Introduction

Healthcare delivery and payment systems in the U.S. are undergoing rapid change. Health and Human Services Secretary Sylvia Burwell’s statement published in the New England Journal of Medicine in early 2015 underscores the federal government’s commitment to meaningful change represented by a continued shift from an encounter-based to a value-based payment system.¹ Private payers and health systems have opined similarly.²

Kidney care providers are no strangers to integrated models of care and reimbursement, with an example being CMS’s End Stage Renal Disease (ESRD) Managed Care Demonstration program.³ Additionally, nephrologists have been reimbursed for providing care to patients with ESRD via a capitated model, the Monthly Capitation Payment (MCP), for decades. Furthermore, the MCP was modified in 2004 to incentivize more frequent face-to-face encounters, with a goal to improve clinical outcomes.

In more recent years, the evolution toward use of care delivery models embracing the concept of delivering increased value has accelerated, fueled in part by the passage of the Affordable Care Act (ACA). Medicare Shared Savings Programs (MSSPs), including Accountable Care Organizations (ACOs) and, specific to kidney disease, ESRD Seamless Care Organizations (ESCOs) are only a few of the new care delivery and reimbursement structures.

As these new payment methodologies are developed, nephrologists must provide value and have supporting data to demonstrate that value to payers – insurers, health systems, hospitals – in order to succeed.

This document provides the practicing nephrologist with the rationale and guidance for success in this evolving environment, as well as outlines the business and clinical practice considerations necessary for that success.

Business Considerations in Evolving Integrated Care Models

It is important to determine the value proposition for the nephrologist (and for the organizations with which the nephrologist will contract) in order for that practice to survive and thrive. Additional information related to the nephrology value proposition is included in the RPA Position Paper on Nephrology Scope of Practice.
Nephrologists as Leaders of the CKD Patient Care Team

The era of “value-based purchasing” has begun. Incentives and penalties for reporting, for meeting clinical outcomes, for the cost efficiency attributed to a physician’s or practice’s work are becoming increasingly important. The ESRD Quality Incentive program (QIP), the Physicians Quality Reporting System (PQRS), the Value-Based Payment (VBP) Modifier, and the Meaningful Use (MU) program are only a sampling of such initiatives. Physicians often think of themselves as autonomous and independent of others when making patient care decisions, but it’s imperative for physicians to also understand that caring for populations of patients with kidney disease and achieving superior clinical and cost-effective outcomes requires teamwork. Thus, it is important to determine what it means to be the leader of this team.

The members of this CKD care team include office personnel (including staff responsible for scheduling, medical records, billing, etc.), Medical Assistants (MAs), Registered Nurses (RNs), and Advanced Practitioners (APs). In the dialysis facilities there are patient care technicians (PCTs), RNs, Social Workers and Dieticians. Hospitals also have discharge planners. Their roles are designed to be complementary to the nephrologist’s work to deliver timely, coordinated, comprehensive, and high quality care. Clearly, patients and payers are interested in clinical outcomes and the associated costs (i.e., the key elements of the value equation). Physicians have to take the lead in their offices to engage staff and patients to be able to optimize clinical outcomes, and at a reasonable cost. The major challenge to resource planning and optimization is operating in a fee-for-service and an emerging value-based world simultaneously. From an operations management perspective, face-to-face encounters and telephonic and other electronic means of communication require workflows and staffing that are not consistently complementary. With more patients insured and seeking care, the longstanding hospital strategy of bricks and mortar “heads in beds” is paying off quite well for some, while others are preparing for a time when the main goal for those accepting financial risk becomes avoidance of expensive hospitalizations. That scenario requires a shift in strategy to stay solvent. Medical practices face similar challenges.

As noted on the chart below, Ian Morrison has deemed this strategic shift the “second curve”. The chart illustrates the component parts of volume-based first curve in contrast to the characteristics and concepts comprising the second curve. While neither the first nor second curves are inherently good or bad, the success factors in each ‘curve’ are different.
Re-assessment of office team staffing and the costs of future CKD care models are critically important to successfully projecting revenue requirements to make this model sustainable. This is especially true where future contracts similar to capitation but with quality performance requirements embedded in them are expected to be dominant. In such contracts, revenue becomes fixed per patient except for supplemental quality (plus cost) incentives (i.e. additional encounters fall onto the expense side, not the revenue side of the ledger). This modification creates an expectation that increasing the use of less expensive resources “upstream” will enhance quality and savings “downstream” (thus creating “value”). Potentially, the better a physician or practice is at providing higher value, the greater the opportunity for more revenue-generating contracts with ACOs, health systems, independent practice associations and similar entities. Coordination of care becomes even more transparent and important than in volume-based models. To remain competitive, practice strategy will need to adjust to accommodate this second curve; when service superiority and friendly relationships generating consults/encounters (first curve) are no longer the exclusive strategic imperative for competitive differentiation -- cost and quality are front and center in broader population management and value creation (second curve).
Coordination of care among various specialists and the patient’s PCP very often becomes the responsibility of the nephrologist. Therefore, as nephrologists, it’s imperative to understand the value of care coordination to other specialists, the PCP, the patients, the hospitals and health systems with which nephrologists work.

**Nephrologists as Experts Managing Patients with Complex Chronic Diseases**

As leaders of the team caring for patients with acute and chronic kidney disease, the nephrologist provides strategic advice and is a clinical resource to other providers. Nephrologists, as a result of their clinical training, are effectively pre-positioned as an essential participant in the patient care team, helping to assure high quality, evidenced based, appropriate medical care. In a value based compensation model, fair compensation demands having this “seat at the table”, which these clinical and leadership roles ought to assure.

**Value Proposition for Nephrologists**

Patients with multiple chronic illnesses consume a disproportionate share of medical resources and expenses. Patients with late stage chronic kidney disease (CKD) and End Stage Renal Disease (ESRD) exemplify this as they comprise 1.6% of the Medicare population but consume approximately 7.7% of Medicare costs (approximately $42.4 B per year). The complex nature of these chronic illnesses frequently requires that multiple subspecialists, including the patient’s primary care physician (PCP), be involved in the care of the patient. This results in a system in which patients are actually cared for by a “virtual team” of healthcare providers. The sites of care are geographically dispersed and may include physician offices, nursing homes, hospitals, dialysis units, vascular access centers, and ambulatory surgery centers. This virtual team system has traditionally been very fragmented, with patients receiving medical care in silos with very little integration or coordination. As medical costs continue to increase, providers can no longer focus only on their area of specialty, but must become more involved in an overall coordinated system of care, where priorities are based on better quality outcomes at the lowest possible cost. Consumers and payers are demanding that healthcare providers be accountable for the outcomes of their medical treatments.

As health care is becoming a team endeavor, it is becoming abundantly clear that having a team leader is an absolute necessity. Strong leadership with a clear vision will be necessary to survive and prosper in today’s turbulent redesign of the health care delivery system. Nephrologists are particularly well suited to provide the leadership necessary to meet the complex needs of patients with late stage CKD and ESRD. They have the necessary medical knowledge to manage the patients’ multiple complex medical co-morbidities. Frequently they already act as the patient’s “principal care” physician, helping to assure that the patient’s overall medical care needs are met. In their roles as medical directors of dialysis units, they are responsible for population management, lead Continuous Quality Improvement (CQI) efforts and manage numerous administrative functions. They also frequently possess greater business acumen as a result of running their practices as small businesses.
Nephrologists have always been recognized by primary care and other specialists as expert resources in the managing complex medical needs of patients with acute and chronic kidney disease, and as leaders of and accountable to the clinical care team. If nephrologists are not to be de-emphasized in the new world order of integrated healthcare, they must whole-heartedly embrace a leadership role in the care continuum for patients with CKD and ESRD. To ensure fair compensation to providers in a value-based model, nephrologists must lead efforts that result in the delivery of high quality, evidence-based, cost effective, and coordinated patient care. They must provide medically driven strategic leadership so that limited financial resources are allocated to the delivery of high quality population management. They must actively participate in the development and implementation of new programs which improve outcomes and create value. In their leadership role, they must also be willing to be held accountable for both clinical and financial outcomes of the redesigned CKD delivery system.

In addressing the medical needs of late stage CKD and ESRD populations it must be recognized that the sites of care differ by stage of CKD. The care of patients with CKD stages 3-5 typically takes place in the nephrologist’s outpatient office while ESRD patients receive most of their care in dialysis facilities. Therefore, different programs will be needed based on the patients’ stage of kidney disease.

**Nephrologists’ Value Proposition for Hospitals**

It is well recognized that patients with multiple comorbidities, especially diabetes, congestive heart failure (CHF) and chronic kidney disease (CKD) consume a disproportionate share of healthcare costs. While Medicare patients greater than age 65 with these three diagnoses represent 32% of the Medicare population, they consume 50.4% of Medicare expenditures.7

Nephrologists, with their extensive knowledge of chronic kidney disease and their experience in managing their patient’s comorbidities, are ideally suited to play a leadership role in helping hospitals achieve the government’s Triple Aim of Health Care, a framework for optimizing health system performance which includes: improved health of populations, improved experience of care and reduced overall health care costs.8

Success in this rapidly changing healthcare environment demands that hospitals develop appropriate strategic plans to meet the goals of the Triple Aim. Nephrologists are ideally suited to play an important role in the design and implementation of these plans in kidney disease care. Reducing hospital costs while documenting superior clinical outcomes through activities such as reducing unnecessary admissions and readmissions, reducing length of stay, improving transitional care management, reducing preventable complications, and enhancing quality assurance and improvement programs, will be a focus in an integrated care, financial risk or shared savings environment.

Medicare and other payers are focusing on reducing unnecessary admissions and readmissions. Vascular access complications, infections, and fluid overload/hyperkalemia related issues are major causes of hospitalizations. Initiating dialysis in otherwise stable new ESRD patients in dialysis units rather than the hospital may reduce unnecessary admissions. Many patients with mild fluid overload or hyperkalemia may safely be transferred from the Emergency Room to an outpatient dialysis unit, also avoiding
unnecessary admissions. Procedures on vascular accesses can be performed in lower cost outpatient settings.\textsuperscript{9} The implementation of urgent start peritoneal dialysis (PD) programs, focusing on patients that “crash” into the hospital due to the lack of pre-dialysis nephrology referral will help reduce placement of temporary dialysis catheters and subsequent catheter related infections requiring hospitalization and shorten length of stay. These programs will also likely result in more patients being placed on home dialysis, a modality associated with significant cost savings compared to in-center hemodialysis.

The development and implementation of a formalized program to manage the transition to renal replacement therapy of late stage CKD patients in the nephrologist’s office is another way nephrologists can add value and reduce unnecessary admissions and overall healthcare costs. Total per person per month (PPPM) costs in the month following dialysis initiation in Medicare ESRD patients age 65 and older was approximately $19,000 PPPM in 2011.\textsuperscript{10} This was more than double the amount in the months immediately preceding dialysis initiation. A focused late stage CKD program could emphasize CKD education, modality selection including referral for renal transplantation as appropriate, timely access placement and the appropriate management of CKD complications and comorbidities. Appended to this document are sample kidney disease education tools that can be used for late-stage patients.

Nephrologists must also be involved in discharge planning and all transitions of care involving their patients to help reduce length of stay and prevent readmissions. These care transitions typically occur between a hospital and a skilled nursing or sub-acute rehabilitation facility or an outpatient dialysis facility. Medication reconciliation, dry weight reassessment and adjustment, anemia management, management of diet and fluid intake, referral for access creation and hemodialysis catheter removal, and assurance of PCP and appropriate subspecialist follow-up are especially important during transitions of care. Patient navigators or care coordinators focusing on late stage CKD/ESRD patients can assure patient compliance with their care plan and assist with arranging transportation for medical appointments when necessary. Additionally, it is noteworthy that as hospitalists direct much of a hospitalized patient’s case management and discharge planning, it is important for nephrologists to work closely with them to assure that those care transitions are coordinated appropriately. Palliative care programs incorporating recommendations and tools from the RPA’s Clinical Practice Guideline on “Shared Decision-Making in the Appropriate Initiation and Withdrawal from Dialysis,”\textsuperscript{11} should be utilized to optimize appropriate end of life planning.

Nephrologists who can reduce preventable complications also add value to hospitals. Acute kidney injury can be reduced by identifying high-risk patients and implementing risk mitigation strategies. Hospital acquired infections can be reduced by avoiding unnecessary placement of Foley catheters and avoiding long-term use of hemodialysis catheters. Additionally, nephrologists and other specialists should focus on avoiding peripherally inserted central catheter (PICC) line placement and vein preservation in late stage CKD patients to preserve future access sites and reduce the need for dialysis catheters in the future.

Finally, improving the experience of care, and fostering patient safety is of utmost concern to all parties in kidney disease care. The nephrologist is already intimately involved in overseeing inpatient dialysis and ensuring that this care is provided in a safe and high
quality manner. However, improving the experience of care should be added to Quality Assurance and Improvement programs. Nephrologists, with their depth of experience in managing and communicating with CKD and ESRD patients, will play a key role in designing new processes in this effort.

**Nephrologists Engagement in ACOs, ESRD Seamless Care Organizations, and other Primary Care and Multi-Specialty Care Provider Organizations**

Nephrologists and other specialists are becoming increasingly involved with federally-based Medicare Shared Savings Program (MSSP) ACOs, Pioneer ACOs, End Stage Renal Disease Seamless Care Organizations (ESCOs), and/or integrated care models developed by commercial payers.

Following are two scenarios to help illustrate the options for engagement in these entities that are available to nephrology practices.

- **Scenario A:** A practice of 3 nephrologists in a community with 2 hospitals, where there are no other nephrologists, and no ACOs. The nephrologists are reimbursed fee for service for all of their care. It’s therefore unlikely that the scenarios below will have significant impact to their practices in the near term.

- **Scenario B:** A practice of 40 nephrologists in a large city with 3 major health/hospital systems, and 3 dialysis providers with 30 outpatient dialysis facilities. There are 2 major primary care IPAs and all 3 hospital systems are participating as MSSP ACOs. This group needs to determine how to effectively navigate this new environment and their options if they want to be the providers of choice for each of these entities.

It’s helpful to know the rules of engagement. For MSSP ACOs, the diagram below is a good guide to specialist participation. Essentially, PCPs are not permitted to join and participate in more than one MSSP ACO. Specialists are able to participate in more than one MSSP ACO, except under certain conditions. In order to participate in the ACO’s shared savings (or losses), a physician must be formally enrolled, i.e. participating in that ACO. Each formally participating physician is enrolled using his or her practice’s Taxpayer Identification Number (TIN).

The event disqualifying a specialist from formally participating in more than one MSSP ACO is billing CMS’s “Primary Care Codes” for one or more Medicare beneficiaries attributed to a particular ACO if that patient has not seen a PCP during the attribution period, and then if other specialists have not seen the patient more often than the specialist in question. CMS defines primary care services as CPT codes 99201-99215 [plus others less often utilized by nephrologists i.e. 99304 – 99340 (E&M services in a nursing or similar facility), 99341 – 99350 (E&M home visits), G0402 (Welcome to Medicare visit) and G0438 or G0439 (annual wellness visits)]. Importantly, the ESRD Monthly Capitation Payment (MCP) codes (CPT codes 90960 –90962) that the nephrologist uses for monthly dialysis patient claims are not considered “Primary Care Codes”.

If the patient was seen by his/her PCP at least once during the attribution period, the nephrologist’s use of these primary care codes for that patient’s care is irrelevant since the nephrologist is not identified as that patient’s PCP. Therefore, in this case the nephrologist
is not prohibited from participating in additional MSSP ACOs. However, if the patient has no PCP or did not see his/her PCP, and the nephrologist saw the patient for the plurality of primary care services as defined by use of the CPT codes designated above during the attribution period, the nephrologist is prohibited from participating in other MSSP ACOs. There are two ways for a nephrology practice to participate in more than a single MSSP ACO if one or more of the group’s physicians are prohibited from doing so based on the above scenarios.

- The practice can operate under more than one TIN, with some of its physicians under one TIN, and the rest under another TIN, since it is the practice’s TIN that is used to identify each of its physicians’ primary care services provided to attributed Medicare beneficiaries; or
- The practice may provide specialist services to the MSSP ACO but not as a participating specialist i.e., not formally contracted via its TIN and therefore not practicing as a member of that MSSP ACO. In most cases this is the situation facing many nephrologists – admitting and consulting on hospitalized patients with kidney disease, fluid and electrolyte disorders, etc. as an independent physician with no formal contractual ties to the hospital other than being a member of its medical staff.

It is therefore critically important for each practicing nephrologist and practice leader to understand what’s happening in his or her local market. Consider the following questions:

- Are hospitals and/or health systems and/or independent physician practice organizations developing formal ACOs? If so, are these entities MSSP ACOs, Pioneer ACOs, Commercial ACOs?
- Are these entities looking to narrow their specialist networks? What criteria will they use to make those selections?
  - Clinical outcomes (e.g., percentage of late stage CKD patients referred for transplant and/or CKD education, percentage of patients starting hemodialysis with a CVC, etc.)
  - Financial performance (e.g., hospitalizations and re-hospitalizations)
  - Resource utilization (e.g., lab and radiologic testing)
- Will your practice have the data needed by ACOs?

Relying solely on social relationships and good service may not be enough to differentiate a practice from competitors in such scenarios, where delivering value as defined by outcome/cost trumps everything else. Note that “outcome” here is quality-based. This is not the “managed care” of a generation ago.
The diagram below shows that participating in an ESCO or a Pioneer ACO precludes a specialist from also participating in an MSSP ACO; however, a specialist can simultaneously participate in an ESCO and a Pioneer ACO.
Interrelationships among nephrologists, dialysis providers, hospitals, other physicians and health care organizations in an “accountable care” world are illustrated in the diagrams below.

MSSP or Pioneer ACO (*or Non-ACO System) without ESCO – “Existing” Model

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The relationships shown above illustrate the current situation for most nephrologists. Nephrologists attend to patients in one or more outpatient dialysis centers, receive patient referrals from primary care or other physicians, and see those patients periodically in local hospitals. If the hospital is participating in a Pioneer or MSSP ACO, the nephrologist may care for the ACO’s attributed ESRD patients as a participant specialist, or simply as an informal consultant (as described above, i.e. not a formal participant in the ACO).
In the scenario above, one or more nephrology practices are participating in the Center for Medicare and Medicaid Center for Innovation’s (CMMI) Comprehensive ESRD Care (CEC) Initiative by partnering with a dialysis provider in an ESRD Seamless Care Organization, or ESCO. Medicare patients (“beneficiaries”) with ESRD are automatically attributed to an ESCO. Presently if they have already been attributed to a MSSP or Pioneer ACO, assuming one or more operate in the same geographic area, those patients are ineligible for attribution to the ESCO, as would likely be the case in the scenario below.
An ACO CEO’s perspective on how nephrologists can provide value to that ACO is provided below.

“When I evaluate provider specific data I’m interested to know how high the quality of care is that we can measure being provided to Medicare beneficiaries in the ACO and what is the cost for the average case or unit of care. For example I would not expect every outpatient consultation for a nephrologist to include a kidney biopsy or a nuclear medicine renal scan. I would be interested to know how many CTs and MRIs per consultation are ordered especially if the physician is known to have ownership interest in an MRI or radiology ancillary business. I would want to know how many patients are admitted to the hospital for conditions that could and should be typically managed as an outpatient such as vascular access complications or to have an understanding of how many patients are admitted to the hospital fluid overloaded or with insufficient control of hypertension or for transfusions or other comorbid conditions for which the Nephrologist would be expected to play a role. Therefore, Nephrologists who want to provide value to an ACO with higher-quality at lower cost should follow several steps: try to use outpatient facilities for vascular access complications, try to avoid having the dialysis unit send people to the emergency room as a knee-jerk response to a noncritical problem, reduce the central venous catheter rate, improve coordination of care between the patients and
their primary care physicians and other specialists e.g. cardiologist, and focus on having CKD 5 patients have a functioning peritoneal access or functional fistula prior to initiation of dialysis whenever possible. Highly sophisticated integrated care networks will have software packages and functioning quality and clinical policy committees as well as functioning compliance committees, which will be robust enough to look into these types of quality and cost issues. Smaller and less sophisticated ACOs may not have the resources to develop these types of reports; however I would suggest that nephrologists would be recommended to provide leadership to any ACOs of which it is a member or provider to help them develop these processes.”

Examples of Elements to look for in an ACO Contract

Requirements for Data Submission and Certification
So-called ‘Big Data’ is not the sole purview of large technology enterprises. Consider that the average practicing nephrologist performs thousands of office, hospital and dialysis facility patient encounters each year. Each encounter results in a document with information concerning the patient’s history, vital signs and other physician examination information, laboratory and radiology results, smoking status, ICD and CPT codes, and if pertinent, information about patient education, ESRD modality selection, transplant status, etc. This is the practice’s data. It needs to be documented, searched, analyzed and used for quality improvement, cost analysis, and development and assessment of clinical processes for added value. Making the proper investments in your practice’s Big Data is not only a critical function, but is becoming a requirement for ongoing success.

Exclusivity
In general, it is preferable to avoid exclusivity clauses; however, if as above there is more than one MSSP ACO that a practice has the opportunity to join or participate in, the practice will likely have to obtain a new and separate TIN to create a virtual second practice. If that’s the path taken, legal counsel is recommended for advice as to exclusivity clauses and TINs.

Electronic Health Records Technology
Health Information Technology is constantly evolving. As such, ACOs are likely to have physician and vendor participants with different EHRs; interoperability among these participants is critically important for tracking outcomes and communicating among providers. As there are costs to creating conduits between systems, the practice should be sure to investigate the expectations and responsibilities of building those conduits.

Termination for Failure to Meet Performance Standards
Successfully performed shared savings and/or risk contracts require financial and quality results. Each participant should be expected to be held to standards that enhance both.
Clinical Practice Considerations

Quality improvement tools to help nephrologists achieve performance metrics and track their patient data, and incorporate these into the clinical care continuum of CKD patients are essential for effective participation in ACOs, ESCOs, and other shared savings models. As with information obtained from comparing their own financial and operational performance to their peers through tools such as the RPA Benchmarking Survey Report, practices will benefit from knowing how they are doing with clinical performance. Such “Measures that Matter” can be defined by each practice; however, what matters most will ultimately be measures that add the most value to patient care. Examples of “Measures that matter” include:

- CVC rates at initiation of dialysis
- Pre-emptive renal transplantation
- CKD and diet education
- Vessel mapping
- Medication prescription and adherence

One recommended model for formatting the data is to have it: (1) based upon existing EHR capabilities; (2) Excel-based; and (3) using a registry such as RPA’s CMS-approved Clinical Quality Data Registry (QCDR).

It will also be important to operationalize tools and resources in the nephrologist’s practice to improve patient engagement and outcomes. The following components and activities may be included in such an effort:

- EHR-based Patient Portals are integral to certified EHR technology, and use is required for successfully meeting the HITECH CMS EHR Incentive program requirements
- CKD education programs (including ESRD treatment options) are available to patients with CKD, often through dialysis providers in their area. Additionally, RPA tools can be found at [http://www.renalmd.org/page.aspx?id=1794](http://www.renalmd.org/page.aspx?id=1794)
- Use of Office RNs and other clinical personnel (discussed above)
- Use of data reports to manage the effectiveness of the practice’s CKD Care protocols
Summary

Payment and healthcare delivery systems in the U.S. continue to evolve and demand greater accountability of providers for outcomes and costs. Activities exemplifying this movement include incentive and penalty programs such as the Physician Quality Reporting System, Meaningful Use, the Value-Based Payment Modifier, penalties to hospitals for readmissions, and the Quality Incentive Program for dialysis facilities. Accountable Care Organizations that are assuming financial risk and/or shared savings/losses are also representative of this shift.

The highest costs of care are typically attributed to hospitalizations; thus, hospitals and health systems (some emerging entities potentially being kidney care specific) will, in an effort to avoid becoming marginalized, seek an advantage by acquiring physician practices, investing in more outpatient and transitional care services, assuming financial risk, participating in shared savings programs, and aligning with or becoming insurers. It therefore follows that physicians will increasingly look at the minimum requirements for inclusion in those entities’ narrowed provider networks or exclusive provider organizations to be able to provide and be reimbursed for their professional services.

Such disruptions to the current health care paradigm present new challenges but also new opportunities. It is imperative that physicians continue to focus on providing high quality patient care, but also develop the ability to track and utilize relevant data to improve value. This value proposition is not only for patients and for payers (see above, The Triple Aim), but also for nephrology practices.
## Appendix A: Kidney Disease Education (KDE) Tools

### Plan of Care Chart

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<th>Patient Name: ________________________________</th>
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#### CKD Education- Stage IV
- Immunizations
  - □ Anemia
  - □ Bone & Mineral Disorders
  - □ Hypertension
  - □ Modality
  - □ Nutrition

#### Nutrition (to be completed only by Dietitian as scheduled):
- □ Basic Nutrition Guidelines ____/____/______
- □ Understanding the Nutrients ____/____/______
- □ Lab Tests ____/____/______
- □ Food Labels ____/____/______
- □ Meal Planning ____/____/______
- □ Food/Drug Interactions ____/____/______

#### Immunizations:
- □ Hepatitis B Panel: ____/____/______
- □ Hepatitis B
  - 1st Dose ____/____/______
  - 2nd Dose ____/____/______
  - 3rd Dose ____/____/______
- □ Flu
  - ____/____/______
  - ____/____/______
  - ____/____/______
  - ____/____/______
- □ Pneumovax ____/____/______

#### Transplant Referral To:
- ___________________________ ____/____/______

#### Transplanted Date: ____/____/______

#### Access Referral to
- ___________________________ ____/____/______

#### Type of Access:
- □ PD Cath
- □ Graft
- □ Permacath
- □ AV Fistula:
  - △ Left
  - △ Right

#### Annual Lipid panel drawn ____/____/______ ____/____/______ ____/____/______

#### Anemic Patients Iron Panel Drawn ____/____/______ ____/____/______ ____/____/______
CKD Quiz

Chronic Kidney Disease
Test your knowledge

Name _________________________  Date___________________

1. What is your GFR (Glomerular Filtration Rate)? _______________________________________________
   Why is it important? ________________________________________________

2. What stage of CKD do you have? ______________________________________________________________
   How many stages of CKD are there? ___________________________________________________________

3. Do you have Anemia? _________________________________________________________________
   If yes, what caused it? _________________________________________________________________

4. What things can you do to slow progression of CKD?
   _________________________________________________________________
   _________________________________________________________________

5. Is your calcium and phosphorous (bone health) in Range? Y or N

6. Color in the amount of kidney function you have left in the kidney below.
Your score is: __________

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