

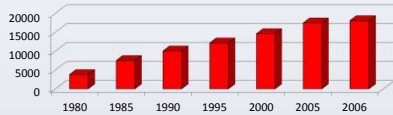
Work Flow Analysis: Evaluating Efficiency and Barriers to Care in the Geriatric Renal Transplant Population

Jedidiah Schlung, MSII John Fontanesi, PhD UCSD School of Medicine

Introduction and Background

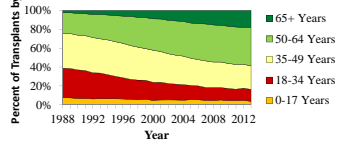
The United States currently faces rising incidence of both chronic kidney disease and renal failure¹.

Kidney Transplants in the U.S.



Additionally, in recent years this disease burden has shifted toward the geriatric population².

Kidney Transplants in the U.S. as a Function of Age



This project was initiated with the goal of promoting healthcare in this patient population in both an efficient and compassionate manner.

Workflow analysis, which has been used in many contexts to improve both clinical efficiency and patient care^{3,4,5}, presents a means to both of these ends.

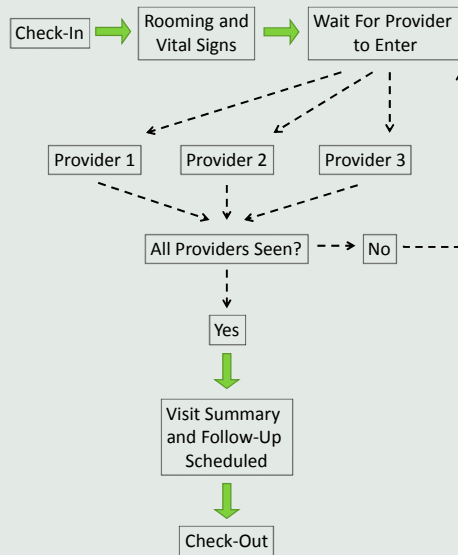
Hypothesis and Objectives

Hypothesis: Quality healthcare consists of a balance between capacity and demand.

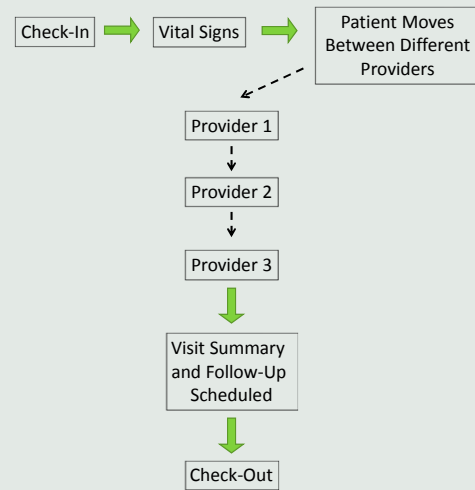
Goals

1. Construct an idealized workflow model of a renal transplant clinic visit
2. Establish baseline clinical performance by recording workflow data and key performance indicators⁴ for multiple patient visits to clinic
3. Hypothesize ways to reduce variability in the duration of clinical visits, decrease costs, and improve patient satisfaction with the clinical appointment
4. Conduct brief, semi-structured interviews of patients, physicians, and ancillary staff to identify obstacles to care and hypothesize ways in which they may be addressed.

Current "As-Is" Clinic Workflow



Idealized Clinic Workflow



Materials and Methods

1. Workflow observation study with a convenience sampling of patients from the UCSD Renal Transplant Clinic at Hillcrest
2. Patients followed through clinic by observer, 56-item workflow observation form - Observational Checklist of Patient Encounters (OCPE) - used to record key performance indicators describing patient visit
3. Patients given short questionnaire, brief semi-structured interview focused on visit perception, satisfaction, and barriers to care

Future Directions

1. Institute hypothesized changes in clinic workflow pattern and record workflow data for future patient visits to clinic
2. Test data against baseline to evaluate success of proposed measures.

References

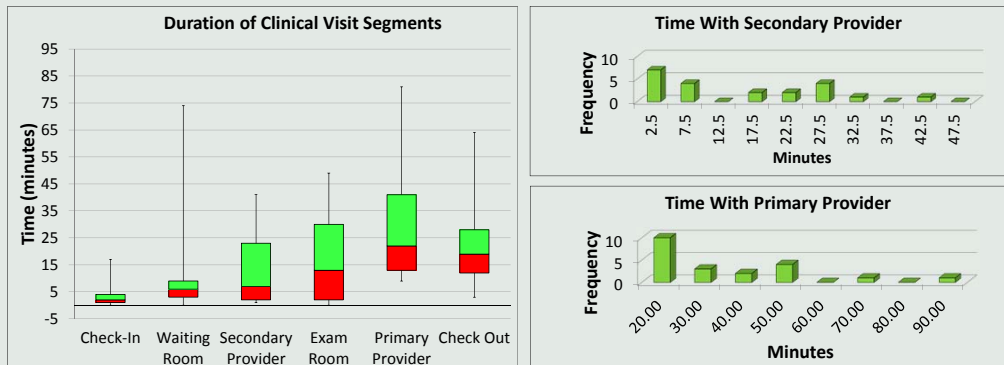
1. Kidney Disease Statistics for the United States. National Kidney and Urologic Diseases Information Clearinghouse, 2013. (Accessed December 30, 2013, at <http://kidney.niddk.nih.gov/kudiseases/pubs/kustats/#11.>)
2. Transplants in the U.S. by Recipient Age. U.S. Department of Health & Human Services: Organ Procurement and Transplantation Network, 2013. (Accessed December 30, 2013, at <http://optn.transplant.hrsa.gov/latestData/rptData.asp>.)
3. Fontanesi J, DeGuire M, Chiang J, Holcomb K, Sawyer M. Applying workflow analysis tools to assess immunization delivery in outpatient primary care settings. The Joint Commission Journal on Quality Improvement 2000;26:654-60.
4. Wilson MJ, Nguyen K. Bursting at the Seams: Improving Patient Flow to Help America's Emergency Departments. Washington D.C.: The George Washington University Medical Center 2004.
5. Woodcock E. Mastering Patient Flow: More Ideas to Increase Efficiency and Earnings. 2 ed: Medical Group Management Association; 2003.

Acknowledgements

Project funded by the Medical Student Training in Aging Research Program (MSTAR)

The author would like to thank Sonal Desai for her assistance in learning to use the OCPE, and Dr. Dianne McKay, Dr. Kristin Mekeel, and John Dickerson for their time and insight into clinic operation.

Results



Key Points and Conclusions

- Proposed change in workflow pattern: patients move between stationed providers, rather than waiting in exam room
- Clinical visit segments with widest variability illustrated above; intervention will focus on these areas
- Observed time with providers shows bimodal distribution, represents opportunity to tailor appointment length to patient
- Two obstacles to care brought up by majority of geriatric patients, plan to discuss these concerns with clinic leadership
 - distance from parking to clinic
 - distance between transplant clinic and blood-draw lab in hospital complex