classified as adherent (with evidence of all prescribed antihypertensive medications in their urine), and to establish medication or demographic factors that may predict non-adherence.

Baseline medical and demographic details were captured from the patient's health records in both consenting and non-consenting cohorts (anonymously) in order to compare characteristics that may indicate non-adherence or non-participation in an adherence study.

Results: In total, we approached 351 patients across five primary care centres in England—216 patients consented to the study (61.5%), 196 of which were able to produce a urine sample at the time of recruitment. Mean patient age was 76.5 years (49% male) with a BP of 134.5/74.9 mmHg. Of the 369 BP lowering medications prescribed (mean of 1.9 medications per patient) 95.7% were detected in the patient's urine.

Conclusions: Opportunistic screening of antihypertensive medications was feasible in almost 2/3 of patients approached. Given the potential for non-adherence to antihypertensive medications to lead to costly secondary care referrals for so-called pseudo-resistant hypertension, the ability to objectively detect non-adherence using a routine urine sample has the potential to reduce this.

P-08 Harms of antihypertensive therapy for hypertension: a systematic review and meta-analysis

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Introduction: The benefits of prescribing antihypertensive therapy must be balanced against their potential harms. Currently there is no systematic review quantifying the extent to which antihypertensive therapy is associated with adverse events (AE). This study aimed to conduct such a review using data from previous trials.

Methods: A systematic review and meta-analysis of randomised controlled trials (RCTs) was conducted. A search strategy was run in five databases. Trials were included if they examined an antihypertensive vs placebo, more vs less-intense treatment or higher vs lower BP targets and reported 50 outcome events or ≥650 patient-years of follow-up. Data relating to study characteristics and outcomes including falls (primary outcome), hypotension, hypo/hyper kalemia, syncope, fractures, and acute kidney injury (AKI) were extracted. Study quality was determined using the Cochrane Risk of Bias tool. The association between treatment and outcomes was examined in a random effects meta-analysis.

Results: Sixty-one trials were identified and included in the analyses. Antihypertensive therapy was not associated with an increased risk of falls (OR 1.06, 95% CI 0.88–1.27). Treatment was associated with an increased risk of hyperkalemia (OR 1.69, 95% CI 1.35–2.11) as well as hypotension (OR 1.81, 95% CI 1.46–2.26). No significant association was observed between antihypertensive treatment and falls, hypokalaemia, AKI, or fractures.

Conclusions: While the benefits of antihypertensive treatment have been studied extensively and been shown to reduce the risk of stroke and cardiovascular disease, the findings of this review demonstrate that they are not without risk of harm. Our review provides useful evidence about the harms of therapy which will enable clinicians and patients to make better informed decisions regarding the use of anti-hypertensive therapies, particularly in older patients.

Disclosures: None.

P-09 Directly observed administration of anti-hypertensive medication prior to ambulatory blood pressure monitoring—a useful tool for investigating resistant hypertension

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Introduction: Resistant hypertension is frequently defined as a mean daytime blood pressure (BP) ≥135/85 despite the use of three or more anti-hypertensives. We investigated whether directly observed administration (DOA) of anti-hypertensive medications immediately before 24-h ambulatory blood pressure monitoring (ABPM) would help exclude 'treatment resistance' potentially caused by medication non-adherence.

Methods: Patients attending our nurse-led hypertension clinic were requested in advance to not take their prescribed anti-hypertensives before their morning appointment but instead to bring them with. Patients were then observed taking their anti-hypertensives before ABPM. Patients not following these instructions or who had ABPM organised from another clinic formed the control group. Proportions were compared with Chi-square tests and data analysis using Microsoft EXCEL 2010 [1].

Results: From November 2018 to October 2019, 53 patients had DOA before ABPM with 136 controls (Table 1). The DOA group average daytime BP was 138/83 (38% <135/85). The control group average daytime BP was 141/86 (27% <135/85).