

**Introduction:**

Patients with Adrenal Insufficiency (AI) lack endogenous Cortisol and require oral Hydrocortisone. In Primary AI (PAI) endogenous aldosterone synthesis is also lost and patients require oral Fludrocortisone<sup>1</sup>.

We aimed to audit two important long term issues:

1. Adequacy of steroid replacement including Fludrocortisone, assessed by Plasma Renin Activity (PRA).
2. Wearing of Medic-Alert Jewellery (MAJ)

While oral replacement of endogenous hormones is life-saving, patients often report poor quality of life compared to those with normal adrenal function. Optimising steroid dosing, including Fludrocortisone may be helpful<sup>2</sup>.

Medic-Alert Jewellery is advised to alert health care providers to the need for stress dose steroids in acute illnesses. This aims to reduce mortality associated with adrenal crisis.

**Methods:**

The hospital's Patient Correspondence System identified letters including the terms "Adrenal Insufficiency" and "Addison's Disease". Such identified patients were classified as having primary or secondary AI. Recent Hydrocortisone and Fludrocortisone doses were recorded.

Patients were contacted using registered telephone numbers and invited to participate in the study.

Electronic laboratory results were reviewed for PRA measurements

**Compliance with Medic-Alert Jewellery among patients with Addison's Disease attending the Endocrinology and Diabetes Day Centre, Gal way University Hospital**

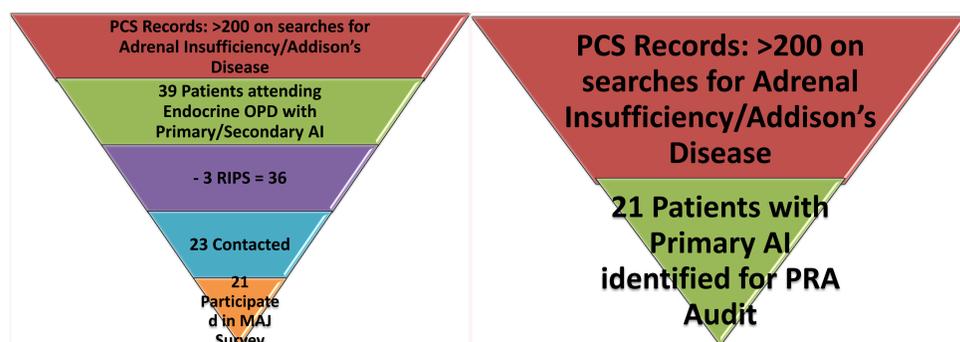
1. How long since you were diagnosed with Addison's/adrenal insufficiency?
2. Have you ever had an adrenal crisis? Yes/No
  - a. If yes was this: at diagnosis/since diagnosis
3. Are you aware of Medic-Alert Jewellery?
4. Do you own Medic-Alert Jewellery?
5. How much of the time do you wear this jewellery:
  - a. Never
  - b. Rarely
  - c. Sometimes
  - d. Usually
  - e. Always
6. Were you advised to wear Medic-Alert jewellery on your last clinic visit?

**Figure 1 – MAJ Questionnaire**

**Results:**

Review of >200 letters identified 39 patients with AI, 21 with PAI and 18 with Secondary AI. 21 patients were successfully contacted and consented to a telephone survey. Of these, 20 (95%) were aware of the need for MAJ and 62% owned MAJ.

Among patients with PAI 67% had a PRA performed in the past five years and 47% in the previous year. Two thirds of patients had PRA above the recommended target range.



**Figure 2 – Recruitment**

	Applicable Patients	PRA Measurement	Percentage*
Ever	21	14	66.7%
2014	21	10	47.3%
2013	20	3	15%
2012	18	1	5.6%
2011	15	1	6.7%
2010	13	9	0%

**Table 1 – Frequency PRA Measurement over time**

**Discussion:**

Patients with AI require complex and long-term follow-up. Establishing a database of AI patients allows for audit of patient care and adherence to current guidelines. Patients attending our unit are well advised on the need for wearing MAJ but less than two thirds of patients own MAJ.

PRA, a useful measurement in determining appropriate fludrocortisone replacement was available on less than half the patients for the previous year and even when available was above the recommended target in over two thirds of patients.



**References:**

1. Husebye ES, Allolio B, Arlt W et al. Consensus statement on the diagnosis, treatment and follow-up of patients with primary adrenal insufficiency, J Intern Med. 2014; 275(2):104-15.
2. Grossman A, Johannsson G, Quinkler M, Zelissen P. Perspectives on the management of adrenal insufficiency: clinical insights from across Europe. European Journal of Endocrinology 2013; 169:165–175
3. Hahner S, Spinnler C, Fassnacht M et al. High incidence of adrenal crisis in educated patients with chronic adrenal insufficiency: A prospective study. Journal of Clinical Endocrinology and Metabolism. 2015 ; 100(2):407-416