

## AN AUDIT TO COMPARE DISCHARGE RATES AND SUICIDALITY BETWEEN ANTIDEPRESSANT MONOTHERAPIES PRESCRIBED FOR UNIPOLAR DEPRESSION

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### SUMMARY

**Introduction:** It has been demonstrated that there are differences in efficacy and acceptability of commonly prescribed antidepressants (Cipriani et al. 2009). This meta-analysis showed that escitalopram, sertraline, venlafaxine and mirtazapine were the most effective antidepressant monotherapies in the acute treatment of unipolar depression in adults. We aimed to analyse prescribing patterns of antidepressant monotherapies in Bedford Hospital. We intended to compare the efficacy of antidepressant monotherapies in patients with unipolar depression at Bedford East CMHT, using discharge rates and rates of reduced suicidality (including suicidal ideation and Behaviour) after treatment by the CMHT as the outcome measure. We also decided to compare the efficacy of 'the four' versus 'the others' in patients with unipolar depression in Bedford East CMHT, using discharge rates and rates of reduced suicidality (including suicidal ideation and Behaviour) after treatment by the CMHT as the outcome measures.

**Subjects and Methods:** We identified and included all patients with unipolar depression prescribed an antidepressant monotherapy in Bedford East CMHT. We identified patients who were discharged after treatment, as well as patients who were suicidal before treatment, and after treatment. Hence we could work out discharge rates and reduction in suicide rates for each antidepressant monotherapy. These were then compared, using graphs.

**Results:** The most frequently prescribed antidepressant monotherapy was citalopram. Prescription of 'the four' was associated with a greater percentage of patients discharged from the clinic than 'the others'. Sertraline was the antidepressant most likely to reduce suicidality in our sample.

**Discussion:** This audit in a small group of patients suggests that prescription of 'the four' leads to a higher discharge rate than 'the others'. Regarding suicidality, this audit in a small group of patients suggests that sertraline is the most effective antidepressant monotherapy in reducing suicidality in patients with unipolar depression.

**Conclusion:** The study has several limitations, however it does appear that the antidepressants identified by Cipriani are effective compared with other monotherapies. We recommend that all CMHTs should carry out audits of their prescribing practice.

**Key words:** anti-depressants – prescribing – audit – suicidality - discharge rates

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### INTRODUCTION

It has been demonstrated that there are differences in efficacy and acceptability of commonly prescribed antidepressants (Cipriani et al. 2009). This meta-analysis showed that escitalopram, sertraline, venlafaxine and mirtazapine were the most effective antidepressant monotherapies in the acute treatment of unipolar depression in adults, while escitalopram and sertraline were found to be the antidepressants which were best tolerated. In this audit, these most effective antidepressants will be referred to as 'the four', whilst other antidepressants will be referred to as 'the others'. Few studies have been published in order to study the treatment of depression within the specific context of a British Community Mental health team. Such a team will deal with cases of depression which have usually not responded to treatment by General Practitioners with anti-depressants, usually SSRIs, and brief psychological therapies, the availability of which does vary from one area of the UK to another. The context of this study is a single CMHT in Bedford, England, which receives referrals from a number of GPs. We wished

find out whether we were tending to make the treatment choices suggested by Cipriani, and whether, within our practice, the anti-depressants identified by Cipriani did in practice give better results. In the UK, the choice of anti-depressants is based on the Guidelines for Depression published by the National Institute for Health and Clinical Excellence (NICE 2004, NICE 2009), another important influence is the STAR-D trial (Rush et al. 2004, Rush et al. 2006, Warden et al. 2007, Howland et al. 2008, Huynh et al. 2008).

The aims of this study were as follows:

- To analyse prescribing patterns of antidepressant monotherapies in Bedford Hospital.
- To compare the efficacy of antidepressant monotherapies in patients with unipolar depression at Bedford East CMHT, using discharge rates and rates of reduced suicidality (including suicidal ideation and Behaviour) after treatment by the CMHT as the outcome measure.
- To compare the efficacy of 'the four' versus 'the others' in patients with unipolar depression in Bedford East CMHT, using discharge rates and

rates of reduced suicidality (including suicidal ideation and Behaviour) after treatment by the CMHT as the outcome measures.

## SUBJECTS AND METHODS

We identified and included all patients with unipolar depression prescribed an antidepressant monotherapy in Bedford East CMHT in our analysis (145 patients in total) (Figure 1). It was possible to identify the patients because of a database (using Microsoft office Excel) which is held by the Bedford East CMHT. The database was used in an anonymised form. We examined the clinical notes for each patient to assess whether they had been discharged from the CMHT after being prescribed the antidepressant. This allowed us to calculate discharge rates for each antidepressant monotherapy and for ‘the four’ versus ‘the others’.

Furthermore, we examined the clinical notes for each patient to assess whether they demonstrated suicidality before and after being prescribed the antidepressant. This allowed us to calculate rates of suicidality for each antidepressant monotherapy. We were able to do this because the information about whether the patients were suffering from suicidal ideation or had attempted suicide was held on the database already mentioned. We were then able to search electronically for the last letter to the GP, so that we could identify whether the suicidal ideation or behaviour had persisted.

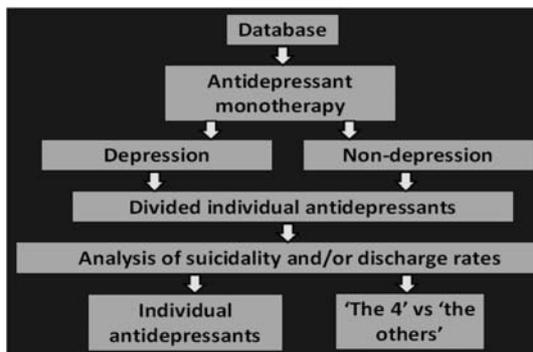


Figure 1. Flow chart to show patient selection method

## RESULTS

- The most frequently prescribed antidepressant monotherapy was citalopram (21%), followed by sertraline (18%), venlafaxine (17%) and mirtazapine (17%). Escitalopram made up only 7% of prescriptions (Figure 2). Fifty-nine percent of patients were prescribed one of ‘the four’ and 41% were prescribed one of ‘the others’.
- A higher percentage of patients prescribed escitalopram were discharged from clinic compared to the other antidepressant monotherapies (Figure 3).
- Prescription of ‘the four’ was associated with a greater percentage of patients discharged from the clinic than ‘the others’ (Figure 4).

- In our data, ‘the others’ showed a greater reduction in suicidal ideation than ‘the 4’, however Sertraline caused the greatest reduction.
- Of all the antidepressants analysed, sertraline caused the highest reduction in the rate of suicidality (Figure 5 and 6).
- No patients with suicidal ideation were prescribed escitalopram or trazadone.

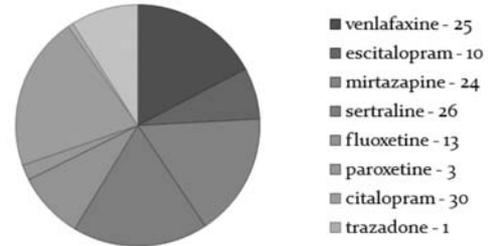


Figure 2. Number of patients prescribed each antidepressant monotherapy for unipolar depression

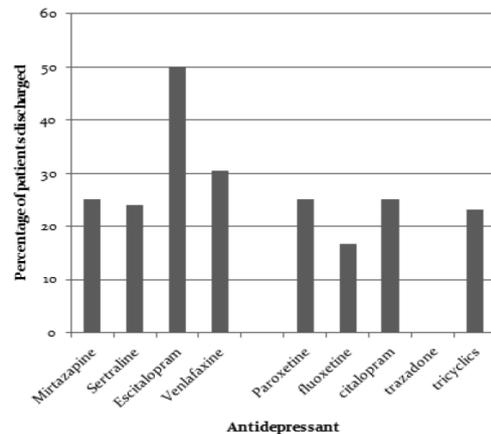


Figure 3. Bar chart to show the percentage of patients discharged from clinic when prescribed each antidepressant monotherapy

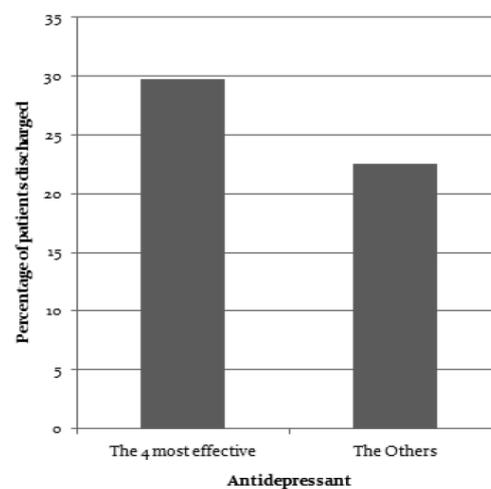
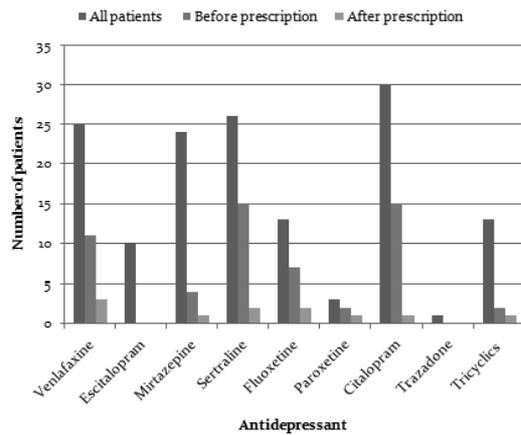
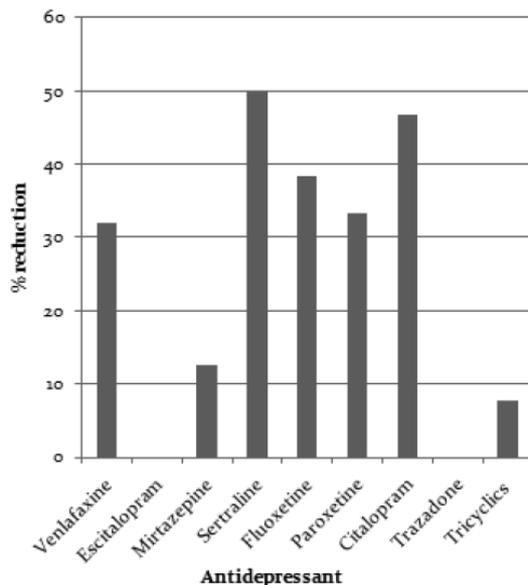


Figure 4. Bar chart to show percentage of patients discharged from clinic when prescribed ‘the four’ versus ‘the others’



**Figure 5.** Bar chart to show number of patients with suicidality before and after prescription of each antidepressant



**Figure 6.** Bar chart to show the percentage reduction in suicidality in patients with unipolar depression prescribed an antidepressant

## DISCUSSION

Our results support the findings of the meta-analysis in that prescription of ‘the four’ led to a higher discharge rate than ‘the others’. The discharge rates from Bedford East CMHT suggest that escitalopram in particular is the most efficacious.

However, the prescribing pattern in Bedford East CMHT suggests that escitalopram is being under-prescribed in view of its efficacy, and 41% of patients are being prescribed a less effective group of antidepressants (‘the others’).

Regarding suicidality, our results show similar efficacies between several antidepressants in terms of reduction of suicidality. The fact that no patients with suicidality were prescribed escitalopram or trazadone

means that it was not possible to compare these antidepressant monotherapies. Sertraline and citalopram were the most effective in reducing suicidality in this audit, which mirrors the prescribing patterns of antidepressant monotherapies in Bedford East CMHT.

There are, however, a number of limitations to this study; The number of patients was very small (only 145 in total) so the power of the study is low, however the study was intended to examine prescribing practices in a single CMHT, with the consequent small number of patients.

There were particularly small numbers of patients on escitalopram, and none with suicidal ideation before treatment. The small number of patients on escitalopram was because it had not, at the time of the study, been approved for treatment of depression in the trust formulary.

We did not perform any statistical analyses on the results, so we do not know if the results were statistically significant.

We looked at the last clinic letter for post-prescription suicidality, so the time from prescription is different for every patient.

We did not include the dose of the antidepressant, nor did we take into consideration psychosocial therapies which the patients would be receiving concurrently with medication.

Despite these limitations, we would recommend such a study to be carried out regularly within CMHTs in order to determine the effectiveness of antidepressant prescribing within each particular service.

## CONCLUSIONS

This audit in a small group of patients suggests that prescription of ‘the four’ leads to a higher discharge rate than ‘the others’, with escitalopram resulting in the highest discharge rate compared to the other monotherapies prescribed.

Regarding suicidality, this audit in a small group of patients suggests that sertraline is the most effective antidepressant monotherapy in reducing suicidality in patients with unipolar depression. However, not all antidepressants were able to be analysed in this audit. None the less, sertraline is one of the four antidepressants identified by Cipriani as being more efficacious and tolerable.

Hence, these results do suggest that, at a CMHT level, Cipriani appears to have identified a group of anti-depressants which are efficacious from the point of view of treating depression, enabling discharge to primary care, and reducing suicidality. Fortunately, the CMHT studied has been making effective choices of anti-depressants which accord with the recommendations of Cipriani.

We recommend that audits of medication with anti-depressants should be repeated annually in order to ensure best practice in the choice of antidepressants.

## REFERENCES

1. Cipriani A, Furukawa TA, Salanti G, Geddes JR, Higgins J, Churchill R et al. Comparative efficacy and acceptability of 12 new-generation antidepressants: a multiple-treatments meta-analysis. *Lancet* 2009; 373:746-58
2. Howland RH: *Sequenced Treatment Alternatives to Relieve Depression (STAR\*D). Part 1: study design.* *J Psychosoc Nurs Ment Health Serv.* 2008 ;46:21-4.
3. Huynh NN & McIntyre RS: *What Are the Implications of the STAR\*D Trial for Primary Care? A Review and Synthesis.* *Prim Care Companion J Clin Psychiatry.* 2008;10:91
4. *NICE Depression Guidelines 2004.*
5. *NICE Depression Guidelines update 2009.*
6. Rush AJ, Trivedi M, Wisniewski S et al. *Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR\*D Report.* *Am J Psychiatry.* 2006; 163:1905-17.
7. Rush AJ, Fava M, Wisniewski S et al. *Sequenced treatment alternatives to relieve depression (STAR\*D): rationale and design.* *Control Clin Trials.* 2004 ;25:119-42.
8. Warden D, Rush AJ, Trivedi M et al. *The STAR\*D Project results: a comprehensive review of findings.* *Curr Psychiatry Rep.* 2007; 9:449-59.

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