I DROP IT- Impact of Deprescribing Rounds on Outpatient Prescriptions: an Interventional Trial

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Introduction

Deprescribing: A holistic and encompassing process that involves obtaining a patient's medication list, identifying potentially inappropriate medications, and deciding if the culprit medication should have a trial of discontinuation.

- If an inappropriate medication has not contributed to a hospital admission, it is unlikely to be deprescribed.
- It is often thought the patient's primary care provider is the best person to assess the need for continuation of these potentially inappropriate medications.
  - Anecdotal evidence suggests that patients' medications remain unchanged with neither acute care nor primary care providers taking the responsibility to address potential concerns.
- Hospitalization may be the ideal time to deprescribe medications given the specialized care and close monitoring provided to patients.
- By incorporating deprescribing rounds into standard patient care rounds on the ward, potentially inappropriate medications will be addressed during the patients' stay.

Uniqueness of Research

Unlike other work in this area, to date, the intervention pharmacist:
- Had dedicated time during daily patient care rounds to discuss medication candidates for deprescribing
- Followed a standardized approach to deprescribing
- Was equipped with a novel evidence-based deprescribing "cheat sheet"

To date there has been no published trial of this design evaluating both clinical and non-clinical outcomes of pharmacist-led deprescribing

Study Objectives

Primary Objective

- To compare the number of medications deprescribed in patients upon discharge from hospital between groups with and without dedicated deprescribing rounds.

Secondary Objectives

To determine:
- thirty day hospital readmission rate between both groups
- thirty day rate of emergency department visit/s between both groups
- how many medications remain deprescribed 30 days after hospital discharge
- patient opinion of medications deprescribed
- the retail cost savings to the patient as a result of medication deprescribing*
- how many home medications had a dose reduction at discharge*
- attending physician's and medical residents/students' opinion of the utility of dedicated deprescribing rounds*

*Outcome not yet assessed

Methods

Design
- Prospective, non-randomized, single centre, controlled trial
- Intervention arm patients were subject to deprescribing rounds; deprescribed patients surveyed 30 days post discharge
- Clinician satisfaction survey

Study population

Inclusion	Exclusion
- Patients admitted to the RJH CTU - Attending physicians, medical residents, and medical students assigned to CTU Blue team	- Patients with foreign language barriers - Patients who are not discharged from RJH CTU during study period - Patients who present with inappropriate cases as per RJH CTU consult guidelines - Patients with no medications prior to admission - Patients less than 19 years old

Results

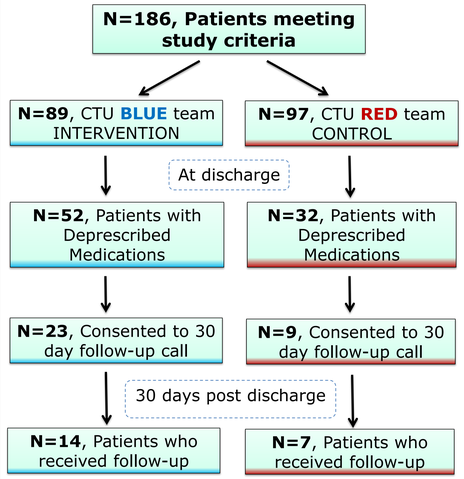


Figure 1: Recruitment flow chart

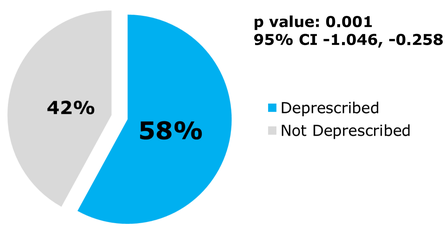
- No deprescribed meds **102**
- Did not consent for follow up **52**
- Loss to follow up* **11**

* Loss to follow up: did not respond to phone call, follow-up period ongoing

Table 1: Baseline demographics

Parameter		CTU BLUE	CTU RED
Avg. Age (years)		69.0	66.3
Male (%)		56%	54%
Avg. Number Home Medications		7.81	7.44
Comorbidities	Cardiovascular	73%	79%
	Endocrine	46%	43%
	Gastrointestinal	36%	40%
	Hematologic	18%	19%
	Infectious Disease	11%	10%
	Malignancy	9%	16%
	Musculoskeletal & Skin	17%	27%
	Neurologic	18%	14%
	Psychiatric	44%	38%
	Renal	22%	27%
	Respiratory	35%	27%
	Rheumatology	18%	13%
	Urology	10%	7%

NOTE: overlap of 95% confidence intervals present for all categorical variables



p value: 0.001
95% CI -1.046, -0.258

Figure 2: CTU Blue team patients with deprescribed medications

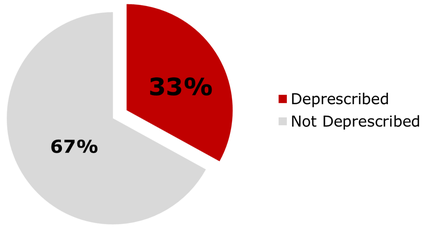


Figure 3: CTU Red team patients with deprescribed medications

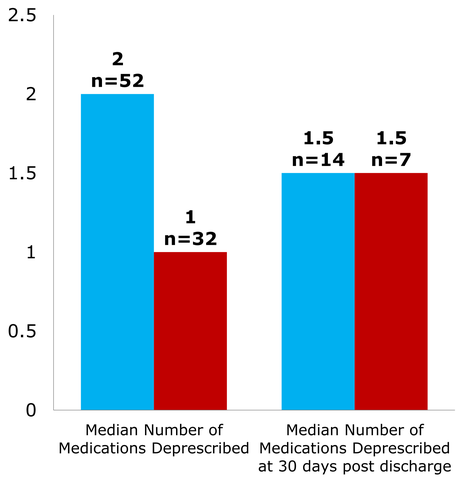


Figure 4: Comparison of medications deprescribed between CTU Blue and Red teams

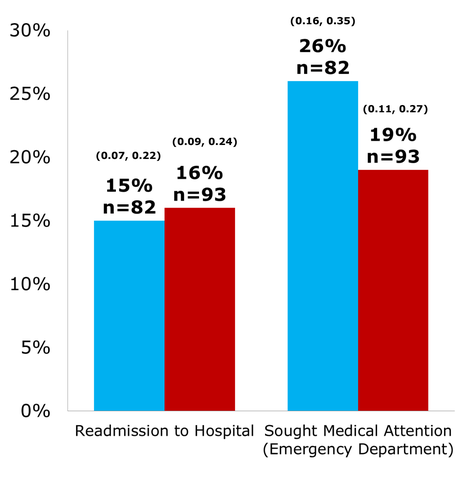


Figure 5: Comparison of 30 day clinical outcomes between CTU Blue and Red Teams

(95% CI in parentheses)

Deprescribed Medications

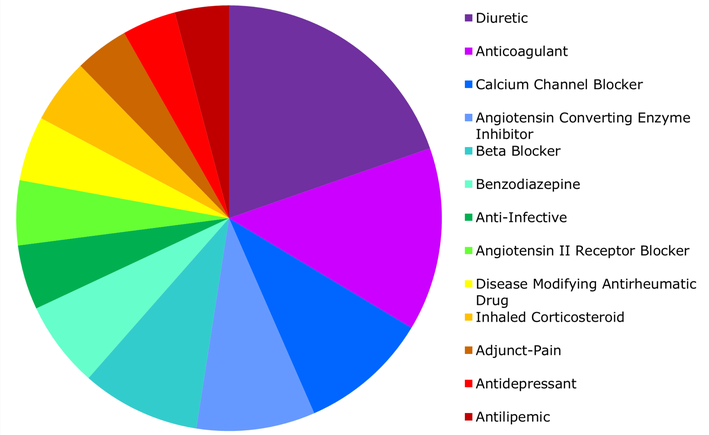


Figure 6: Top 13 classes of deprescribed medications

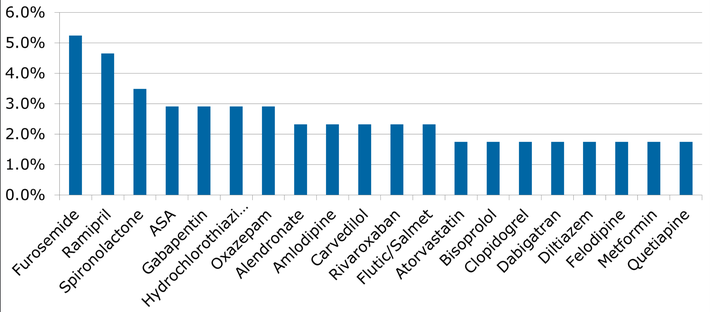


Figure 7: Deprescribed medications by agent*

ASA= acetylsalicylic acid
Flutic/Salmet= Fluticasone/Salmeterol

*Agents deprescribed more than twice during study

Discussion

- We have described a method of deprescribing that does not result in statistical increases in harm
- We hope that the lack of differences in clinical outcomes will help reduce the fear as a barrier to deprescribing
- Anecdotally, physicians were appreciative of and found deprescribing rounds helpful

Limitations
- Single Center
- Performance bias
- Unblinded
- Small sample size for follow-up data
- Long-term (>30 day) outcomes of deprescribed medications not assessed

Conclusions

- Deprescribing rounds resulted in greater and longer-lasting deprescribing of medications, without impacting 30 day readmission rates or hospitalizations.
- Select secondary outcomes are yet to be evaluated.

Deprescribing rounds should be incorporated as an emerging practice in organized health care settings