

# NEUROLOGY SPECIALTY PHARMACIST MANAGEMENT AND MONITORING OF PRESCRIPTION CANNABIDIOL AT AN INTEGRATED CARE CENTER

Kayla Johnson, PharmD, BCPS, BCPP<sup>1</sup> | Holly Dial, PharmD Candidate<sup>2</sup> | Wendi Owens, CPhT<sup>1</sup> | Josh DeClercq, MS<sup>3</sup> | Leena Choi, PhD<sup>3</sup> | Autumn D. Zuckerman, PharmD, BCPS, AAHIVP, CSP<sup>1</sup> | Nisha B. Shah, PharmD<sup>1</sup>  
<sup>1</sup>Vanderbilt Specialty Pharmacy, Vanderbilt University Medical Center; <sup>2</sup>Lipscomb University College of Pharmacy; <sup>3</sup>Department of Biostatistics, Vanderbilt University Medical Center

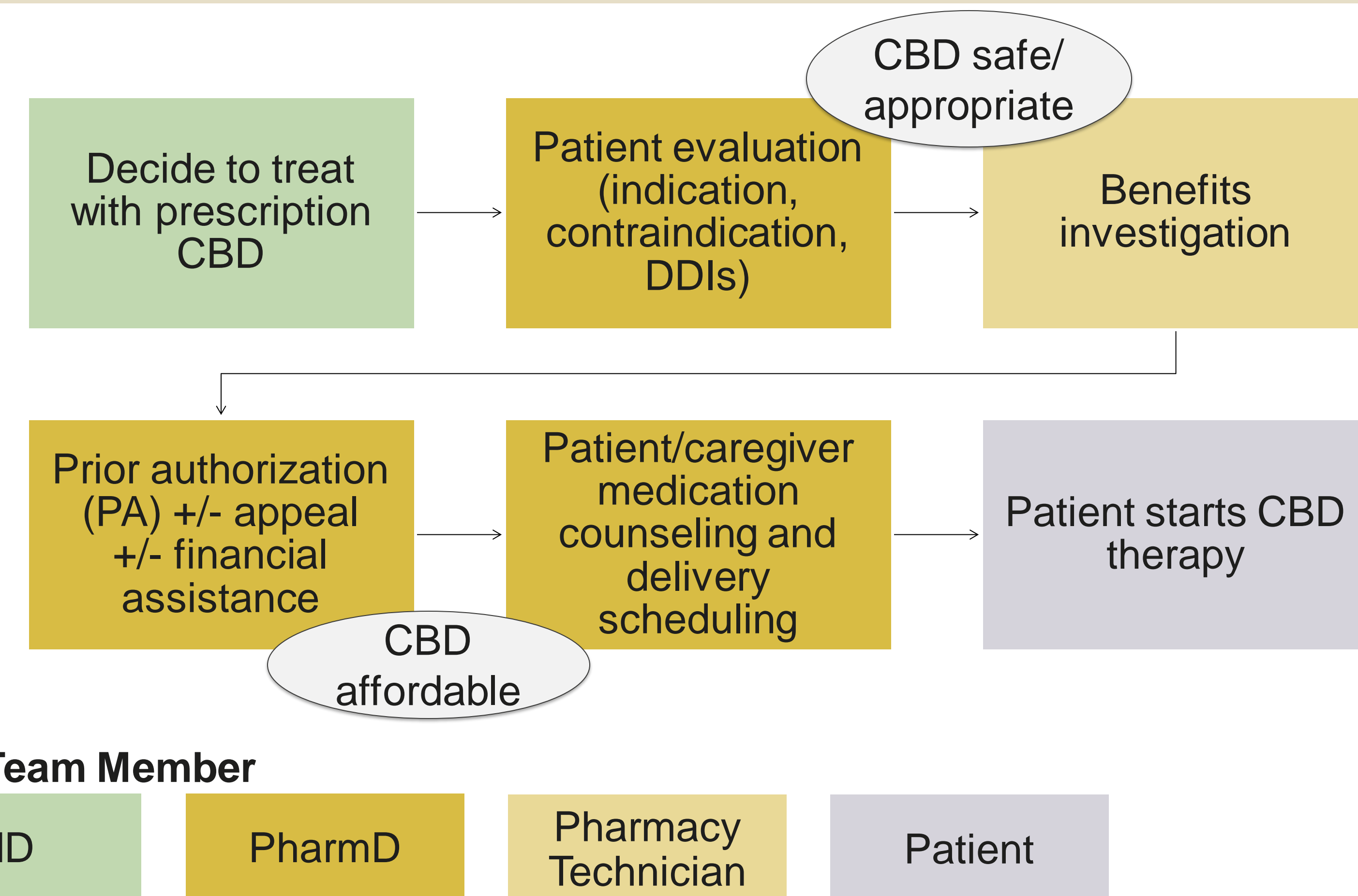
## BACKGROUND

- Prescription cannabidiol (CBD) is approved for the treatment of Dravet, Lennox Gaustaut, and Tuberous Sclerosis Syndromes as adjunct therapy in combination with other anti-epileptic drugs (AEDs).<sup>1</sup>
- CBD may affect multiple metabolism pathways, leading to a variety of pharmacodynamic (PD) and pharmacokinetic (PK) drug-drug interactions (DDI). Therefore, specialty pharmacists can play an important role in ensuring safe treatment initiation and management.

### STUDY OBJECTIVE

Describe the number and type of actions performed by a neurology specialty pharmacist at time of prescription CBD initiation

Figure 1. Role of Integrated Neurology Specialty Pharmacist



## METHODS

- Design** Single-center, retrospective cohort study
- Inclusion** All patients prescribed CBD for the management of a seizure disorder by the center's outpatient neurology clinics from January 1, 2019 – April 30, 2020
- Exclusion** Access and fulfillment of prescription CBD was not handled by the integrated specialty pharmacy or participation in a prescription CBD clinical trial
- Data sources** Electronic health record and specialty pharmacy management system

- PK Interactions** An interaction involving metabolism pathways which effects the risk of side effects, toxicity, or therapeutic control
- PD Interactions** An interaction involving additive side effect risks without altering medication levels

## RESULTS

Table 1. Cohort Demographics (N = 136)

	Pediatric (N=92) % (n)	Adult (N=44) % (n)
<b>Age, years [median, (IQR)]</b>	10 (5 – 14)	28 (21 – 44)
<b>Gender, female</b>	47 (43)	57 (25)
<b>Race, white</b>	84 (77)	86 (38)
<b>Insurance type</b>		
Medicaid/Medicare	73 (67)	78 (34)
Commercial	20 (18)	23 (10)
Tricare	8 (7)	--
<b>Height, cm [median, (IQR)]</b>	130 (102 – 147)	164 (153 – 173)
<b>Weight, kg [median, (IQR)]</b>	29 (17 – 38)	62 (49 – 76)
<b>Lennox-Gastaut Syndrome</b>	89 (82)	80 (35)

IQR = Interquartile range

Figure 2. Number and Type of Pharmacist Actions at CBD Initiation

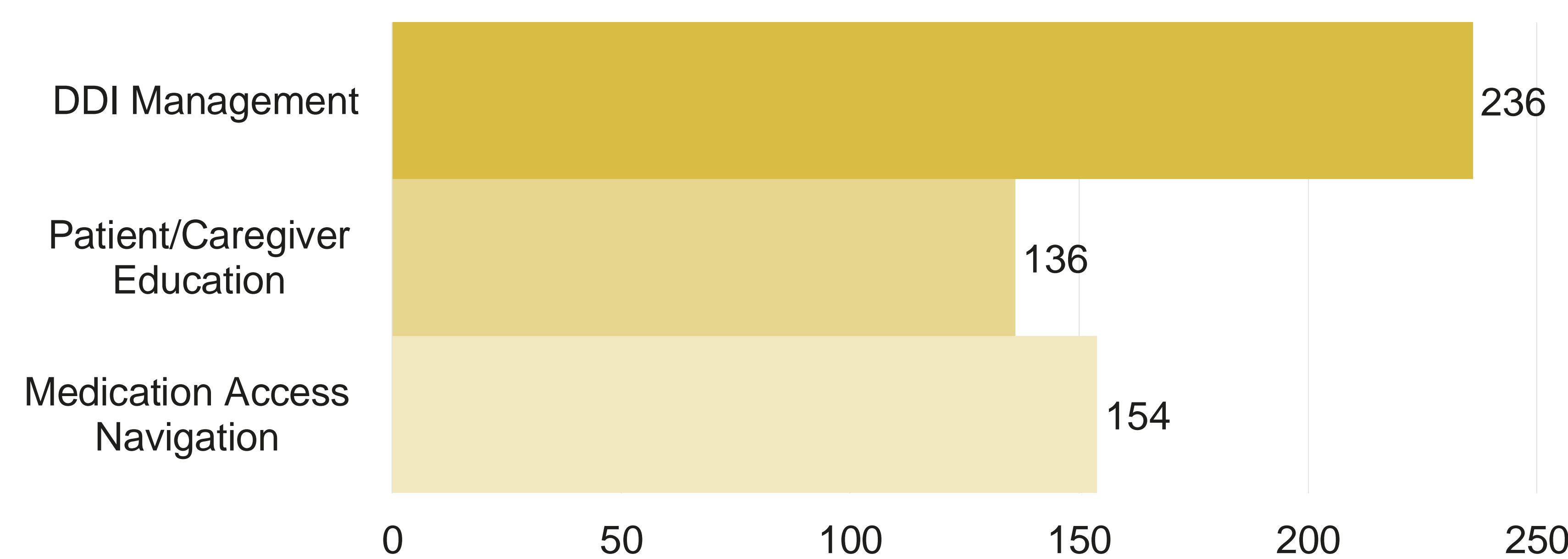


Figure 3. PA Outcomes

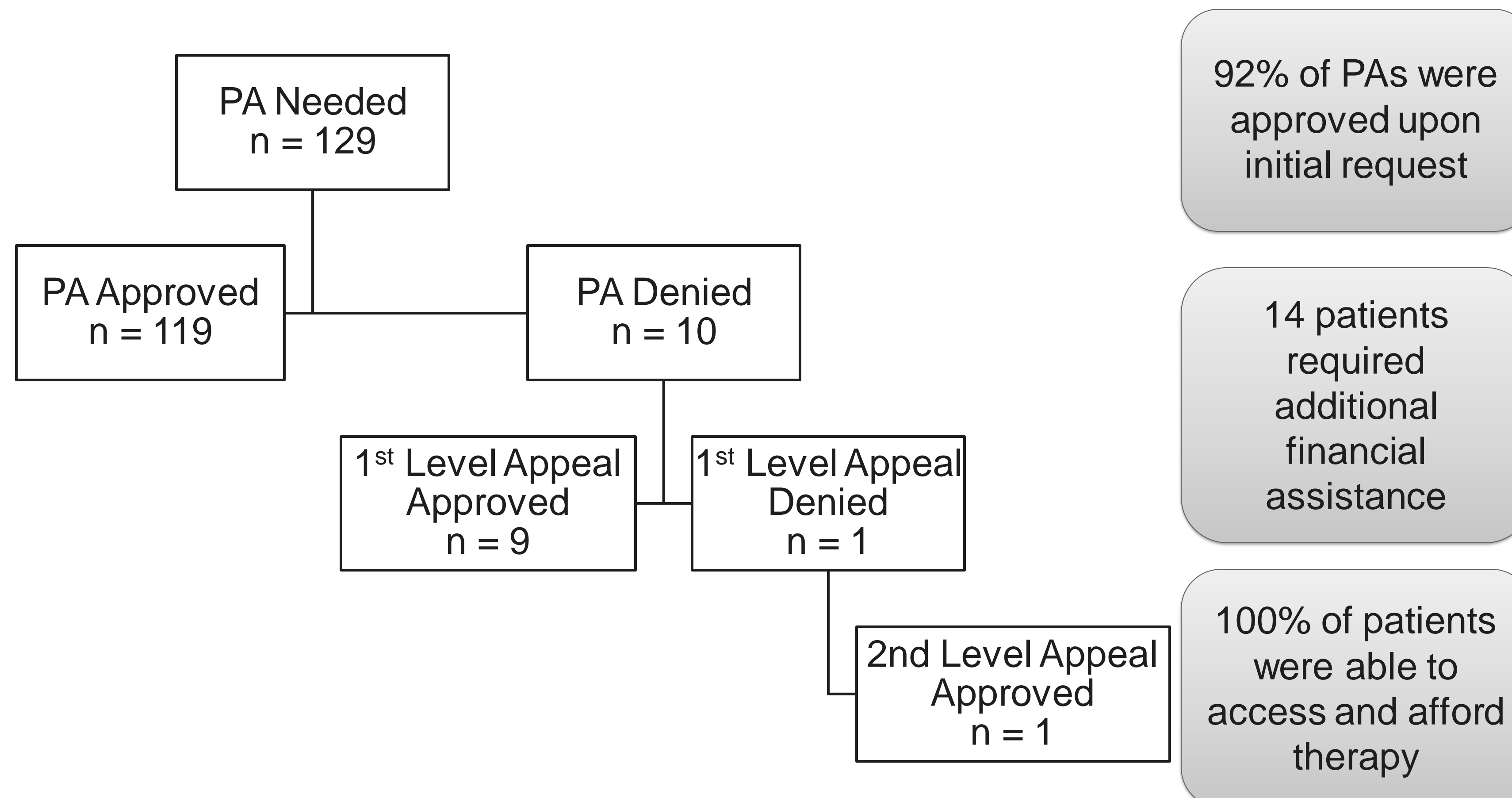


Figure 4. Types of DDI

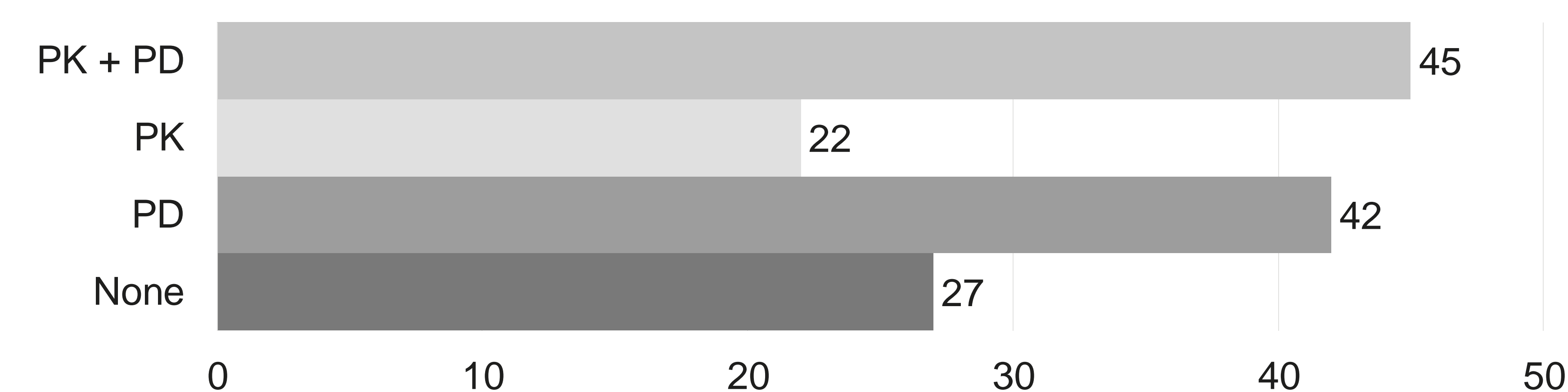
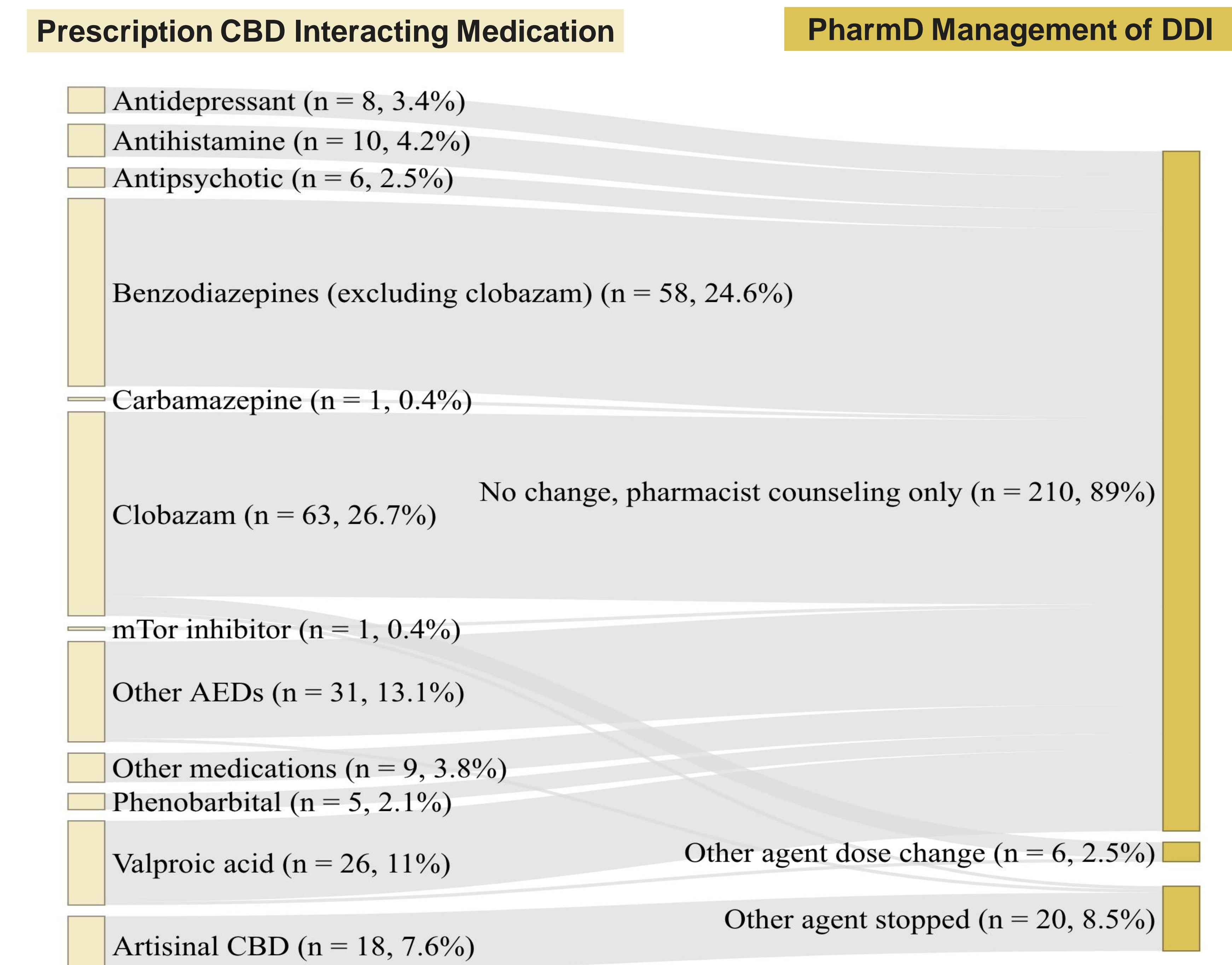


Figure 5. Outcomes of DDI Management (N = 236)



- The most common DDIs were benzodiazepines (24.6%), clobazam (26.7%), other AEDs (13.1%), and valproic acid (11%)

## CONCLUSIONS

- Our study provides previously unavailable data on real-world management of patients utilizing an integrated specialty pharmacy at time of prescription CBD initiation.
- Our findings demonstrate the integral role of a neurology specialty pharmacist in securing insurance approval, educating patients, and managing possible DDIs to ensure safe initiation of prescription CBD therapy.
- Further research is ongoing to evaluate the role of a neurology specialty pharmacist in the long-term management of this patient population.