Reducing kidney waitlist times with shared data among dialysis, nephrology, and transplant providers

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OBJECTIVE

Describe an information technology platform that meets the growing needs of all ESRD care providers under the Advancing American Kidney Health Initiative.

INTRODUCTION

The CMS has outlined a seven-step pathway from late-stage chronic kidney disease and end-stage kidney/renal disease (ESRD) to transplantation (Tx) - the *seven steps to transplant*. The novel information technology (IT) platform is designed to catalogue, update, and communicate pertinent patient-level data at each step on the path from patient identification, education, referral, evaluation, to waitlisting, and proactive clinical tracking of patients after they are waitlisted.

METHODOLOGY

In consultation with subject-matter experts and though an extensive literature review, OmniLife designed and defined the platform implementation strategy to complement CMS seven steps to transplant:

1. Suitability,
2. Interest,
3. Referral,
4. Initial Visit,
5. Evaluation,
6. Transplant Readiness, and
7. Potential Living Donors

This IT platform can bridge communication and data sharing gaps among the ESRD network of care providers; nephrology practices, dialysis units, and transplant centers. Bi-directional and timely communication, data sharing, and interoperability are required of this network to adequately support the seven steps to transplant at a patient level.

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[3] Research reported in this publication was supported by the National Library of Medicine of the NIH, award number: R43LM012575. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.
This work is under review.

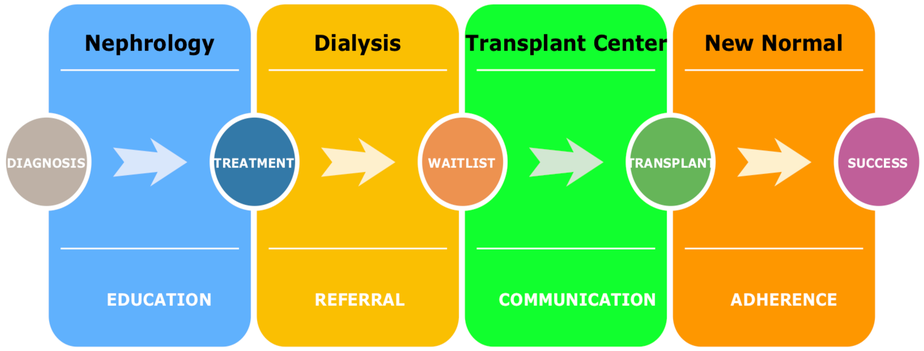
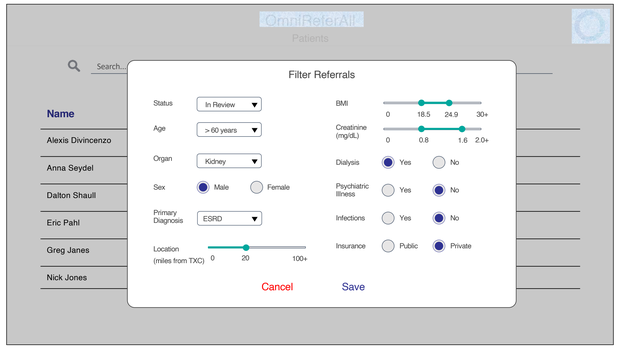
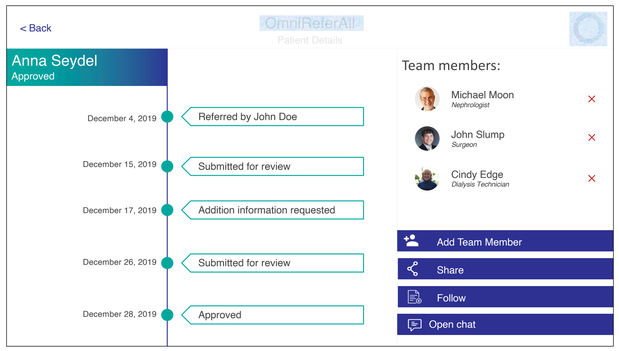


Figure 1. Simplified illustration of the ESRD provider care network depicting a sequential and siloed process, but we know that this progression is not sequential or siloed. This process requires many bidirectional communication channels, data transfers, interoperability, referral networks, and coordination among these providers. In the case of preemptive transplantation, dialysis may be skipped. Education and communication are needed throughout.

Nephrology practices - caring for late-stage kidney disease patients who would benefit from early transplant referral toward the end of increasing pre-emptive transplants.



Dialysis units - track all their patients based on Tx candidacy status, standardized Tx education, executed Tx referrals (date), why they are not a candidate if they aren't, real-time status in the evaluation process, and when they are waitlisted (date), as well as ability to track waitlisted patient.



Transplant centers - timely bi-directional communication and data sharing allow better and timely decisions regarding candidacy, transplantation, and adherence.

CONCLUSIONS

By meeting the needs of each ESRD stakeholder, the IT platform permits data informing pertinent quality metrics to be gathered, collated and tracked for all end-users. Dialysis facilities track their percentage of prevalent patients waitlisted in real time and implement quality improvement projects around all steps of transplantation. Transplant centers inform quality improvement projects around waitlist criteria and waitlist management. Nephrology practices actualize population-health level tracking the transplant education, referral, evaluation and listing of prevalent patients with ESRD.

1. Identifying clinical *suitability for transplantation* – IT platform includes access to standardized and validated patient education tools which the patient can navigate independently, or with assistance. Platform also documents which education tool was used, and the date and time of education session.
2. Assessing/confirming patient's *interest in transplant* – IT platform surveys the patient's interest in transplantation after education, and clinical judgment as to the suitability for referral.
3. Making the *initial referral* to transplant center – IT platform facilitates a secure, trackable, paperless referral to the transplant center.
4. Patient's *first visit* to transplant center – Transplant center end-user is able to upload pertinent data regarding the initial evaluation and multidisciplinary assessment, which will be visible and available to the dialysis provider and/or nephrology practice end-user.
5. Completing the transplant center *work-up* – Once the patient is waitlisted, the dialysis provider and/or nephrology care provider is able to track patients in their unit currently waitlist active or Status 7.
6. Engaged waitlisting – Keeping patients *transplant ready* – IT platform facilitates bidirectional communication between the patient, dialysis provider, nephrology practice, and transplant center to share pertinent clinical information to ensure waitlisted patients continue to be suitable for active listing. Patient adherence to dietary, lifestyle, and medical demands may be tracked passively through mobile apps and wearables or by direct engagement between patient and providers.
7. Identifying *potential living donors* – IT platform permits the registration on living donor registries, such as the National Kidney Registry.