

# **Audit of Therapeutic Drug Monitoring of ACE Inhibitors using HealthOne**

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## **Background**

Patients taking ACE Inhibitors are at risk of acute renal failure and hyperkalaemia<sup>1</sup>. The NICE guidelines advise annual U/E for patients taking ACE Inhibitors<sup>2</sup>.

## **Aims**

The aims were in to improve therapeutic drug monitoring of ACE Inhibitors in the practice and to establish a method of utilising HealthOne's capabilities to audit this and other clinical areas in any practice.

## **Method**

Patients prescribed an ACE Inhibitor in the last year who had not had their renal function checked were identified by HealthOne database analysis, searching by ATC (Anatomical Therapeutic Classification) code and by creatinine result. These patients were then flagged with the disease code "ACE – inhibitor". An alert was then set to prompt the user that the patient needs their renal function checked. After a seven month period a mail merge letter was sent to remaining patients inviting them for a blood test.

## **Results**

Prior to the alert, 28/67 (42%) patients had their renal function checked in the last year, after the seven month alert period this increased to 40/65 (62%). On a subgroup analysis GMS patients increased from 12/35 (34%) to 23/34 (68%) while for private patients it only increased from 16/32 (50%) to 17/31 (55%). The results following the mail merge invitation are pending.

## **Discussion**

The alert was moderately effective, however it relies on patient interaction taking place, for it to be acted on. It was found to be more effective for GMS patients possibly as they have more attendances and typically get three monthly as opposed to six monthly scripts. The use of the alert prior to the mail merge letters being sent, was effective in reducing the number of letters to be sent, thus reducing cost of postage. Though this cost could be eliminated in the future by using mail merge sent by email through HealthOne.

The capabilities of HealthOne allowed the audit to be carried out quickly and easily. Using ATC codes allowed the drugs to be identified accurately and would facilitate searching for other drugs in the future using the existing framework. Using this paper as reference other practices could implement the same high level of audit.

## **References**

1. Renal Considerations in Angiotensin Converting Enzyme Inhibitor Therapy, Anton C. Schoolwerth, Domenic A. Sica, Barbara J. Ballermann and Christopher S. Wilcox *Circulation* 2001; 104:1985-1991
2. National Institute for Clinical Health and Care Excellence, Clinical Knowledge Summary, Guideline on Hypertension (not diabetic), October 2015, <https://cks.nice.org.uk/hypertension-not-diabetic>