

## Case 4

- A. The patient has an uncommon but very complex disorder that requires the nephrologist to follow serially and/or comprehensively. Examples include nephrotic syndrome from primary glomerular disease, or a patient with complex hypertension due to renal vascular disease. This scenario might include the entire spectrum of patients who see the nephrologist as "their doctor."

A 34-year-old female with Systemic Lupus Erythematosus diffuse proliferative/membranous GN with a serum creatinine of 1.8, proteinuria of 4.0 gm/d, hypertension, avascular necrosis of the hip and ankles, history of MAI osteomyelitis of the spine with neurologic impairment, recurrent UTI. SLE has been treated with Cyclophosphamide, steroids, Rituximab and now on Prednisone and mycophenolate mofetil. The patient also has chest pain, and glucose intolerance. She is a single mother, works, and has the basic health plan.

### Issues of overall care:

- a. renal disease – insufficiency, proteinuria
- b. immunosuppression
- c. recurrent infection
- d. deep tissue infection
- e. vascular disease – hypertension, hyperlipidemia
- f. social issues of medical coverage and child care while trying to maintain a job

### This patient demonstrates the following needs:

1. Primary renal disease treatment that requires nephrology follow-up at close time intervals.
2. The risk of infection secondary to the primary disease and treatment that requires follow up by a provider familiar with immunosuppressed patients.
3. The need to coordinate visits/recommendations from rheumatology.
4. The demonstration of recognition and treatment of bone consequences of long term steroid use and other immunosuppressive agents.
5. The demonstration of expertise in the management of recurrent urinary tract infections.
6. The demonstration of recognition of the increased risk of coronary and peripheral vascular disease in patients with lupus.
7. The ability to alter insulin treatment or initiate oral therapy in patients with lupus who develop secondary diabetes.
8. Rehabilitation after infection of the spine.

**Coordination of care for this patient will involve the following providers:**

Diabetologist, Orthopedic Surgeon, Infectious Disease, Cardiology, Rehabilitation

**Questions for Discussion:**

How will the PCMH orchestrate the following care?

How will the above diagnostic and therapeutic plan be accomplished within the patient centered medical home model? How would that be different than currently existing care models?

Who will take responsibility for ordering, collecting and interpreting the initial round of diagnostic studies?

How often will the nephrologist see the patient in follow-up in the first 12 months? After that?

How often will the patient be seen in his primary medical home?

How will redundancy of care be avoided?

By what mechanism(s) will the physicians communicate?

Who is the final decision maker when it comes to therapy and pharmaceutical agents?

How will the physicians decide how to assign areas of clinical responsibility? In other words, who is in charge of the BP, the diabetes, the lipids, infection etc?

Who will facilitate coordination of care and communication, eliminate redundant or unnecessary testing, increase the efficiency of the various physicians, assure continuity of care and promote transparent patient centered transitions?

How will total reimbursement be allocated among the various providers to reflect actual time spent in evaluation and management, educational and counseling functions?

B. A 44-year-old man with nephrotic syndrome referred by his primary care physician for evaluation of proteinuria. You find that he has 6 gms of albumin in the urine and that the work-up for an underlying malignancy is negative. Physical exam reveals hypertension and edema but no other abnormalities. A renal biopsy shows membranous nephropathy. The serum creatinine is 2.1 mg/dl, hgb of 9.6, phosphorus of 6.0, albumin of 2.4 mg/dl.

While awaiting the results of all of the tests, the patient has an episode of dyspnea and you diagnose a pulmonary embolus and begin anticoagulant therapy.

You decide to treat him with corticosteroids and cyclophosphamide. The patient does well with a remission of his proteinuria to 1.8 gms and serum creatinine of 2.3 mg/dl, and is stable for 3 months.

Issues of overall care:

1. renal disease – insufficiency, proteinuria
2. immunosuppression
3. risk for recurrent infection
4. vascular disease – thrombosis, hypertension, hyperlipidemia

This patient demonstrates the following needs:

- a. Primary renal disease treatment that requires nephrology follow-up at close time intervals.
- b. The risk of infection secondary to the primary disease and treatment that requires follow-up by a provider familiar with immunosuppressed patients.
- c. The recognition of the risk for thrombosis, recognized by nephrologists in the setting of heavy proteinuria and specific renal diseases.
- d. The management of CKD given the creatinine of 2.3 and proteinuria.
- e. Management of hypertension.

Coordination of care for this patient will involve the following providers:

Who should coordinate this patient's care?

Would a primary care physician be comfortable and knowledgeable about determining need for further immunosuppressive therapy?