



# Deaths From Medicines: Systematic analysis of UK Coroners' Reports to Prevent Future Deaths

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## Introduction

Coroners in England and Wales investigate unexplained deaths. Since 2009, they must send relevant parties **Reports to Prevent Future Deaths (PFDs)** if they believe prevention may be possible.<sup>[1]</sup> PFDs could provide data on drug-related deaths.

## Aim of Study

To see how often PFDs implicated medicines and other drugs, whether they revealed preventable medication errors or novel adverse drug reactions, and the concerns raised by coroners.

## Methods

See **Figure 1**. We excluded cases where delays in assessment, investigation, or diagnosis led to delays in treatment.

## Results

We identified 99 relevant reports (100 deaths) in 500 PFDs (**Table 1**). Most reports went to healthcare organisations. PFDs listed adverse reactions to prescribed medicines (22), omission of necessary treatment (21), failure to monitor treatment (17), and poor systems (17). Almost all were well known. Coroners identified defects in education or training, lack of clear guidelines, and failure to implement existing guidelines. The UK Medicines and Healthcare products Regulatory Agency issued four related warnings.<sup>[2-5]</sup>

## Discussion

- Coroners commonly report preventable deaths with drugs
- Often reflect existing concerns.
- Some reports influence regulators

## Conclusion

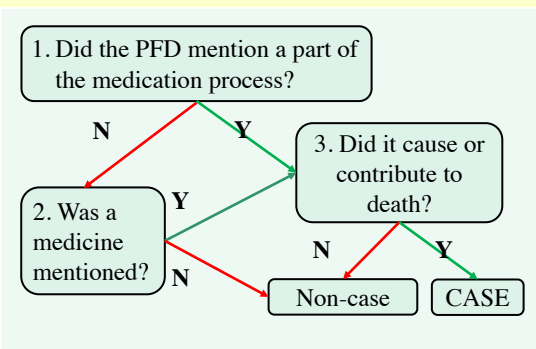
- Most PFD reports = previously well-known problems
- Many PDF reports are sent to local organizations
- Wider regulatory lessons may

**Table 1: Drug classes in PFDs**

Drug Class	No.*
Anticoagulants (LMWH 8, warfarin 8, NOAC 2)	22
Opioids (fentanyl 3, methadone 4, morphine 4)	17
Psychiatric medicines (mirtazepine 4, olanzapine 3, citalopram 4)	17
Drugs of abuse, excluding opioids (MDMA 3, cannabinoids 4, cocaine 3, eCigarette fluid 1)	12
Antibiotics	9
Hypnotics and sedatives (lorazepam 2, zopiclone 2)	7
Pregabalin	4
Anticonvulsants	3
Emollients	2

\*Number refers to the number of cases in which one or more drugs of the class are mentioned. LMWH = Low Molecular Weight Heparin, NOAC = Novel Oral Anti-coagulant, MDMA = 3-methoxy-4,5-methylene-dioxymphetamine

**Figure 1: PFDs and medicines**



1. <https://www.judiciary.gov.uk/related-offices-and-bodies/office-chief-coroner/pfd-reports/>

2. Anonymous. Citalopram: suspected drug interaction with cocaine; prescribers should consider enquiring about illicit drug use. Drug Safety Update 2016; 9 (12): 3. Anonymous. Hyoscine butylbromide (Buscopan) injection: risk of serious adverse effects in patients with underlying cardiac disease. Drug Safety Update volume 2017; 10 (7): 1

4. Anonymous. Spirinolactone and renin-angiotensin system drugs in heart failure: risk of potentially fatal hyperkalaemia. Drug Safety Update 2016; 9 (7):2.

5. Anonymous. Topical miconazole, including oral gel: reminder of potential for serious interactions with warfarin. Drug Safety Update 2016; 9 (11): 3.