

Adherence with the Renal Licences of Antidiabetic Medications in Diabetes Outpatient Clinics at a Large University Teaching Hospital



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Introduction

Thirty-percent of people living with diabetes have chronic kidney disease; care must be taken when prescribing antidiabetic medication in this group.¹

It is essential that glycaemic control is optimised in this group to reduce further decline in renal function, and risk of other microvascular and macrovascular complications.²

Whilst some antidiabetic medications require no dose adjustment in renal impairment, others might require dose reduction or are contraindicated for patients with a low eGFR, as detailed in the licencing information.³

Aims

Our aim was to gain insight into the prescribing habits of clinicians at a large university teaching hospital, and assess adherence to prescribing as per the renal licences of antidiabetic medications.

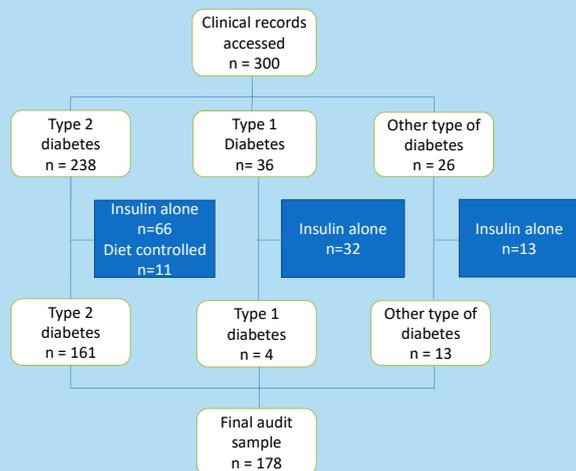
Methods

Retrospective analysis of clinical records was undertaken for people attending diabetes outpatient clinics over a four-week period.

- **Study type:** Audit
- **Study setting:** Outpatient clinics at large university teaching hospital.
- **Data collection tool:** Electronic health records
- **Data collected:** Type of clinic attended, demographics, type of diabetes, eGFR, antidiabetic medication with dosage.
- **Analysis:** Data was coded and analysed using Microsoft Excel.

Antidiabetic prescriptions were reviewed against the most recent eGFR. Medications prescribed outside of the terms of the renal licence were highlighted as being 'out-of-licence'. Those with no prescriptions of antidiabetic medication were excluded.

Figure 1: Flow chart to show the exclusion criteria and final sample of the audit.



Results

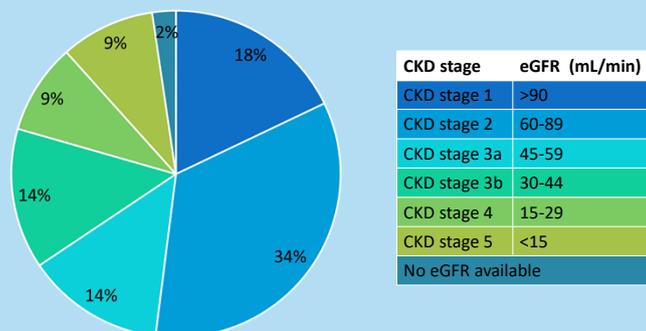
Of the 300 people studied:

34% attended the renal diabetes clinic (mean eGFR 32mL/min/1.732) and the remaining 66% attended non-renal diabetes clinics (mean eGFR 70).
 Demographics: Mean age, 62 years; 42% female and 38% of non-white ethnicity.
 79% had type 2 diabetes
 Five people had no eGFR available within the past year.
 People on insulin monotherapy, or with diet-controlled diabetes, were excluded (41%).

References

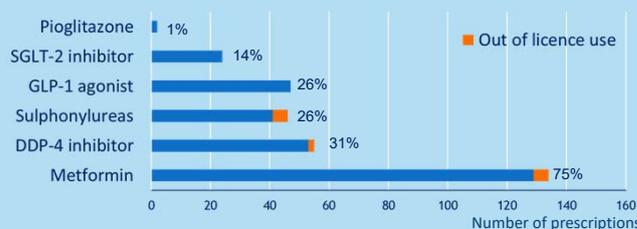
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Figure 2: Chronic kidney disease stage of the cohort



In the remaining 178 people, the majority (93.3%) were appropriately prescribed the medication as per the renal licences.

Figure 3: Number of prescriptions of antidiabetic medication. Percentage of the cohort prescribed medication from each class of drug.



Cautious use of gliclazide for people with an eGFR <30 was noted in the renal clinic, this use was safe and effective.

Figure 4: Out of licence prescriptions identified in renal and non renal clinics

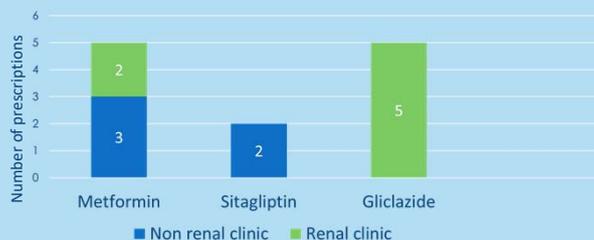


Figure 5: List of 12 'out of license' prescribing errors noted in renal (denoted by *) and non-renal clinics:

Name of Medication	eGFR	Prescribed Daily Dosage	Appropriate Licensed Dosage
Metformin	33	2000mg	1000mg
	39		
	44*		
	44*		
	57		
Sitagliptin	41	100mg	50mg
	45		
Gliclazide	10*	80mg	Avoid
	21*		
	25*		
	27*		
	28*		

Conclusions

Clinicians should be mindful of renal licences when prescribing antidiabetic medication, particularly in renal diabetes clinics. Diabetes UK should promote awareness of these renal licences to prescribers across the UK.