

# Baclofen exposures reported to the UK National Poisons Information Service over 12 years (2005-2017)

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## Introduction

Baclofen is a gamma-aminobutyric acid (GABA) receptor agonist with a well established role in the treatment of spasticity. NHS Digital prescription data demonstrate a substantial rise in the number of issued primary care prescriptions for baclofen in the UK, from 540,195 in 2005 to 1,000,026 in 2015.[1] We investigated whether the observed trend in prescribing was mirrored by an increase in the number of poisonings reported to the UK National Poisons Information Service (NPIS).

## Objective

To investigate cases of baclofen poisoning reported to the UK NPIS.

## Methods

A retrospective analysis of UK NPIS enquiry data between 01/01/2005 and 31/07/2017 where baclofen was listed as the agent of exposure were extracted from the UK Poisons Information Database (UKPID).

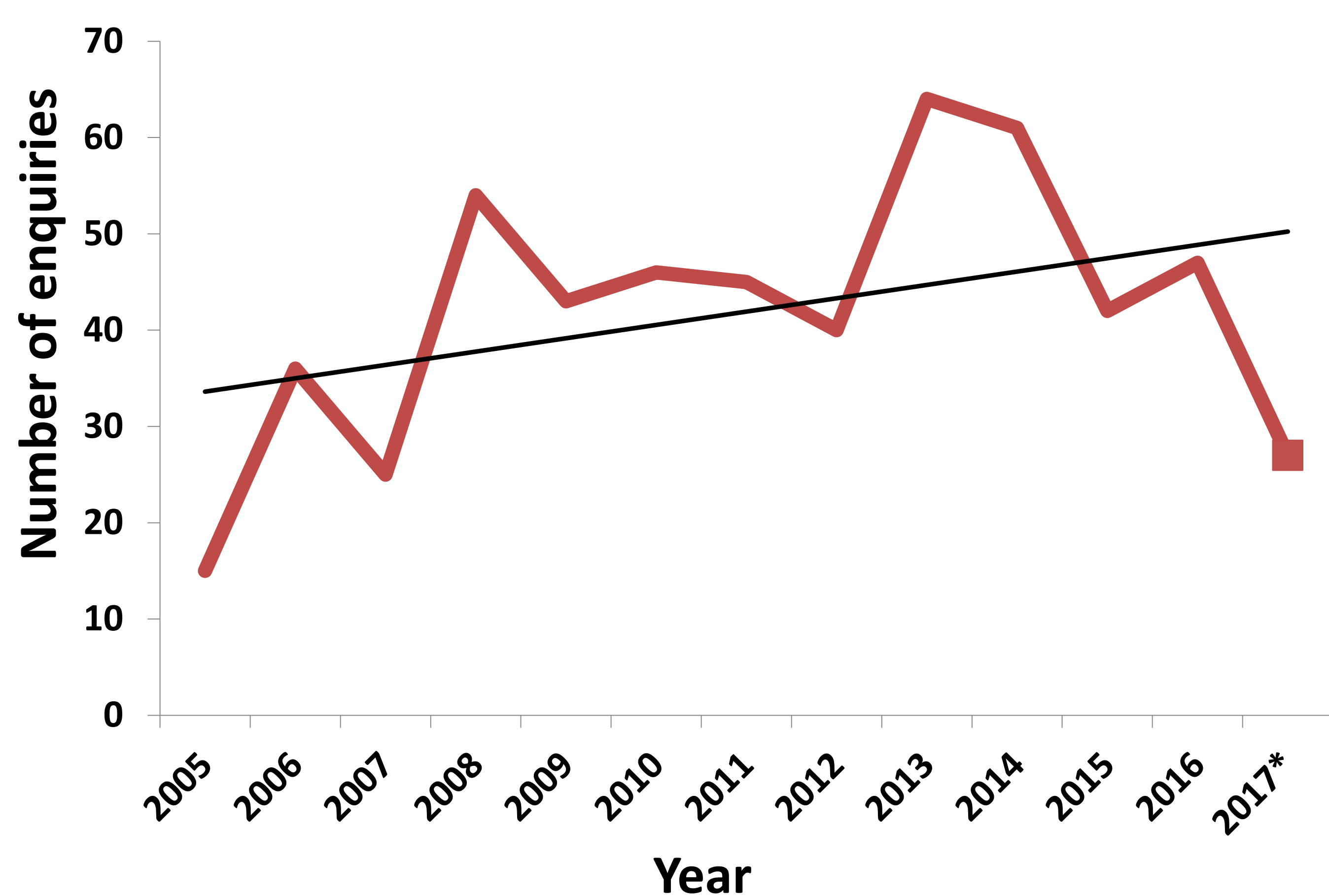


Figure 1. Number of enquiries per annum

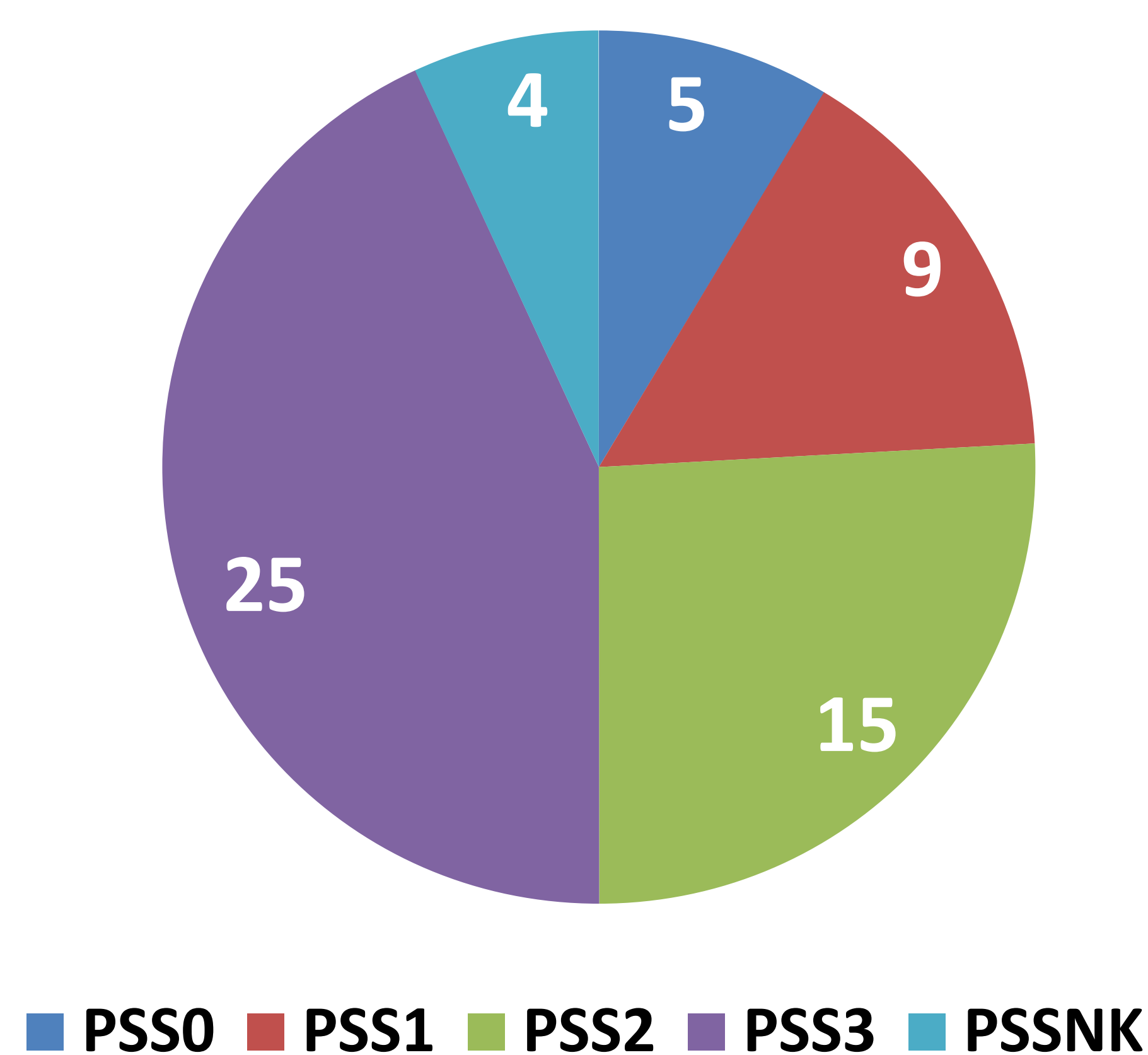


Figure 2. Poisoning Severity Score of 58 patients exposed to baclofen

## Results

We identified 545 enquiries regarding 530 patients. There was an increase from 15 enquiries in 2005 to 47 in 2016, with an additional 27 enquiries in the first seven months of 2017 (Figure 1). The majority (54%) originated from primary care facilities. One-hundred-and-ninety-five (36%) enquiries originated from hospitals and involved 186 patients; 128 of these patients had co-ingested baclofen with other pharmaceuticals and these have been excluded from subsequent analysis.

There were 58 patients (35 adults and 23 children) exposed, based on history, to baclofen only. The maximum poisoning severity score (PSS) [2] was moderate in 15 (26%) of these and severe in 25 (43%) (Figure 2). The predominant route of exposure was ingestion (n=52). The median reported dose following ingestion was 175 mg (IQR 57.5-295 mg).

Seventy-nine per cent of patients experienced some degree of reduced consciousness, with 26% requiring intubation and ventilation. Nine cases were followed up with a complete recovery documented in eight. No deaths were reported. Other features reported included respiratory insufficiency (22%) and myoclonus (9%). Only five patients (9%) were asymptomatic (Table 1).

Feature	n=	%
Somnolence	31	53%
Coma	15	26%
Respiratory insufficiency	13	22%
Bradycardia	7	12%
Tachycardia	5	9%
Asymptomatic	5	9%
Mydriasis	5	9%
Myoclonus	5	9%
Confusion	4	7%
Creatine kinase increased	4	7%
Hypertension	4	7%

Table 1. Frequently reported features

## Conclusion

This study demonstrates that the increase in the number of NHS prescriptions of baclofen over time is associated with an increase in the number of cases of baclofen poisoning, with the majority of cases resulting in moderate to severe poisoning. Clinicians and specialists in poisons information should be aware of the potential for severe toxicity following baclofen overdose.

## References

1. Prescribing and Medicines Team. Prescriptions dispensed in the community: England 2005-2015. Health and Social Care Information Centre. 2016 1-129
2. Persson HE, Sjoberg GK, Haines JA, De Garbino JP. Poisoning Severity Score. Grading of acute poisoning. J Toxicol Clin Toxicol. 1998; 36: 205-213.