Sample Use Case 1

In the Develop section of your final ADDIE paper, you will include a use case to outline the project's steps. Following is a sample use case:

Use Case: New testing procedure for kidney disease in Black and mixed-race patients

ID: New testing procedure for kidney disease in Black and mixed-race patients, Version 1

Use Case Description: Patients at risk of severe kidney disease are seen by a primary care clinician (MD, NP, PA) and blood tests are drawn and sent to the laboratory. Race-corrected values are no longer calculated or entered in to the electronic medical record (EMR). Additional information may be collected and analyzed, including age, height/weight, BMI, muscle mass, and albumin level. Cystatin C may be ordered to confirm eGFR results. Additional lab results will be discussed with the patient and referrals to nephrology will be made if three consecutive monthly eGFR tests are under 60.

Primary Actors: Patients and primary care clinicians

Supporting Actors: Information system team, phlebotomy team, laboratory team, nephrology practices

Stakeholders and Interests: Clinic executive management team (CEO, COO, CFO), board members, insurance companies

Pre-Conditions:

1. After agreement by the clinical and laboratory teams to implement new lab values, the information systems team makes the change in the EMR.
2. Insurance companies agree to pay for additional tests when they are required to make the diagnosis of kidney disease.
3. Patient education materials are developed to include the new test results and procedures.
4. Nephrology practices agree to accept all patients- no matter what race--based on eGFR results and any additional data/testing done.

Normal Flow of Events:

1. Patients at risk of severe kidney disease are seen by a primary care clinician (MD, NP, PA) and referred to the phlebotomy team at the end of the visit.
2. Blood draws are done by the phlebotomy team.
3. Labs are sent to the laboratory.
4. eGFR test is completed, no race-based values are calculated, and values are entered into the electronic medical record (EMR) system.
5. Results are discussed in person or by phone with the primary care provider and the patient.
6. Based on eGFR results, additional information may be collected and analyzed, including age, height/weight, BMI, and muscle mass. Other lab tests may be ordered, including albumin level and cystatin C.
7. Additional lab results are discussed with the patient and referral to nephrology will be made if three consecutive monthly eGFR tests are under 60.
8. Primary care clinicians will continue to follow patients and collaborate with the nephrology team on next steps in treatment.
9. If eGFR and other lab results/clinical data do not support referral, patient will continue to be followed closely for progressive kidney disease. If eGFR is > 60 in any subsequent visits, the three lab test series will be repeated.
10. Support: contact the lead clinician with any questions.
11. Evaluate: lead clinician on this project will review data quarterly on referrals, patient outcomes, and billing issues. An annual review will also be completed. If problems are detected, revise the normal flow.

Post Conditions:

Success-end condition

1. The changes are approved by the primary care clinician, laboratory teams, and executive management.

2. Nephrology practices and insurance companies accept the new changes.
3. All steps in the normal flow of events are successfully completed when needed.
4. All patients meeting the criteria for referral are referred and accepted into nephrology practice.
5. Patient's kidney disease is stabilized or mitigated with additional treatments and procedures.

Failure-end condition:

1. The laboratory test changes are not approved by the primary care clinician, laboratory teams, or executive management.
2. Nephrology practices or insurance companies refuse to accept patients or cover lab costs.
3. Steps in the normal flow of events are ignored or missed, and confusion about patient care flow is introduced.

4. Patients of color are refused by nephrology practices, which continue to use old eGFR values as the referral basis.
5. Additional data or laboratory tests are not used to confirm eGFR results, and there is potential over-diagnosis of kidney disease.
6. Patients of color continue to have poorer kidney disease outcomes.

Trigger: Patients of color are being seen at primary care practices.

The workflow or normal flow of events (see earlier in this document) is visually depicted in the next section.

Implementation

Workflow for new eGFR calculations, values and referrals