Improved patient care and efficiency savings following the introduction of a virtual integrated multidisciplinary diabetic renal meeting

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INTRODUCTION

- Diabetic nephropathy is a leading cause of end-stage renal failure.
- An integrated approach is required to exclude other causes of renal impairment, prevent further decline of kidney function, managed cardiovascular risk and complications of both their diabetes (DM) and chronic kidney disease (CKD).
- We established a combined diabetes-renal service to optimise management for such patients, with a virtual MDT.

METHODOLOGY

- Retrospective 3-year audit of adult diabetic patients (2013-2015).
- Discussed in a Virtual Diabetes Renal MDT with a diabetologist and a renal physician.
- Patients referred from either diabetes or renal clinics.
- We looked into: causes of CKD (other than diabetic nephropathy), screening for complications, cardiovascular risk management and cost-efficiency of the service.
- Demographic data was obtained using electronic records and clinic letters.
- Outcomes were compared from prior to the MDT to 1 year after.
- The data was analysed for statistical significance using paired/unpaired T-tests.

RESULTS

- Total of 88 patients identified with DM and CKD, who attended the service over 3-years.
- Median age 68years (+/-14years) with approximately 67% male gender.
- Majority of patients had Type 2 diabetes (91%).

Table 1: Baseline Characteristics	n = 88
Male gender (%)	59 (67%)
Median age (years, range)	68 (19 - 90)
Type 1 diabetes diagnosis (%)	8 (9%)
Type 2 diabetes diagnosis (%)	80 (91%)
Years since diagnosis (years, range)	21 (3- 50)

	Pre - MDT	Post- MDT	P-values
HbA1c IFCC (mmol/mol)	63 (range 39 - 131)	61 (range 40 - 109)	0.259
Haemoglobin (g/DL)	117 (range 81-153)	115 (range 82 - 161)	0.217
Cholesterol (mmol/L)	4.0 (range 2.4 - 6.7)	3.6 (range 2.1 - 5.7)	**0.005 ***
Urinary ACR	126 (range 1.8 - 723)	165 (range 2.4 - 1051)	0.043
eGFR	33 (range 5-85)	27 (range 8 - 72)	**0.00 ***
Sulphonylurea use (% patients)	20 (45%)	10 (23%)	**0.019 ***
Insulin use (% patients)	45 (51%)	48 (55%)	0.262

- Prior to service entry 28/88 patients (32%) did not have screening for bone disease.

EFFICIENCY SAVINGS

Following Virtual MDT, patients were assigned to be seen in either a diabetes clinic, renal clinic or both.

This stratification led to a reduction in the total number of outpatient clinic appointments, in the consecutive year

Follow-up at selective Specialist Clinic as deemed appropriate by specialists

Follow - up post Virtual MDT				
	Diabetes Clinic	**Renal Clinics**	**Both Clinics**	**Other (Community/ GP/Other) Trust)**
No. of patients (%)	23 (26%)	7 (8%)	51 (58%)	7 (8%)

Reduction in Outpatient Clinic Appointments

	Pre-MDT	Post- MDT	P-Value
No. of clinic appointments/ year	300	262	0.354

Total reduction in clinic appointments = **38**

Cost per clinic is approx. £200 = **£7600 per population**

Therefore, **savings** of **£86 per patient/year**

Whilst no statistical significance was observed in the reduction of clinic numbers, this is likely to be a reflection of our small cohort sample.

DISCUSSION & LEARNING POINTS

1. An integrated approach via a simple and effective MDT enhances clinical care.
2. Patients are reviewed in the appropriate specialist clinics, but also there is an overall reduction in the number of outpatient visits equating to financial savings within the NHS.
3. Diabetic renal patients are more likely to have a comprehensive approach to management in a specialist setting, particularly in managing its complications such as renal bone disease and reduction in sulphonylurea use.
4. We have additionally devised a referral criteria pathway to prompt referrals from the community when appropriate.