Impact of a ward based clinical pharmacist intervention on improving the quality use of medicines in patients with chronic non-communicable diseases in a tertiary hospital

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INTRODUCTION

Clinical pharmacy service has been shown to improve patient care in many settings. Clinical pharmacy service is a new concept to Sri Lanka.

OBJECTIVES

To investigate the impact of a ward based clinical pharmacy service on appropriate prescribing of discharge medications

METHODS

- This was a cross-over non-randomized controlled trial
- The patients with chronic non-communicable diseases admitted over 7 months were evaluated
- The control patients were given usual care
- The intervention group received clinical pharmacy service in addition to the usual care
- The clinical and demographic data were collected during the hospital stay
- Appropriateness of prescribing was assessed at discharge with the Medication Appropriateness Index (MAI) - the lower the score the more appropriate the medications are

CONCLUSIONS

This study demonstrates that a ward based clinical pharmacy service can reduce inappropriate prescribing of medications at discharge providing an opportunity to improve quality use of medicine

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RESULTS

- The mean number of medications per patient was 6.04±2.95 and 6.18±2.99 in control and intervention group respectively
- The mean MAI score per patient was significantly lower in the intervention compared to the control (1.03 vs 4.1, P<0.001) group
- Proportion of patients with appropriate prescriptions (MAI=0) in the intervention group was significantly higher compared to the control group, 65% (236/361) and 34% (119/354) respectively (P<0.001) [Fig 1]
- Among the drugs prescribed in the intervention and control groups, 5% ([112/2232]) and 20% ([420/2140]) had at least one inappropriate MAI criterion respectively (P<0.001) [Fig 2]

Fig 1: Percentage of patients with appropriate prescriptions

Fig 2: Percentage of drugs with at least 1 inappropriate criteria

Fig 3: Percentage of drugs with all appropriate criteria (MAI = 0)

Fig 4: Percentage of inappropriate prescriptions for each MAI criterion