Fairview

# Specialty Pharmacy Outcomes

Snapshots of Recent Outcomes Projects

*Last Update:* March 11, 2026

# What to expect:

This slide deck highlights some of the outcomes initiatives evaluated by Fairview Pharmacy Services since 2022. While it is not inclusive of all projects throughout the department, it showcases the breadth of collaborations around FPS with the Pharmacy Outcomes team.

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# 2026
# Pharmacy Outcomes Projects

Fairview

**Presented at:**
WORLDSymposium
2026 February
San Diego, CA

# Adherence and persistence in patients with lysosomal diseases at an academic health system specialty, home infusion, and ambulatory infusion pharmacies

Olivia Brown, PharmD, CSP; R. May O'Donnell, MS;
Alicia Zagel, PhD, MPH

**Department:** FHI/Specialty

**Completed:** 2026

# Adherence and persistence in patients with lysosomal diseases at an academic health system specialty, home infusion, and ambulatory infusion pharmacies

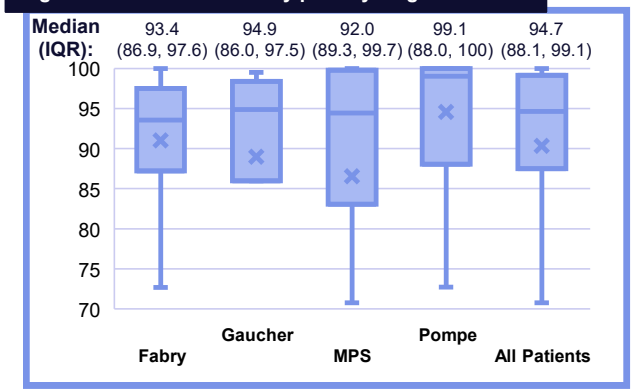
**Objective:** To evaluate medication therapy adherence and persistence rates among patients with Fabry disease, Gaucher disease, Pompe disease, Mucopolysaccharidoses (MPS), and Acid Sphingomyelinase Deficiency (ASMD).

**Background:**

- Medication adherence and persistence to prescribed therapies for lysosomal diseases are linked to better quality of life, delayed disease progression, and reduced morbidity and mortality.
- Factors such as cost, treatment fatigue, prior authorization delays, and logistical barriers may hinder a patient's ability to remain adherent to their therapy.
- The M Health Fairview Advanced Therapies Clinic incorporates a multidisciplinary team, including an ambulatory pharmacist, to enhance management of patients with lysosomal diseases and improve patient outcomes.

**94.7%**
**Overall Adherence**

**Figure 1. PDC distribution by primary diagnosis**



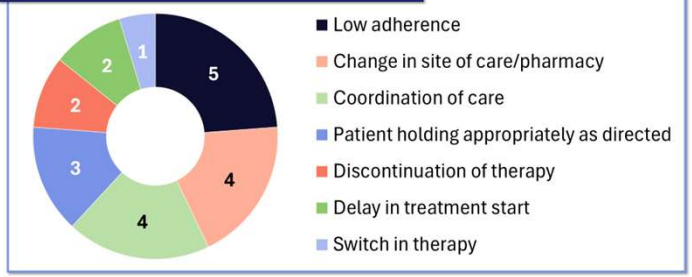

| Table 1. Patient Characteristics | | Patients N (%) | Adherence , % Median (IQR) |
|---|---|---|---|
| Age Group | Pediatric (<18 years) | 23 (26.4) | 94.9 (91.0, 99.8) |
| | Young adult (18-29 years) | 16 (18.4) | 89.6 (84.7, 99.6) |
| | Adult (30+ years) | 48 (55.2) | 94.9 (86.5, 98.7) |
| Sex | Female | 44 (50.6) | 91.7 (85.8, 97.6) |
| | Male | 43 (49.4) | 95.8 (90.2, 99.8) |
| Treatment Location | Specialty pharmacy only | 20 (23.0) | 91.6 (84.5, 96.8) |
| | Home infusion only | 40 (46.0) | 95.0 (89.6, 99.6) |
| | Infusion center only | 7 (8.0) | 100 (81.1, 100) |
| | Multiple sites of care | 20 (23.0) | 96.1 (89.9, 97.7) |

**Only 8 patients were nonadherent to therapy**

**83%** of patients were persistent

**30%** of non-persistence was due to treatment holds, discontinues, or switches

**Figure 2. Reasons for non-persistence**




**Conclusions:**

- Streamlined pharmacy services through an academic health system model yield **high adherence and persistence** metrics among patients with lysosomal disorders.
- Creating internal workflows that **optimize communication across teams** provides patients with individualized care coordination to drive adherence and persistence.
- An **ambulatory pharmacist to oversee care coordination** maintains quality patient care through partnering to achieve therapy goals and manage side effects, providing patient education, and ensuring prompt and continual medication access.


Fairview

**Department:** FHI/Specialty
Presented at: WORLDSymposium 2026

**Completed:** 2026



BROWN O; ZAGEL, A; O'DONNELL, RM;

# 2025
# Pharmacy Outcomes Projects

Fairview

**Department:** Specialty

**Completed:** 2025

# RAPID-3 Metrics for Rheumatoid Arthritis Patients in Specialty Therapy Management

Alicia Zagel, PhD, MPH; Ann Harty, PharmD, AAHIVP; R. May O'Donnell, MS; Dana Simonson, PharmD, BCPS; Susan Chhen, PharmD; Tori Grier, PharmD; Ann McNamara, PharmD

**Presented at:**
National Association of Specialty Pharmacy Annual Meeting & Expo
2022 September
Orlando, FL

# RAPID-3 Metrics for Rheumatoid Arthritis Patients in Specialty Therapy Management

**OBJECTIVE:** To examine changes in quality of life scores among RA patients once started on Biologic Disease-Modifying Antirheumatic Drugs (bDMARDs) within the specialty pharmacy.

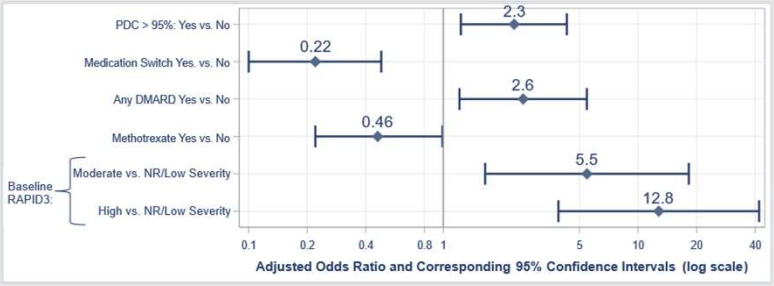
## BACKGROUND:

- Routine Assessment of Patient Index Data (RAPID3) measures quality of life for patients with Rheumatoid Arthritis across function, pain, and global domains.
  - **High RAPID3 scores** correspond to **poor quality of life**
- Previous research notes a decrease of 3.8 points in RAPID3 scores to be clinically meaningful.
- Factors associated with decreases in RAPID3 scores between baseline and 3- to 6-months of follow-up were investigated to determine characteristics of patients who may need differing levels of clinical intervention to control disease.

## IMPORTANT FINDINGS:

Patients were **more likely** to have a clinically significant decrease in RAPID3 scores at follow-up if they had

- **high bDMARD adherence**,
- were taking a **conventional DMARD concurrently**, or
- had a **more severe baseline** disease state



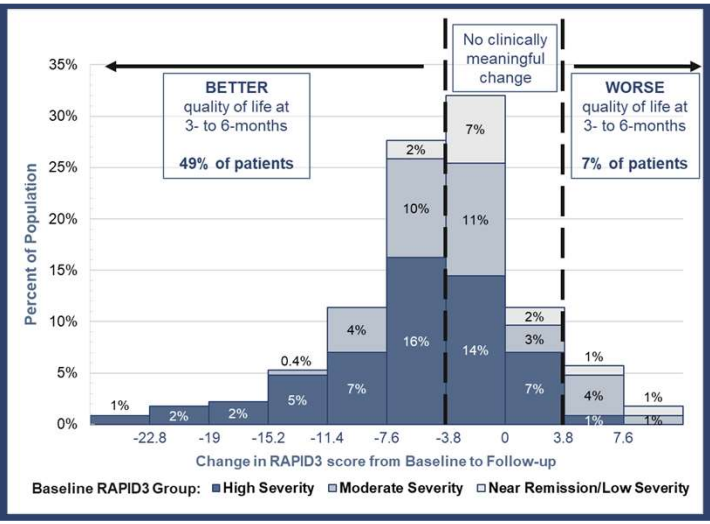

**60%**
of patients with high-severity at baseline and

**44%**
of patients with moderate severity had a **clinically significant improvement** in quality of life

Patients with **high- and moderate-severity** RAPID3 scores at baseline experienced **significant reductions** in scores at follow-up visits:

- 5.9-point reduction in **high severity** group
- 2.6-point reduction among **moderate severity group**

Patients starting at **low severity/near remission** remained at good quality of life at follow-up.




## CONCLUSIONS:

- RA patients who started bDMARDs at Fairview Specialty Pharmacy indicated **vast improvements in their quality of life** after just a few months of their therapy start.
- Therapy management pharmacists act as partners in care with specialty pharmacy patients and help patients with medication therapy problems, adherence, and making medication changes when needed.
- Using RAPID3 to track quality of life among RA patients allows the specialty pharmacy to understand how patients progress and perceive their disease state over time.

**Department:** Specialty **Completed:** 2025
**Presented at:** National Association of Specialty Pharmacy Annual Conference & Expo

Zagel A; Simonson, D; O'Donnell RM; Harty, A; Susan; Grier, T; McNamara, A

# Fairview

**Department:** Specialty

**Completed:** 2025

## Real-world safety, efficacy, and medication access outcomes in a pharmacist-led pegvaliase program

Sofia Shrestha, PharmD, CSP; Alicia L. Zagel, PhD, MPH; Nishitha R. Pillai, MBBS, FACMG; Alia Ahmed, MBBS, CCRP; Jenny Jacobson, RD, LD; Alicia Ranasinghe, PharmD, IgCP; Chester B. Whitley, MD, PhD; Jeanine R. Jarnes, PharmD, MSc

**Published as:**
Shrestha S, Zagel AL, Pillai NR, Ahmed A, Jacobson J, Ranasinghe A, Whitley CB, Jarnes JR. Pegvaliase therapy for phenylketonuria: Real-world safety, efficacy, and medication access outcomes in a pharmacist-led pegvaliase program. Genet Med. 2025 Jun;27(6):101405. doi: 10.1016/j.gim.2025.101405. Epub 2025 Mar 13. PMID: 40094206.

# Real-world safety, efficacy, and medication access outcomes in a pharmacist-led pegvaliase program

**OBJECTIVE:** To evaluate real-life clinical outcomes of patients with phenylketonuria (PKU) managed by a pharmacist-led pegvaliase pharmacotherapy program.

## BACKGROUND:

- Phenylketonuria (PKU) has commonly been treated with phenylalanine (Phe)-restricted medical food and protein-restricted diet.
- Pegvaliase is a novel enzyme substitution therapy that was FDA approved in 2018 for the treatment of PKU.
- Pegvaliase significantly reduces Phe levels in the blood, allows some patient to normalize their diets, and is associated with improvements in neuropsychiatric outcomes.
- However, pegvaliase carries significant risk of adverse effects, thus necessitates close monitoring.

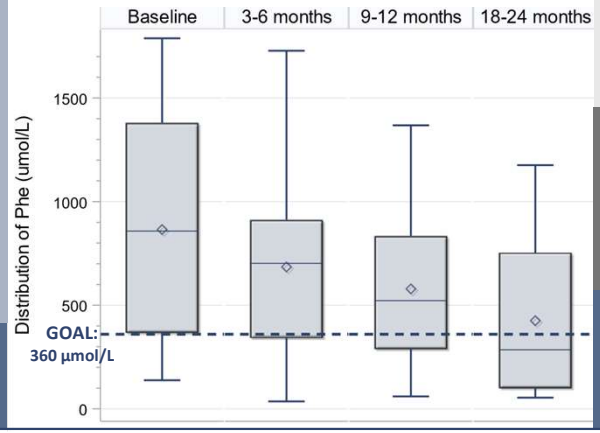
## IMPORTANT FINDINGS:

**Roles of Clinical Pharmacist:**

- **Mitigate medication access barriers:**
  - Facilitate insurance approval e.g. draft letters of medical necessity, identify and provide clinical documentation, etc.
  - Secure prior authorizations and manage appeals
  - Acquire copay assistance
- **Oversee therapeutic management:**
  - Address side effects
  - Ensure timely interventions are made as needed
  - Make dose adjustments
  - Oversee drug monitoring

**51 patients received pegvaliase**
Median baseline Phe: **858 µmol/L**
Median baseline protein intake: **20 g/day**

### Distribution of Phe Over Time




**10.4 Days**
Average time from medication order to insurance approval

**Patient Outcomes:**

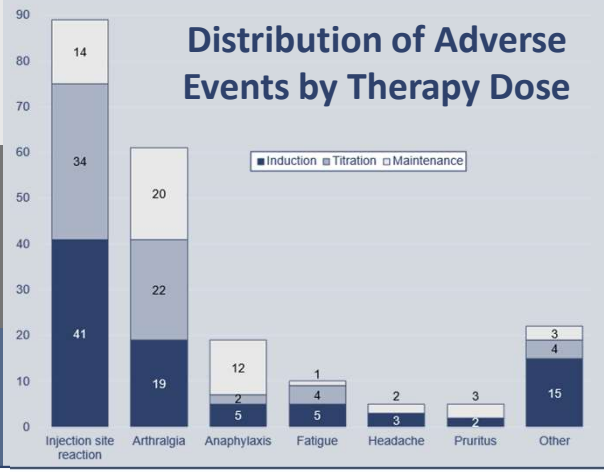
**20%** of patients could maintain unrestricted diets

Another **22%** could maintain diets ≥50 g protein/day

**77%** of patients achieved Phe ≤360 µmol/L

**94%** of patients decreased Phe ≥20% from baseline

### Distribution of Adverse Events by Therapy Dose




## CONCLUSIONS:

- The clinical pharmacist collaborated with patients, providers, payers, and drug manufactures to ensure patients could access necessary medication to treat their PKU and could have positive outcomes while on therapy.
- **Pegvaliase effectively reduced phenylalanine levels** in PKU patients over time and allowed many patients to have a more normal diet.
- However, it carried significant risks of anaphylaxis and other adverse events, which were monitored by the clinical pharmacist.
- **A pharmacist-led program and interdisciplinary collaboration was crucial for prompt access and effective management of adverse events.**

**Department:** Specialty **Completed:** 2025

Shrestha S; Zagel AL; Pillai NR; Ahmed A; Jacobson J; Ranasinghe A; Whitley CB; Jarnes JR

**Published as:** Shrestha S, et al. Pegvaliase therapy for phenylketonuria: Real-world safety, efficacy, and medication access outcomes in a pharmacist-led pegvaliase program. Genet Med. 2025;27(6):101405. doi:10.1016/j.gim.2025.101405

Fairview

**Department:** Specialty

**Completed:** 2025

# AI-Powered Technology to Increase Call Center Efficiency within Fairview Specialty Services Pharmacy

John Anderson, PharmD; Alicia Zagel, PhD, MPH; Mel Nelson, PharmD

# AI-Powered Technology to Increase Call Center Efficiency within Fairview Specialty Services Pharmacy

**OBJECTIVE:** To evaluate the utility of an AI tool and determine if it can enhance specialty pharmacy call center capacity

## BACKGROUND:

- FSSP has evolved into a massive operation since 1997, and it continues to grow, fueling a need for operational efficiency
- Annually, the specialty pharmacy receives ~375,000 inbound calls and originates >275,000 outbound calls
- While call volume is partially offset by technology such as Fairview Link and Mscripts, technology-based solutions are needed to promote year-to-year growth while maintaining quality specialty pharmacy services

## IMPORTANT FINDINGS:

**Calabrio** was ultimately chosen as a vendor to pilot for their functionalities:

- **Transcription Search:** categorizing calls by keywords
- **Desktop Analytics:** allows viewers to filter and provide basic data insights
- **Web-based analytics and reporting:** 23 customized dashboards to aid in operations analysis

***Figure 1.*** *Calabrio Project Implementation Timeline*

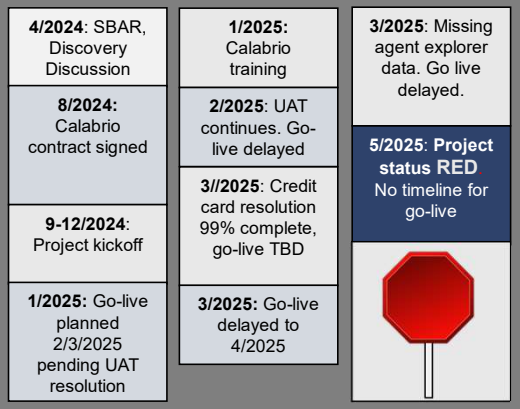



***Table 1****. Insights Phrase Contact Hits from Inbound and Outbound Calls*

| | March 2025 | April 2025 | May 2025 |
|---|---|---|---|
| **Avg Call Volume** | | **53,976** | |
| **Total calls categorized** | 12,168 (22.5%) | 12,936 (24.0%) | 12,859 (23.8%) |
| **Prior Auth/BI** | 7,346 (13.6%) | 8,094 (15.0%) | 7,880 (14.6%) |
| **Payment Related** | 1,786 (3.3%) | 1,626 (2.7%) | 1,445 (2.7%) |
| **Refill Request** | 2,560 (4.7%) | 2,679 (5.0%) | 2,535 (4.7%) |
| **Checking on the Status** | 227 (0.4%) | 259 (0.5%) | 635 (1.2%) |
| **Shipping** | 120 (0.2%) | 168 (0.3%) | 205 (0.4%) |
| **Contact MD/Payer** | 129 (0.2%) | 110 (0.2%) | 159 (0.3%) |

Overall phrase hit rate: **22.5-24.0%**

Most phrases concerned prior authorizations and billing

## CONCLUSIONS:

- Phrase Hit rates < 25% indicates room for improvement of product
- Further enhancements to the Calabrio product are needed before it can have full utility within the specialty pharmacy call center
- One limitation of Calabrio is that it does not support call categorization in non-English languages.
- Long-term use of Calabrio should provide trend data such that FSSP can move staff around appropriately throughout the calendar year to maximize resource capabilities.

**Department:** Specialty **Completed:** 2025

Anderson J.; Zagel A; Nelson M

# 2024
# Pharmacy Outcomes Projects

Fairview

**Department:** Specialty

**Completed:** 2024

# Oral Oncology Inventory Management Interventions by a Specialty Pharmacy

Marjorie Wittenborg, BS Pharm; Erin Kelley, PharmD, BCOP;
Tori Grier, PharmD; Alicia L. Zagel, PhD, MPH;
Ann McNamara, PharmD

**Presented at:**
National Association of Specialty Pharmacy Annual Conference & Expo
2024 September
Nashville, TN

# Oral Oncology Inventory Management Interventions by a Specialty Pharmacy

**OBJECTIVE:** To describe interventions that reduce oral oncology medication waste, and calculate total cost avoidance due to specialty pharmacy processes

## BACKGROUND:

- Oral oncology medications may diminish disease progression and improve overall survival.
- They are expensive, entail complex regimens, and their adverse effects are prevalent and often serious.
- Fairview Specialty Pharmacy has strict processes overseen by oncology pharmacists and liaisons who regularly engage with patients and providers to (1) Ensure patients take medications correctly,(2) Provide strategies to minimize side effects, and (3) Assess patient medication inventory
- One goal of these processes is to **decrease total costs** to the pharmacy, patients, and payers.

## IMPORTANT FINDINGS:

**Table.** Inventory management interventions and rationale resulting in cost avoidance

| Pharmacist Intervention | Rationale | Count | Total Cost | Avg Cost | Total Category Cost | Avg Category Cost |
|---|---|---|---|---|---|---|
| Hold or delay dispense | High likelihood of medication or dose change | 25 | $346,387 | $13,855 | $617,314 | $12,104 |
| | Medication on hold | 12 | $140,352 | $11,696 | | |
| | Excess supply from previous cycle or fill | 14 | $130,575 | $9,327 | | |
| Quantity adjustment | Excess supply from previous cycle or fill | 26 | $78,971 | $3,037 | $145,801 | $4,288 |
| | High likelihood of medication or dose change | 8 | $66,830 | $8,354 | | |
| | Medication on hold | 0 | $ - | $ - | | |
| Proactive split fill | High likelihood of medication or dose change | 17 | $111,058 | $6,533 | $111,058 | $6,533 |
| Dose Optimization | Consolidating a patient's regimen into fewer units while providing the appropriate, prescribed dose | 2 | $35,712 | $17,856 | $35,712 | $17,856 |
| **Total Pharmacist Interventions:** | | **104** | | | $909,885 | $8,749 |
| **Liaison Intervention** | **Rationale** | **Count** | **Total Cost** | **Avg Cost** | **Total Category Cost** | **Avg Category Cost** |
| Hold or delay dispense | Excess supply from previous cycle or fill | 1 | $38,918 | $38,918 | $46,984 | $23,492 |
| | High likelihood of medication or dose change | 1 | $8,066 | $8,066 | | |
| Quantity adjustment | Excess supply from previous cycle or fill | 14 | $188,245 | $13,446 | $188,245 | $13,446 |
| **Total Liaison Interventions:** | | **16** | | | $235,229 | $14,702 |

**120 interventions** resulting in **>$1.1 million** of cost avoidance in one year

Consolidating a patient's regimen into **fewer higher-strength units** while providing the equivalent prescribed dose led to **$17,856 cost savings per intervention**

**Top reasons for not dispensing full medication amounts:**

- High likelihood of medication or dose change (N=51 interventions; $532,341)
- Excess supply from previous cycle (N=55; $436,709)

**Table.** Top medications involved in inventory management interventions

| | |
|---|---|
| **Highest total cost avoidance:** | **Verzenio** $99,487 |
| **Greatest frequency of interventions:** | **capecitabine/Xeloda** 22, 19% of total interventions |
| **Highest avg cost avoidance per intervention:** | **Xospata** $36,809 |
| **Highest intervention rate:** | **Inqovi** 6.5% of all dispenses |

## CONCLUSIONS:

- Strict inventory management processes led to significant cost avoidance and reduced waste for oncology medications.
- Strong engagement with patients and providers is necessary to avoid excess costs or waste and ensure patients have appropriate supply of oral oncology medications.
- In some cases, access to the medical record may equip the pharmacist with information to allow for additional interventions.

**Department:** Specialty **Completed:** 2024
**Presented at:** National Association of Specialty Pharmacy Annual Conference

Wittenborg M; Kelley E; Grier T; Zagel A; McNamara A

Fairview

**Department:** Specialty

**Completed:** 2024

# Trajectory of Asthma Control Test (ACT) Scores Among Patients Treated Within the Specialty Pharmacy

Alicia L. Zagel, PhD, MPH; Marjorie Wittenborg, BS Pharm; Sandra Ill, PharmD; Ann McNamara, PharmD

**Presented at:**
National Association of Specialty Pharmacy Annual Conference & Expo
2024 September
Nashville, TN

# Trajectory of Asthma Control Test (ACT) Scores Among Patients Treated Within the Specialty Pharmacy

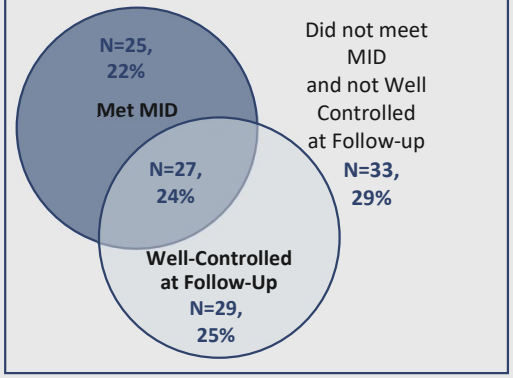
**OBJECTIVE:** To evaluate ACT score trajectories and determine factors related to asthma improvement among patients treated within the specialty pharmacy.

## BACKGROUND:

- Severe asthma often requires biologic therapies dispensed through specialty pharmacies.
- Routine monitoring via the Asthma Control Test (ACT) can identify uncontrolled asthma and evaluate treatment progress, with improvement measured either through achieving **well-controlled symptoms** or the **minimally important difference** (MID; ≥3 point improvement)
- Factors commonly evaluated within specialty pharmacies like adherence, symptom triggers, and comorbidities may interact with ACT score trajectories
- Deciphering the interplay among elements related to symptom improvement may aid specialty pharmacies in designing targeted initiatives to improve asthma care.

## IMPORTANT FINDINGS:

**FIGURE: Asthma Control at Follow-Up**

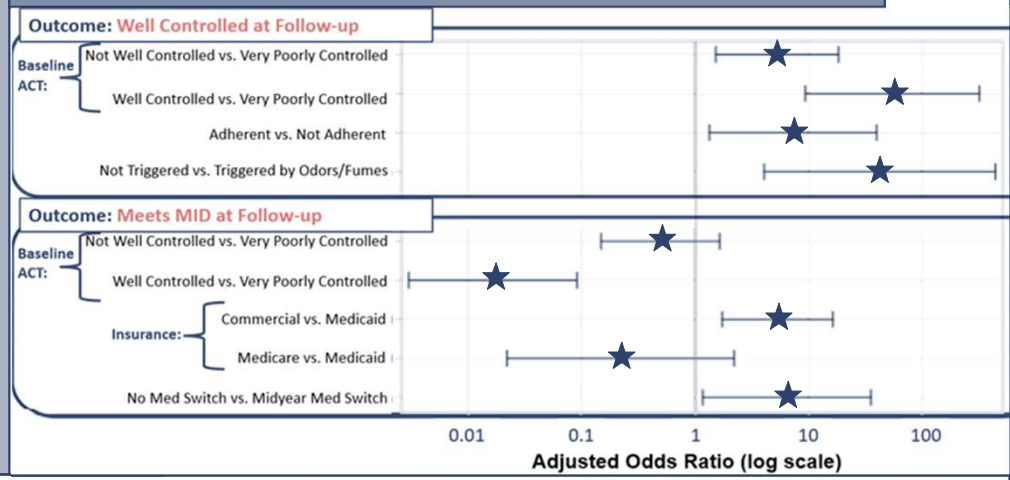



**4 points**
Median improvement in ACT scores among patients beginning at **Very Poorly Controlled**

**71% of patients**
**Measured as well-controlled or achieved MID at follow-up**

Certain triggers like **odors/fumes**, **nonadherence**, and **Medicaid insurance** were associated with not being well-controlled or meeting MID at follow-up

**FIGURE: Adjusted Odds and 95% Confidence Intervals of being Well-Controlled or Meeting MID at Follow-up**




## CONCLUSIONS:

- Goals for asthma control are often **either** set as meeting the MID or being Well Controlled; **integrating both into goal-setting in asthma care may be important**.
- Understanding factors related to ACT trajectories may aid in personalizing care goals for patients in the specialty pharmacy.
- Other studies indicate that patients experiencing greater social determinants of health are at higher risk of poorer asthma outcomes.
    - Incorporating insurance, nonadherence, triggers, and ACT score trajectories into counseling and frequency of pharmacy assessments may be important.

**Department:** Specialty **Completed:** 2024 **Presented at:** National Association of Specialty Pharmacy Annual Conference

Zagel A; Wittenborg M; III S; McNamara A

# 2023
# Pharmacy Outcomes Projects

Fairview

**Department:** Specialty

**Completed:** 2023

# Patient-Oriented Eczema Measure (POEM) Scores to Measure Patient Improvement with Specialty Medication for Atopic Dermatitis

Dana Simonson, PharmD, BCPS; Ann McNamara, PharmD; Ann Harty, PharmD; Alicia Zagel PhD, MPH

**Presented at:**
National Association for Specialty Pharmacy Annual Conference & Expo
2023 September
National Harbor, MD

# Patient-Oriented Eczema Measure (POEM) Scores to Measure Patient Improvement with Specialty Medication for Atopic Dermatitis

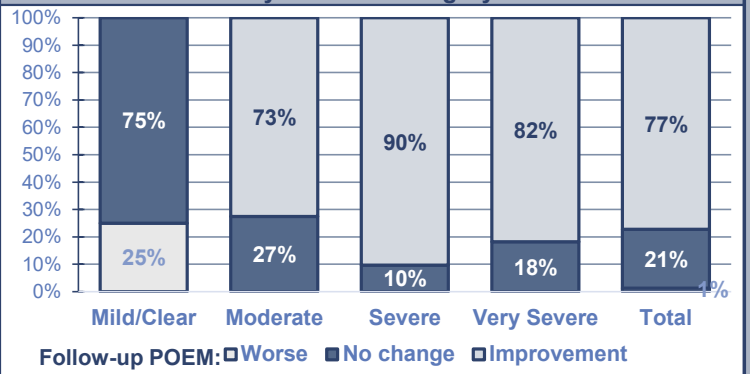
**OBJECTIVE:** To examine trends in AD severity, as measured by POEM scores, among patients with AD during their first 6-months of specialty pharmacy treatment within our health system-owned specialty pharmacy

## BACKGROUND:

- Severe Atopic Dermatitis (AD) is chronic or recurrent, widespread skin lesions with persistent itching; compromises a patient's quality of life; and often requires management with biologic medications available through specialty pharmacies
- Severity of AD can be evaluated using the 28-point Patient-Oriented Eczema Measure (POEM)
- Published findings are limited regarding the trajectory of POEM scores and their utility in patient care and clinical decision-making throughout the specialty pharmacy patient journey.

## IMPORTANT FINDINGS:

### Figure 1: Improvement in POEM Scores by Baseline Category




Baseline: **55%** patients Severe or Very Severe
Follow-up: **66%** of patients Mild or Clear within 6-months and **77%** indicated improvement at follow-up

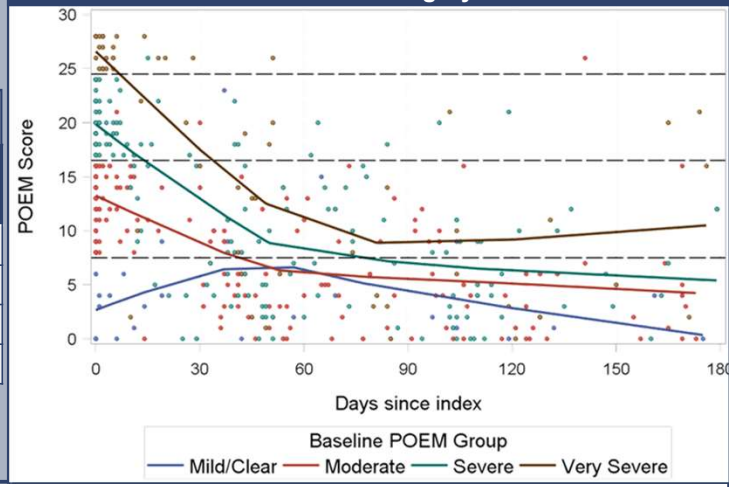
Patients **with higher severity baseline** disease activity **exhibited larger average POEM decreases** in follow-up from 1- to 6-months.

**Table : Average Decrease in POEM Score Over Time by Baseline POEM Category**

| | | POEM decrease by 6 months | p-value |
|---|---|---|---|
| Baseline POEM Category | Mild/Clear | 0.79 | 0.81 |
| | Moderate | 11.3 | **<.0001** |
| | Severe | 19.7 | **<.0001** |
| | Very Severe | 21.4 | **<.0001** |

Most dramatic decreases in POEM scores occurred within 45 days of starting biologic therapy

### Figure 2: Trajectory of POEM Scores over 6-months by Baseline Category




## CONCLUSIONS:

- Adult and pediatric patients generally had **high AD disease severity when starting** dupilumab with a health system-owned specialty pharmacy; but **rapidly moved to a lower disease activity**
- The literature reports ranges of 3-9 points as the minimally important difference, indicating that patients with baseline moderate to very severe scores, on average, met that threshold quickly.

**Department:** Specialty **Completed:** 2023 **Presented at:** National Association of Specialty Pharmacy Annual Conference

Simonson D; McNamara A; Harty A; Zagel A

# 2022
# Pharmacy Outcomes Projects

Fairview

**Department:** Specialty

**Completed:** 2022

# Productivity and Accuracy of Specialty Pharmacy Staff Working Remotely

Jennifer Bulin, PharmD; Mel Nelson, PharmD, CSP;
Tim Affeldt, PharmD; Alicia L. Zagel, PhD, MPH.

# Productivity and Accuracy of Specialty Pharmacy Staff Working Remotely

**OBJECTIVE:** To compare productivity and accuracy during remote and on-site work periods in 2021 within the health system-owned specialty pharmacy.

**BACKGROUND:**
- Many state boards of pharmacy temporarily granted remote work during the COVID-19 pandemic for certain tasks
- Concerns about worker productivity and patient privacy/safety remained.
- The health system specialty pharmacy is a unique venture to explore remote work due to the vast array of tasks performed regularly

**IMPORTANT FINDINGS:**

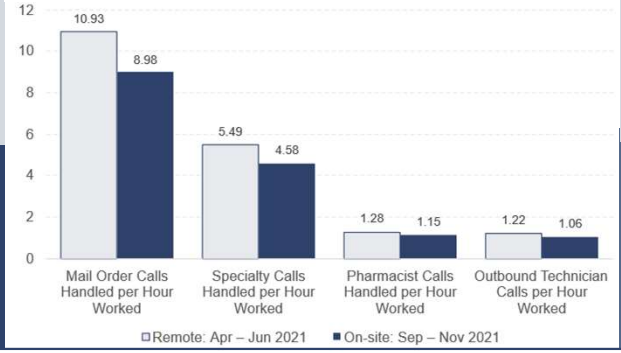
Productivity and accuracy rates **were largely similar across remote and on-site time periods.**

Specialty pharmacy staff *were able to maintain rigorous standards even when working remotely.*

More than **33,000**

Average number of prescriptions filled within the Specialty Pharmacy per Month

Average number of calls per hour were ***greater*** during the ***remote work*** time period than the on-site time period




Number of prescriptions pre-verified per hour was ***greater*** during the ***remote*** period

**18.39 vs. 17.44**

**3**

Number of seconds **FASTER** the **speed of answer** was for mail order and specialty calls during the **REMOTE** timeframe

Privacy and safety events were rare, occurring in

**1 per 10,000**

prescriptions during the remote period

The rate of prescriptions receiving feedback calls was the same across time periods:

**5 per 1,000**

Indicating **high levels of accuracy**

The most common feedback calls were due to *incorrect insurance being billed* or *incorrect address* on file.

**CONCLUSIONS:**
- Productivity and accuracy was largely similar between remote and on-site work periods in our HSSP, indicating that working remotely is as safe as working on-site.
- Recruiting and maintaining the health system specialty pharmacy workforce could potentially be improved by allowing for remote work on a permanent basis for certain job titles and tasks.
- Efficiencies may be bolstered with increases in remote technology access.

**Department:** Specialty **Completed:** 2022

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Fairview

**Department:** Specialty

**Completed:** 2022

# The experience of Trikafta (elexacaftor/tezacaftor/ivacaftor) among patients with Cystic Fibrosis in a health system-owned specialty pharmacy

Alicia Zagel PhD, MPH; Marjorie Wittenborg, BS Pharm

# The experience of Trikafta (elexacaftor/tezacaftor/ivacaftor) among patients with Cystic Fibrosis in a health system-owned specialty pharmacy

**OBJECTIVE:** To examine differences in patient-reported quality of life and medication adherence among patients with cystic fibrosis upon switching to Trikafta

## BACKGROUND:

- Cystic fibrosis (CF) is a chronic, multisystem disorder caused by mutations in the *CFTR* gene, leading to thick, sticky mucus that impairs respiratory and digestive function.
- Trikafta (elexacaftor/tezacaftor/ivacaftor) is a highly effective *CFTR* modulator first approved in 2019 to treat CF
- Clinical trials and real-world studies show that Trikafta produces dramatic improvements in lung function, symptoms marking a transformative shift in CF management and reducing disease burden for most eligible patients

## IMPORTANT FINDINGS:

Physical and Mental Health Scores improved among CF patients following the addition of Trikafta to their medication regimen

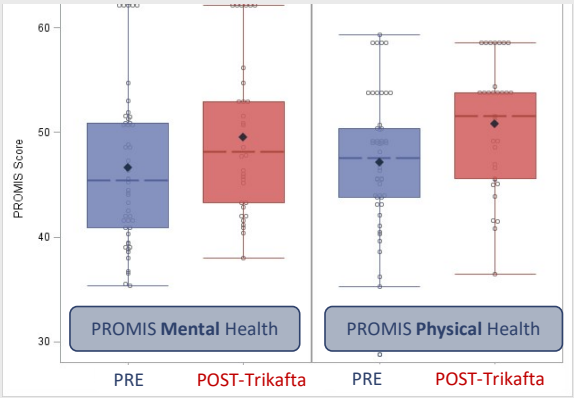


**Figure.** Adherence to Trikafta and Pulmozyme

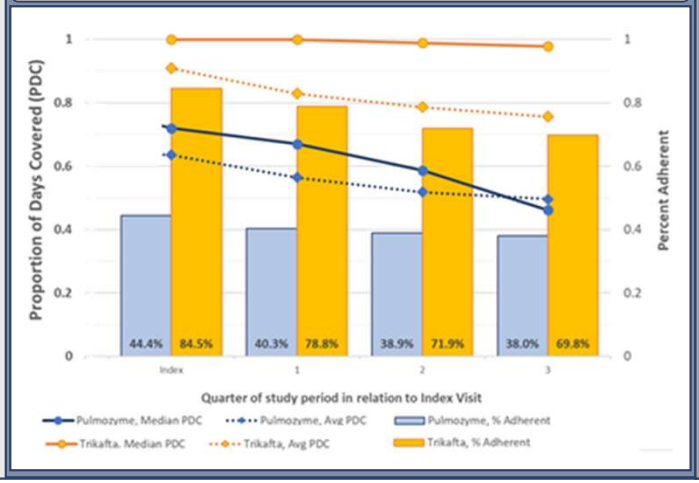


**Table.** Health metrics before and after starting Trikafta

| | | Pre-Trikafta | Post-Trikafta |
|---|---|---|---|
| BMI, kg/m²; median (IQR) | | 22.6 (20.6, 25.0) | 24.1 (22.4, 26.6) |
| ≥1 Infection(s) | | 20 (24.7) | 11 (13.6) |
| Hospitalization | | 55 (67.9) | 32 (39.5) |
| On Transplant List | | 5 (6.2) | 2 (2.5) |
| CF Exacerbation | | 45 (55.6) | 26 (32.1) |
| Lung function, FEV1; median (IQR) | | 71.5 (42, 89.5) | 83 (52.5, 99.5) |
| A1c | Normal | 41 (53.3) | 52 (65.8) |
| | Prediabetes | 15 (19.5) | 12 (15.2) |
| | Diabetes | 21 (27.3) | 15 (19.0) |

## CONCLUSIONS:

- Overall patient health improved after beginning Trikafta, with **increases in BMI**, **fewer hospitalizations and infections reported**, **fewer CF-related exacerbations, improved A1c scores**, and **fewer patients on the transplant list.**
- Patients also reported **greater mental and physical health** after starting Trikafta.
- Ambulatory pharmacists in the CF clinic and specialty pharmacists may enhance overall adherence to Trikafta, and help to educate and troubleshoot when side effects arise.

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