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Medication Use Evaluation of IL-17 and IL-23 inhibitors at a Large Health System.

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OBJECTIVE

- Evaluate the appropriateness of interleukin (IL)-17 and IL-23 inhibitor usage within Parkview Health, a nonprofit community hospital health system.

BACKGROUND

- Psoriasis (PsO), a multisystem inflammatory disease, originates from the activation of the IL-17 and IL-23 pathways resulting in epithelial cell hyperproliferation.¹ This pathway also causes other comorbid conditions including:
 - Psoriatic arthritis (PsA), which occurs when IL-17 is deposited into joint spaces.
 - Inflammatory bowel disease (IBD), including Crohn's disease (CD) and ulcerative colitis (UC), which occurs when IL-23 causes chronic intestinal inflammation.
- Inhibiting the IL-17/IL-23 pathway can mitigate symptoms of these disease states.

IL-17 Inhibitors

- Secukinumab (*Cosentyx*)
- Ixekizumab (*Taltz*)
- Brodalumab (*Siliq*)

IL-23 Inhibitors

- Guselkumab (*Tremfya*)
- Risankizumab (*Skyrizi*)
- Tildrakizumab (*Ilumya*)

- These medications are subcutaneous injections given every 2-12 weeks depending on the specific medication administered.

METHODS

- Retrospective analysis conducted within 10 community hospitals and outlying facilities.

Inclusion Criteria

- Patients who received at least one dose of any IL-17 or IL-23 agent, inpatient or outpatient, from June 1, 2022 through May 31, 2023

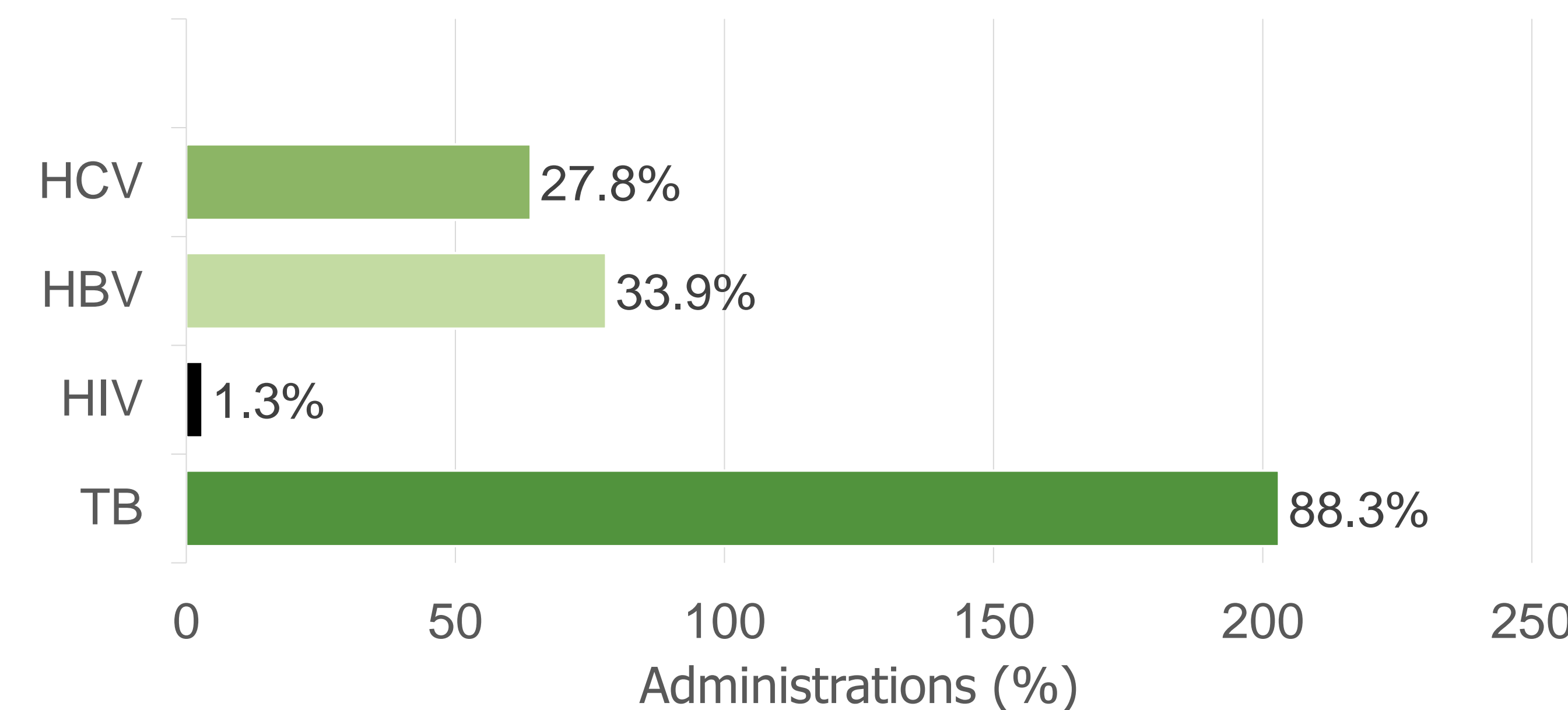
- Data were extracted from the institution's electronic medical record and manually validated.
- Presence of documentation regarding indication of use; pre-screening testing completion of tuberculosis (TB), human immunodeficiency virus (HIV), hepatitis B (HBV) and C (HCV) virus; pertinent lab values; and inflammatory bowel disease (IBD) diagnosis were manually collected via chart review.
- Presence of moderate or severe psoriasis documentation was collected and defined as:
 - Involvement of greater than 3% body surface area (BSA)
 - Any involvement of hands, feet, scalp, face, or genitalia
- Previous utilization of adalimumab, etanercept, methotrexate, or any topical agent intended for the treatment of psoriasis were recorded to assess appropriate place in therapy relative to IL-17 and IL-23 usage.

RESULTS

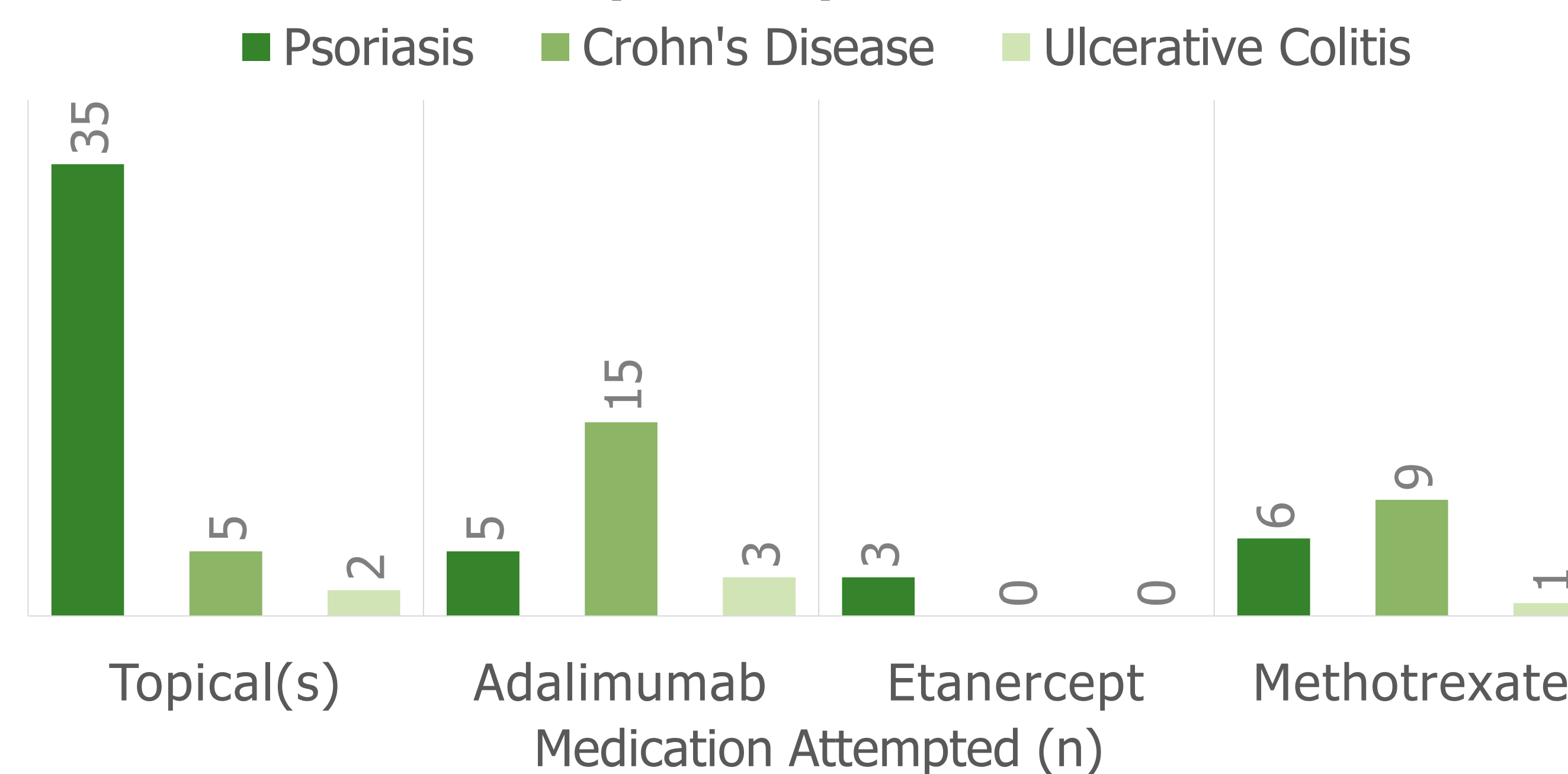
- There were 230 administrations of an IL-17 or IL-23 inhibitor amongst 74 patients included in the study analysis.

Baseline Characteristic	Study Sample (n=74)
Mean age (yr., SD)	56.8 ± 17.1
Mean weight (kg, SD)	85.3 ± 21.0
Female sex (n, %)	42 (57.5%)
Indication for use (n, %)	
Psoriasis	42 (56.8%)
Crohn's disease	29 (39.2%)
Ulcerative colitis	7 (9.5%)
Psoriasis severity (n, %)	
Unknown or not reported	7 (15.6%)
Moderate	1 (2.2%)
Severe	37 (82.2%)
Labs acquired including AST, ALT, and bilirubin [n (administrations), %]	
Baseline	203 (88.3%)
Subsequent labs	120 (56.9%)

Pre-Screening within 1 Year of Administration

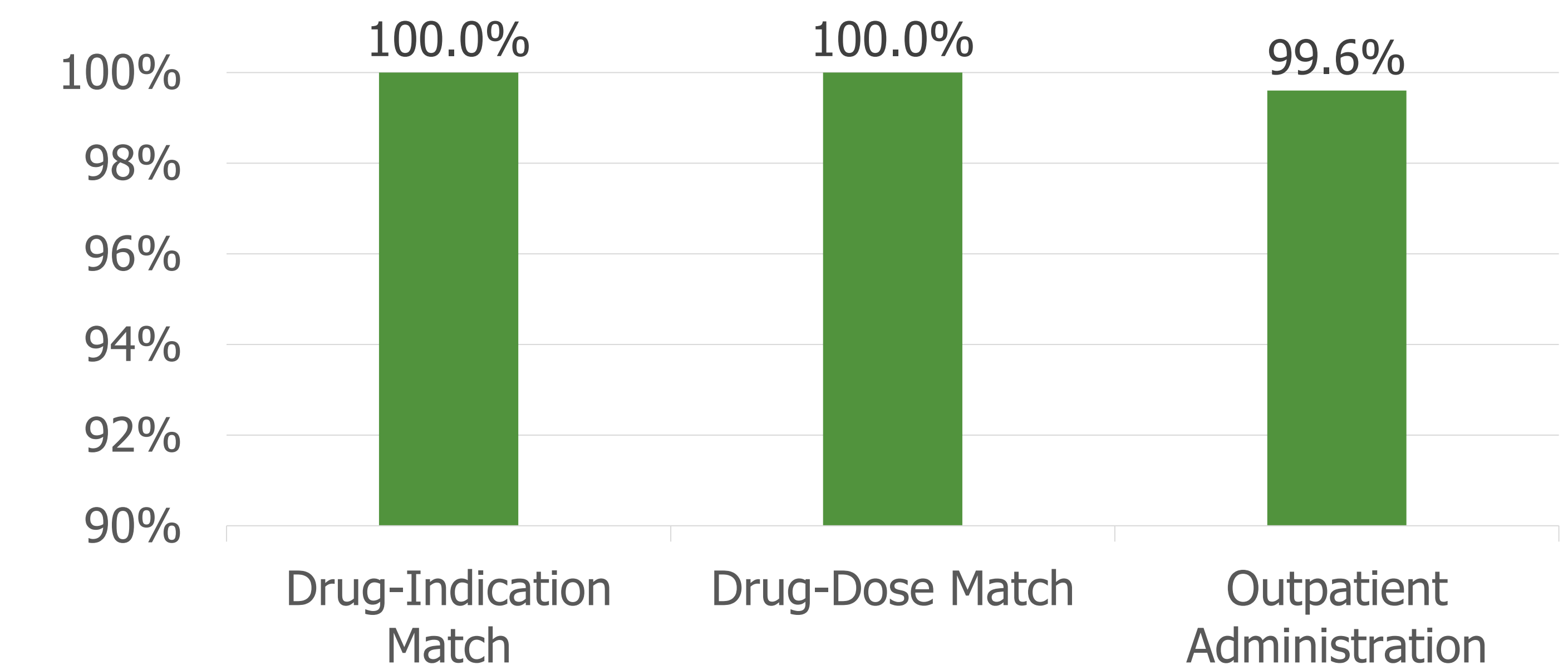


Previously Attempted Medications



RESULTS

Appropriate Use (n=230 administrations)



DISCUSSION & CONCLUSIONS

- All administrations of an IL-17 or IL-23 inhibitor were deemed appropriate including the drug, indication, and dose match.
- Only 1 patient received a dose of one of the study drugs in the inpatient setting. This was confirmed as a patient's home supply.

Based on this medication use evaluation, there is opportunity for process improvement.

- Provider and patient adherence of obtaining up-to-date prescreening testing and pertinent laboratory values

Limitations:

- Use of a manual chart search to identify patient information is limited by availability of data and findings from a broad chart search

Future Directions:

- IL-17 and IL-23 inhibitors could only be ordered using an order panel that prompts appropriate labs and pre-screening testing to be ordered/reviewed.

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