Patient-Tailored Pharmacist Interventions to Improve Specialty Medication Adherence: A Randomized Controlled Trial

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Purpose

Evaluate the impact of patient-tailored complex interventions on adherence to specialty medications as compared to usual care.

Setting and Patient Sample

Single-center, pragmatic, randomized controlled trial at an integrated health-system specialty pharmacy

Patients included for pharmacist review: 1) PDC <0.9 over the previous 4 and 12 months and 2) filled a specialty medication at least 4 times in the previous 12 months from select specialty clinics

Figure 1. Study Methods

1300 patients screened
881 patients excluded (may have >1 criteria)
- Misidentified as nonadherent (n=775)
- Planned discontinuation (n=82)
- Prescribed by outside provider (n=40)
- Deceased (n=17)
439 randomly assigned

Analysis (n=199)
Baseline assessment
- Can you tell me how you take [med]?
- What concerns do you have about [med]
- Have you experienced any side effects?
- How do you remember to take [med]?
- How many doses have you missed in last 30 days?
- Can you tell me why you take [med]?

Primary outcome: 8-month post-enrollment PDC
Exploratory outcomes: 6, 12-month post-enrollment PDC

Patient-Tailored Pharmacist Interventions

Most Common Interventions

- Sent instructions for smartphone reminders
- Addressed clinic or pharmacy errors
- Mailed daily pill boxes
- Provided encouragement
- Created unreachable action plans
- Discussed financial assistance
- Recommended follow up

Study Methods

8-month PDC 94% (intervention) vs. 88% (usual care), p<0.001
Specialty pharmacies should target nonadherent patients for adherence interventions.

Evaluation of Adherence Improvement

Figure 2. PDC by Treatment Group and Time

Table 1. Baseline Characteristics

N=439
Age- mean (±SD) 51 (±18)
Female 299 (68%)
White 360 (82%)
Commercial Insurance 255 (58%)
Duration of Therapy ≥ 1 year 292 (67%)
Clinic
Adult Miscellaneous 57 (13%)
Lipids 75 (17%)
Multiple Sclerosis 86 (20%)
Pediatric 31 (7%)
Pulmonary 36 (9%)
Rheumatology 152 (35%)
Baseline PDC at 12 months- median (IQR) 0.87 (0.78, 0.9)

Table 1. Baseline Characteristics

Results

Table 2. Baseline Characteristics

Clinic
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Primary outcome: 8-month post-enrollment PDC
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Figure 3. Patient-tailored Interventions

Figure 4. Reason for Nonadherence by Clinic

Nonadherence Reason

Memory 82
Unreachable 60
No known reason 35
Unresponsive* 32
Clinical 25
Social issues 23
Health Literacy 19
Health-system determinants** 15
Financial 8

Nonadherence Reason

Most Common Interventions

- Sent instructions for smartphone reminders
- Mailed daily pill boxes
- Provided encouragement
- Created unreachable action plans
- Discussed financial assistance
- Recommended follow up

Conclusion

Patient-tailored interventions to address poor adherence to specialty medications resulted in significant adherence improvement compared to usual care:

8-month PDC 94% (intervention) vs. 88% (usual care), p<0.001
Specialty pharmacies should target nonadherent patients for adherence interventions.