

# ASSESSING PATIENT-REPORTED OUTCOMES AND SPECIALTY PHARMACIST INTERVENTIONS IN MULTIPLE SCLEROSIS



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## BACKGROUND

- Patient reported outcomes (PROs) are used to assess response to medication and the need for therapeutic adjustments in patients with multiple sclerosis (MS).<sup>1,2</sup>
- Vanderbilt Specialty Pharmacy assesses PROs through monthly refill questionnaires (MRQs) to help guide specialty pharmacist interventions.

## OBJECTIVE

To assess PROs and pharmacist interventions in patients prescribed specialty multiple sclerosis (MS) medications at a health-system specialty pharmacy.

## METHODS

- DESIGN** Single-center retrospective analysis
- INCLUSION** Patients prescribed a MS specialty medication by center's outpatient MS clinic provider with:
- 2+ fills through the center's specialty pharmacy, AND
  - 2+ MRQs from January to March 2020
- OUTCOMES**
- Adverse effects (AE)
  - Missed doses and reasons
  - Perceived effectiveness
  - Specialty pharmacist interventions

TABLE 1. DEMOGRAPHICS (n=335)

	n (%) or median (IQR)
<b>Age, years</b>	45 (52-60)
<b>Gender, female</b>	256 (76)
<b>Race</b>	
White	274 (82)
Black	50 (15)
Unknown	9 (3)
Other	2 (<1)
<b>Insurance type</b>	
Commercial	196 (59)
Medicare	127 (38)
Medicaid	12 (4)
<b>Diagnosis</b>	
Relapsing-remitting	295 (88)
Secondary progressive	27 (8)
Primary progressive	11 (3)
Clinically isolated syndrome	1 (<1)
Tumefactive	1 (<1)
<b>Specialty medication</b>	
Fingolimod	74 (22)
Dimethyl fumarate	63 (19)
Glatiramer acetate	56 (17)
Interferon beta-1a	56 (17)
Dalfampridine	33 (10)
Teriflunomide	32 (10)
Interferon beta-1b	13 (4)
Peginterferon beta-1a	7 (2)
Siponimod	1 (<1)

FIGURE 1. MONTHLY REFILL QUESTIONNAIRE AND WORKFLOW

Certified Pharmacy Technicians perform an assessment at each monthly medication refill that includes the following questions that may trigger pharmacist interventions.	<b>Are you experiencing side effects?</b>	Yes	Pharmacist performs intervention
		No	
	<b>Have you missed any doses of medication?</b>	Yes	Pharmacist performs intervention
		No	
	<b>How well do you think your medication is working for you?</b>	Poor	Pharmacist performs intervention
		Fair	
		Good	
		Excellent	

## RESULTS

FIGURE 2. ADVERSE EFFECTS

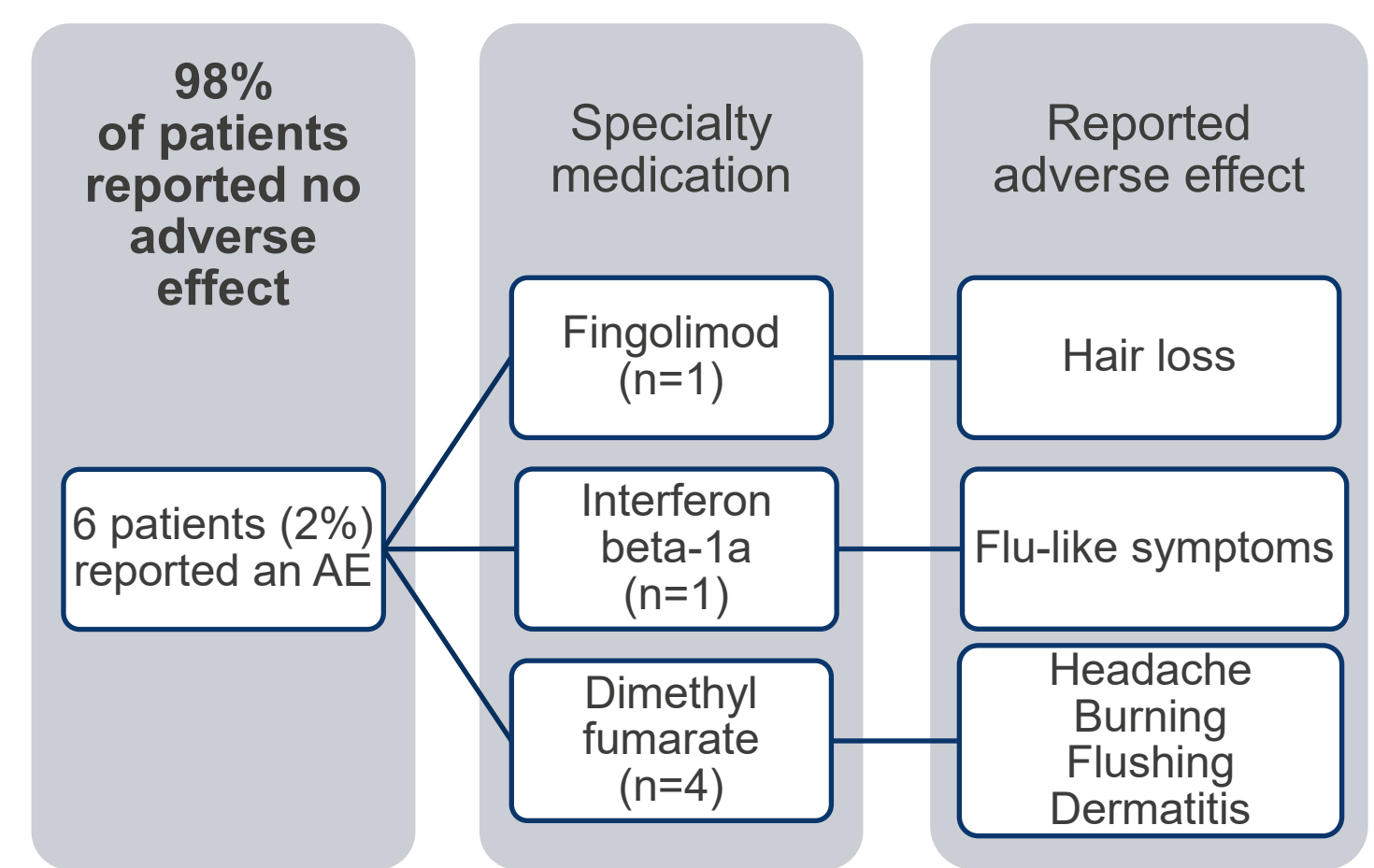


FIGURE 3. MISSED DOSES

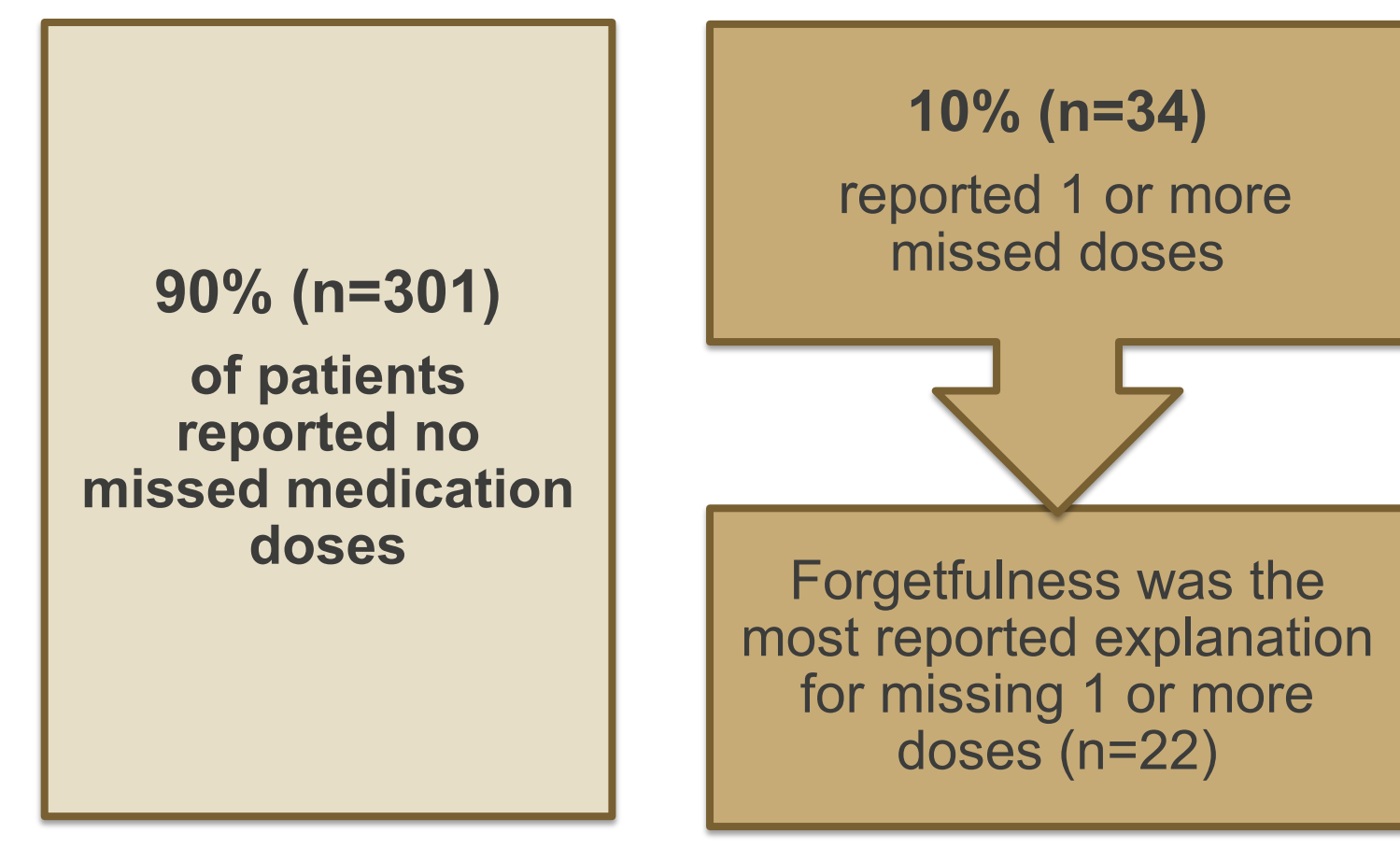
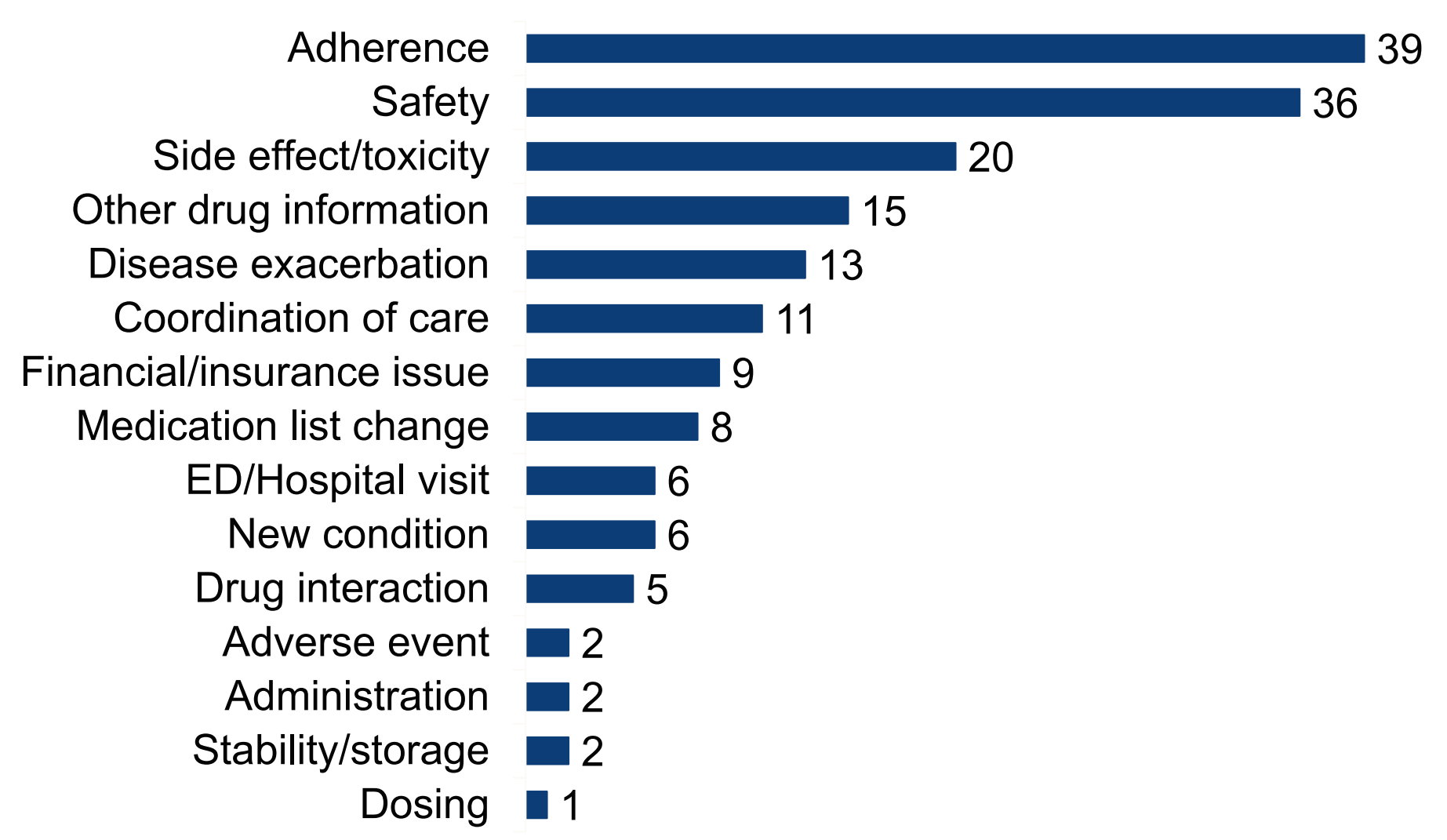


FIGURE 4. PERCEIVED MEDICATION EFFECTIVENESS



FIGURE 5. SPECIALTY PHARMACIST INTERVENTIONS (n=175)



Most common interventions were related to medication adherence, therapeutic monitoring/safety and side effects.

Interventions related to adherence most often included chart review or update and patient counseling.

Interventions related to therapeutic monitoring/safety typically included reviewing lab or therapy monitoring and making treatment recommendations.

## CONCLUSIONS

- Patients receiving medication through an integrated health-system specialty pharmacy reported low rates of missed doses (10%) and adverse effects (2%), and most rated high perceived effectiveness of their medication (95%).
- MS integrated specialty pharmacists perform targeted interventions to ensure safe and effective medication use.
- PROs can be used to direct patient's future course of therapy with the assistance of specialty pharmacist interventions.

1. Lavalley DC, Chenok KE, Love RM, et al. Incorporating Patient-Reported Outcomes Into Health Care To Engage Patients And Enhance Care. Health Aff (Millwood). 2016;35(4):575-582. 2. AMCP Partnership Forum: Improving Quality, Value, and Outcomes with Patient-Reported Outcomes. J Manag Care Spec Pharm. 2018;24(3):304-310.