since January/2007 to September/2012, intersecting the terms ‘medicinal gases’ and ‘medical gases’.

**Results** A total of 6 medicinal gases currently available in Portugal were analysed: medicinal air, nitric oxide, nitrogen oxide, nitrogen dioxide, oxygen and xenon. The main interactions of these gases with other medicinal products are: i) nitric oxide: oxygen, almitrine, nitroglycerin, sodium nitroprusside, phenylephrine, phosphodiesterase inhibitors, prilocaine, sulfonamides; ii) nitrogen oxide: cyanocobalamin, drugs that depress the central nervous system (CNS), methotrexate; iii) oxygen: antiarrhythmics, bleomycin, chloroquine, chlorpromazine, corticosteroids, dactinomycin, doxorubicin, nitrofurantoin, phytomenadione, sympathomimetics; iv) xenon: antihypertensives, drugs that depress the CNS, other inhaled anaesthetic agents, sympathomimetics. No interactions were found with medicinal air. The database developed also describes the interaction mechanisms for each medicinal gas with each drug mentioned and the measures recommended to prevent major side effects.

**Conclusions** The database produced is a valuable tool for Portuguese hospital pharmacists who dispense medicinal gases, contributing to validating prescriptions for these medicines quickly and effectively.

No conflict of interest.

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**Conclusions** Participation of the pharmacist in the reconciliation of treatment allows DRPs to be detected at admission and discharge and educated the patient on his or her treatment at discharge from the hospital.

No conflict of interest.

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**Background** Adverse drug events related to anticoagulants are common and clinically significant. Computerized physician order entry (CPOE) and clinical decision support systems (CDSSs) are widely viewed as crucial for reducing prescribing errors.

**Purpose** To make prescriptions safer and to promote good practise, by developing CDSSs focused on oral and injectable anticoagulants.

**Materials and Methods** A review was carried out of existing guidelines and practise in the units.

About ten meetings with clinicians (cardiologists, thrombosis specialists) and pharmacists from the Pharmacy and Therapeutics Committee (PTC) were required to write these CDSSs. The CDSSs were presented and tested in the cardiology units. New discussions and improvements in the CDSSs were made with prescribers, nurses and pharmacists. The final CDSSs were validated by the Pharmacy and Therapeutics Committee (PTC).

**Results** Nine CDSSs had already been validated by the PTC: Vitamin K Antagonist (VKA), heparin sodium, heparin calcium, Low Molecular Weight Heparins (LMWHs) in prophylactic and curative treatment of deep-vein thrombosis and pulmonary embolism, LMWHs for acute coronary syndrome ST-segment elevation myocardial infarction and non-ST-segment elevation myocardial infarction, LMWHs for cardiac arrhythmia, and treatment of heparin-induced thrombocytopenia. There are still regular meetings to develop CDSSs on new anticoagulants: dabigatran, rivaroxaban and apixaban.

Each CDSS provides:

- Information on the choice of a therapeutic strategy based on the indication and the clinical context.
- Usual doses and rates of administration.
- A dose calculation based on weight (heparins).
- Overrun alerts when the dose is exceeded.
- Regular laboratory tests at the recommended frequency.
- Protocols for dosage adjustments based on the biological values.
- Administration modalities for the nurses.

Since the implementation of the CDSS on VKA, annual fluoride prescriptions have decreased by 17% and annual warfarin prescriptions have increased by 53% in accordance with the recommendation to prescribe warfarin as the first-line oral anticoagulant.

**Conclusions** Development of CDSSs referred to by the CPOE system takes a long time but is a good way of disseminating PTC guidelines to all prescribers, pharmacists and nurses. CDSSs can assist clinicians in the management of patients requiring anticoagulant treatment by improving compliance with care standards. These CDSSs are updated following changes in guidelines and clinical practise. Other CDSSs focused on high-alert medicines will be introduced when computerised prescribing is implemented for the entire hospital.

No conflict of interest.