## Supplementary Box S1. Glossary of organisations

**Clinical Commissioning Group (CCG)** – A collection of GP practices working together to plan, commission, and pay for healthcare services in a local area. There are approximately 200 CCGs in England.

**European Medicines Agency (EMA)** - An agency of the European Union (EU) responsible for evaluation of medicines, the EMA monitors and supervises the safety of medicines that have been authorised in the EU to ensure their benefits outweigh their risks.

**NHS Business Services Authority** – An NHS body that calculates the remuneration and reimbursement due to pharmacies across England, and publishes data on prescribing.

**NHS Improvement** – An NHS body with financial regulatory responsibility for NHS trusts and independent providers of NHS-funded care. It also has responsibility for patient safety across the NHS

**NHS Resolution** – An NHS body advising the NHS on how to resolve compensation claims fairly, while sharing insights for quality improvement, and preserving resources for patient care

**National Patient Safety Agency (NPSA)** – The NPSA was an arm's-length body of the Department of Health, with a mandate to identify patient-safety issues and find appropriate solutions. It was abolished in 2012, and patient-safety issues were transferred first to NHS England and then, in April 2016, to NHS Improvement.

Office for National Statistics (ONS) – the UK's largest independent producer of official statistics

## **Supplementary Box S2**

Measures included in composite prescribing score

- Antibiotic stewardship: co-amoxiclav, cephalosporins & quinolones (KTT9),
- Antibiotic stewardship: three-day courses for uncomplicated UTIs (KTT9),
- Antibiotic stewardship: volume of antibiotic prescribing (KTT9),
- Ciclosporin and tacrolimus oral preparations prescribed generically,
- Co-proxamol,
- Desogestrel prescribed as a branded product,
- Diltiazem preparations (>60mg) prescribed generically,
- Extended-release quetiapine,
- Glaucoma eye drops prescribed by brand',
- High-cost ACE inhibitors,
- High-cost ARBs,
- High-cost drugs for erectile dysfunction,
- High-cost PPIs.
- High-cost statins,
- High dose inhaled corticosteroids,
- High dose opioids as percentage regular opioids,
- High dose opioids per 1000 patients,
- Higher dose Proton Pump Inhibitors (PPIs),
- Keppra vs. levetiracetam,
- Long-acting insulin analogues (KTT12),
- Low and medium intensity statins,
- Methotrexate 10 mg tablets,
- Nebivolol 2.5mg tablets.
- NHS England Low Priority Treatment All Low Priority Treatments,
- Non-preferred NSAIDs and COX-2 inhibitors (KTT13),
- Other lipid-modifying drugs.
- Pregabalin prescribed as Lyrica,
- Prescribing of dipyridamole,
- Prescribing of high cost tramadol preparations,
- Prescribing of trimethoprim vs nitrofurantoin,
- Short acting beta agonist inhalers,
- Silver dressings.
- Soluble/effervescent forms of paracetamol and co-codamol,
- Topical treatment of fungal nail infections,
- Vitamin B complex,
- Anxiolytics and Hypnotics: Average Daily Quantity per 1000 patients,
- Anxiolytics and Hypnotics: Average Daily Quantity per item,
- Prescribing of opioids (total oral morphine equivalence)

These measures can be viewed online at <a href="https://openprescribing.net/measure/">https://openprescribing.net/measure/</a> and are referenced

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