OptimDosing

Chronic Polypharmacy

Overview: Polypharmacy—typically defined as the concurrent use of five or more medications—is now the norm among older adults. The complexity of these regimens drives adverse events, prescribing cascades, and clinical uncertainty.

Problem: In the U.S., 22–25% of adults aged 40–79 and nearly 40% of those 65+ take ≥5 medications. Each additional drug increases risk of drug–drug interactions and adherence challenges. Conventional EHR interaction checkers flag binary conflicts but ignore dosage relationships and aggregate burden.

Opportunity: Health systems, chronic-care platforms, and digital health vendors need advanced analytics that can model full regimen interactions, simulate safe dosing adjustments, and surface likely symptom triggers for intervention.

OptimDosing's Approach: Our patented algorithm models interaction matrices and fits dose-response surfaces using patient and population data. The system integrates symptom-tracking and lifestyle metrics to link outcomes to dosing patterns.

Value for Partners: Identify dose clusters driving fatigue, dizziness, or cognitive decline.Support deprescribing initiatives with simulation-based safety evidence.Integrate regimen modeling into chronic care or pharmacy workflows via API.

Selected references: CDC/NCHS Data Brief 347; Wang X et al., *BMC Public Health*, 2023; Kim S et al., *Arch Gerontol Geriatr*, 2024.

Contact: licensing@optimdosing.com • *Helping partners model and optimize multi-drug safety at scale.*