

Optimising Medication Compliance in Complex Renal Transplant Patients - the Impact of a Patient-Centred Approach

AUTHORED BY: Shiqin Peng & Kim Sucic – Pharmacy Department, Royal North Shore Hospital, Northern Sydney Local Health District, NSW

OBJECTIVE

To describe the benefits of patient-centred pharmacist interventions in ensuring safe and effective use of high-risk medications for two challenging renal transplant patients.

CLINICAL FEATURES

Case 1

- 50-year-old female admitted for a cadaveric renal transplant in August 2018.
- Her past medical history includes epilepsy, hypertension and intellectual disability.
- Her medications are administered from a dose administration aid (DAA) by staff in a group home in rural New South Wales.

Case 2

- 41-year-old Tibetan monk admitted for a cadaveric renal transplant in February 2019.
- His medical history includes hepatitis C, latent tuberculosis (TB) and hyperparathyroidism.
- He resides alone with limited support and understands very minimal English, requiring an interpreter for reviews.

LITERATURE REVIEW

- Medication regimens prescribed post renal transplantation are expensive and require therapeutic drug monitoring.
- Patients require good levels of literacy and comprehension to self-medicate safely.
- Non-compliance can lead to graft rejection and is associated with significant financial burden to the health system. Studies show that pharmacists may optimise patient outcomes by ensuring medication compliance, providing medication review and reconciliation¹⁻³.

PHARMACIST INTERVENTIONS, CASE PROGRESS AND OUTCOMES:

- Pharmacists undertook medication reconciliation and review for both cases as per standard of care.
- Pharmacists adopted a tailored approach to facilitate smooth transition from hospital to community setting.

Case 1

- Pharmacist liaised with the patient's local pharmacy regarding medication supply, brand substitution and medication stability in DAA.
- Pharmacist educated the facility manager regarding medication administration, monitoring, dose changes, handling and storage using verbal and written information.
- To promote autonomy and medication compliance, the patient was encouraged to request her medications when prompted by an alarm.
- She remains off-dialysis and maintains good renal function 15 months post transplant.
- After initially trialling an alarm clock to assist with compliance, our patient remained confused regarding the timing of her medications. She is however able to dispense medications from her DAA under supervision.

Case 2

- A comprehensive pictorial medication list was prepared for the 2 DAAs required for his 21 medications.
- He required extensive pharmacist follow-up in the outpatient clinic. Through demonstration, visual aids and repeated education with an interpreter, he was taught to load his DAAs.
- His medication regimen became more complex as his TB reactivated 3 months post transplant. He was successfully taught to manage Video Observed Therapy of his TB medications using a smart phone app.
- Eight months post transplant, his renal function remains optimal and he remains off haemodialysis.

Case 2 - continued

- His management of medications has been exemplary – he is able to pack his DAAs without error and is extremely conscientious of timing, accuracy and hygiene.
- He is most appreciative of the efforts made by the Pharmacy team to tailor his medication program.
- This has given him dignity and autonomy to manage his medication regimen and he feels empowered to manage changes as they arise.



Picture 1: Case 2 patient packing his DAAs using a pictorial medication list provided.

Royal North Shore Hospital Telephone : 9463 1102 MEDICATION LIST					
MRN :	Patient name :	Date of Birth :	Consultant :	ALLERGIES :	Entered by :
				Date updated :	
Medicine Name(s) including brand names & strength	Number of Tablets/Capsules Time to be taken				What it's for
	Breakfast	Lunch	Dinner	Bedtime	
Tacrolimus 5mg capsules (Prograf) 	2			2	Prevents transplant rejection. • "Do NOT change brand" • Take 12 hours apart at the same time every day. • On the day of your blood test, do NOT take your morning dose until blood is taken. • Swallow whole; do NOT open capsules • Keep in original packaging • Discard unused capsules 12 months after opening • Avoid grapefruit juice • Watch for signs of infections • Wear sun protection • Speak to your doctors/pharmacists before making changes to your medicines
Tacrolimus 1mg capsules (Prograf) 	xx			xx	
Tacrolimus 0.5mg (=500microg) capsules (Prograf) 	xx			xx	
Mycophenolate sodium 360mg tablets (Myfortic) 	2			2	Prevents transplant rejection. • "Do NOT change brand" • Take 12 hours apart at the same time every day • Swallow whole • Keep in original packaging • Ensure 2 effective methods of contraception

Picture 2: Excerpt of medication list provided at our facility.

CONCLUSION

Renal pharmacists play a pivotal role in providing a tailored patient-centred service, empowering otherwise challenging renal transplant patients to engage with and thus optimise management of their complex medication regimen. This contributes to prolonged graft survival and improved patient outcome.

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