials, and an annual patient meeting.

#### **Dialysis Patient Citizens (DPC)**

1012 14<sup>th</sup> St. NW, Suite 1475

Washington, DC 20005

(866-877-4242) Fax: 888-423-5002

Email: [dpc@dialysispatients.org](mailto:dpc@dialysispatients.org)

A nationwide, non-profit, patient-led dialysis organization with membership open only to dialysis and pre-dialysis patients and their families.

21.

**Kidney Care Partners**

601 13th Street, NW, 11th Floor  
Washington, DC 20005

(202-347-9192)  
susan@murdockinc.com

An alliance of patient advocates, dialysis professionals, providers, and suppliers working together to improve the quality of care for patients.

**Kidney Transplant/Dialysis Association**

PO Box 51362 GMF  
Boston, MA 02205-1362

(781-641-4000) Fax 781-272-0558

Provides financial aid, information, and emotional support to kidney patients and families.

**Life Options**

c/o Medical Education Institute, Inc.  
414 D'Onofrio Drive Suite 200  
Madison, WI 53719

**Phone:**

(800) 468-7777      **Fax:** (608) 833-8366

A program of the Medical Education Institute, Inc., dedicated to helping people live long and live well with kidney disease, with a wealth of free info for patients and professionals.

**National Kidney Foundation**

30 East 33rd Street  
New York, NY 10016

(800-622-9010)  
info@kidney.org

The vision of the NKF is to enhance the lives of everyone with, at risk of or affected by kidney disease.

22.

### **Oxalosis and Hyperoxaluria Foundation**

579 Albany Post Road  
New Paltz, NY 12561  
(800-OHF-8699)

The only organization in the world dedicated to improving the care and treatment and finding a cure for Oxalosis, PH and related stone diseases.

### **Renal Support Network**

Renal Support Network  
1146 N. Central Ave. #121  
Glendale, CA 91202  
Phone: (818-543-0896)  
Toll Free: (866) 903-1728  
Fax: (818) 484-2070 E-Fax

Established to help kidney patients develop their personal coping skills, special talents, and employability by educating and empowering them to take control of managing their disease

### **National Kidney Disease Education Program** (National Institutes of Health)

Phone: 1-800-860-8747 Email: [healthinfo@niddk.nih.gov](mailto:healthinfo@niddk.nih.gov)

### **The Kidney Transplant/Dialysis Association, Inc.** (KT/DA)

PO Box 51362 GMF  
Boston, MA 02205-1362

(781-641-4000 ) Fax **781-272-0558**

### **Other Research Firms**

First Research (Dun & Bradstreet)  
BizMiner - Industry Financial Ratios

<https://www.bizminer.com> Search for "621340"

Five-year financial statement analysis includes income statements, balance sheets, and key financial ratios, with data available by sales size range on a national, state, and metro area level.

23.

Livingstone Partners (mergers & acquisitions)

443 N Clark St,  
Chicago, IL 60654  
(312) 670-5900

Livingstone is an international mid-market mergers and acquisitions and debt advisory firm based in Chicago, Illinois.

### **Government Agencies**

Bureau of Labor Statistics

Centers for Disease Control, CDC.gov

Dept. of Health & Human Services

ESRD Network Organizations (CMS.gov)

### **ESRD (End Stage Renal Disease) Network Program**

An ESRD Network is defined in the *Code of Federal Regulations (CFR)*, at 42 CFR Part 405, Subpart U as all Medicare-approved ESRD facilities in a designated geographic area specified by CMS. These regulations require ESRD treatment facilities to be organized into groups called Networks in order to promote a system of effective coordination. As an organized Network, dialysis and transplant providers can coordinated patient referral *and* access to resources in a more efficient manner.

National Institutes of Health, NIH.gov

U.S. Census Bureau, County Business Patterns (census.gov)

### **Published Articles, Reports, Surveys**

Trump signs executive order overhauling kidney transplant, dialysis market, CNBC, July 10, 2019

Dialysis centers are the health industry's growth story, Modern Healthcare, July 11, 2018

U.S. seeks to cut dialysis costs with more home care versus clinics, Reuters, March 4, 2019

Dialysis firms' profits are obscene. What will happen if California tries to cap them?, LA Times, July 20, 2018

24.

Consolidation in the Dialysis Industry, Patient Choice, and Local Market Competition, NIH, March 7, 2017

U.S. Renal Data System Annual Data Report, The National Institute of Diabetes and Digestive and Kidney Diseases, Health Information Center, [niddk.nih.gov](http://niddk.nih.gov)

The Big Business of Dialysis Care, Catalyst, June 9, 2016

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