Preventing serious errors in lithium & clozapine prescriptions

by establishing a notification system between hospital pharmacy & psychiatry liaison service

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Introduction:

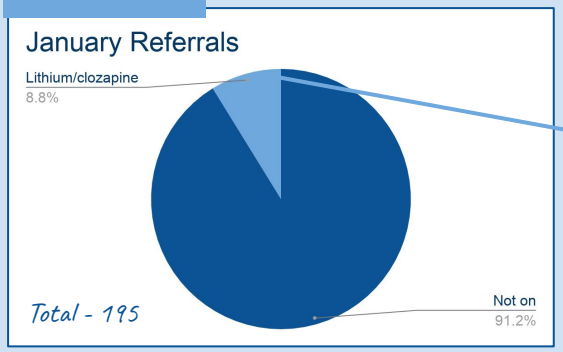
Lithium and clozapine both have a narrow therapeutic window.[1,2] In the general hospital setting these medications are often incorrectly prescribed due to lack of familiarity. These prescription errors can result in serious incidents of toxicity or result in a need to re-titrate a patient on their regular medication, often requiring an inpatient psychiatric admission. By establishing a notification system, where the pharmacy notify the psychiatry liaison service (PLS) of any inpatient on lithium and clozapine, early advice can be given to the relevant ward staff to ensure the prescription is appropriate. The effectiveness of this notification system is evaluated below.

Aim: To reduce the number of patients presenting to the PLS due to a lithium or clozapine prescription error.

Methods:

In February 2021, the pharmacy team at St Peter's hospital began referring every inpatient (including those in the accident & emergency department) on lithium or clozapine, to the PLS. All referrals to the PLS were audited for the months of January 2021 and March 2021, prior and latter to this change in practice. This audit assessed whether the patient referred was on either medication, whether this was specified in the referral and whether the referral was due to a complication with their clozapine or lithium.

Results :



Of the patients on lithium/clozapine: How many presented with complications secondary to these medications?

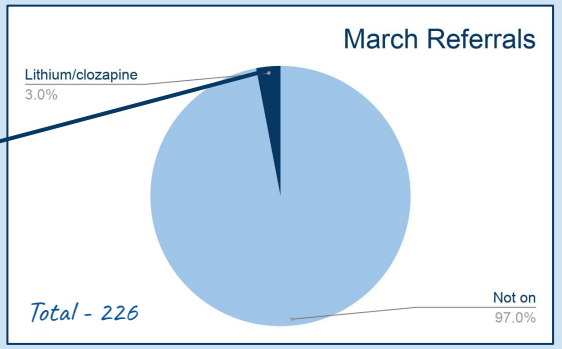
January	March
56.25%	71.4%

How many prescription errors?

January	March
None	One

January	March
N/A	42.9%

How many of these referrals came from pharmacy?



Patients who are taking lithium and clozapine make up a small portion of the patients referred to PLS (8.8% & 3.0% for January & March respectively). A higher rate of patients on lithium/clozapine presented with a medication complication in March (56.25% compared to 71.4%). In both months these complications were due to an intentional overdose in all but one case. Just under half of the March referrals for patients on lithium/clozapine came from the pharmacy. There was only one referral due a prescription error, which occurred in March, due to omission of lithium whilst in the emergency department.

Conclusion:

A significant proportion of the referrals to PLS of inpatients on lithium/clozapine came from the pharmacy. It is difficult to evaluate whether this notification system prevented later presentation to the service due to a prescription error. A more comprehensive audit is needed covering a longer time frame to capture the rare errors in clozapine and lithium prescribing which have serious patient safety implications.

1.Therapeutic Guidelines Limited (TGL). Treatment-resistant schizophrenia. TGL, 2014. Available from: http://online.tg.org.au/complete/desktop/index.htm (Accessed April, 2021)

2.Perrone, J. Chatterjee, P. Lithium Poisoning. UpToDate, 2021. Available from: https://www.uptodate.com/contents/lithium-poisoning/print (Accessed April, 20210