

Case Study: SIMPFillFY: Streamlining Medication Refills Through Digital Channels to Boost Adherence in Cystic Fibrosis

Background: The 2022 Cystic Fibrosis Foundation Patient Registry Report reveals that about 75% of adults with cystic fibrosis (CF) are involved in work or education,¹ emphasizing the importance of reducing treatment burdens for all ages, a key goal of the SIMPLIFY study.² Adherence to medication, often measured by the Proportion of Days Covered (PDC), is crucial for effective CF management, with a PDC of $\geq 80\%$ considered high adherence.³ Low adherence is linked to poor health outcomes in people with CF (PwCF), underscoring the need for focus on enhanced adherence strategies.

Foundation Care Specialty Pharmacy offers three primary refill channels — phone, online portal, and text messaging. While CF treatments are proven effective, the impact of these refill options on adherence remains underexplored. The purpose of this study is to investigate the impact of prescription refill channels on medication adherence among PwCF.

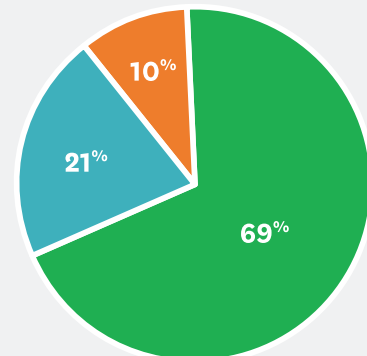
Methods: This is a retrospective review of adherence using the PDC formula across three refill channels for fills between 1/1/23 to 12/31/23. Patients were included if they received a CF exclusive medication from Foundation Care, or affiliated pharmacies, within this time period. Patients were categorized according to the refill method utilized as phone, portal, or text for each refill. PDC rates for phone compared to portal and text were analyzed for significant differences ($p < 0.05$) using two-sample t-tests.

Results: The analysis included 2,428 PwCF (mean age 22.6 + 16.6; 50.5% male) with 19,649, 5,913, and 2,773 refills among phone, portal, and text channels, respectively. Mean PDC adherence rate comparison findings between telephonic and digital (portal and text) refill channels were 89.1% phone, 94.0% portal ($p=0.01$), and 93.8% text ($p=0.04$).

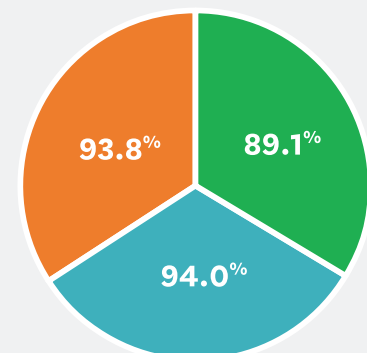


Image is for illustrative purposes and does not represent an actual patient.

**Refill Count
by Refill Method**



**Mean PDC Adherence Rate
by Refill Method**



■ Phone ■ Portal ■ Text

VISIT US ONLINE

FoundCare.com  @AcariaHealth

©2024 AcariaHealth. All rights reserved. 5_2409

Foundation Care
An AcariaHealth Solution

Patient Demographics by Refill Method

| | Refill via Phone | Refill via Portal | Refill via Text |
|--|------------------|-------------------|-----------------|
| Gender | | | |
| Male | 890 | 210 | 127 |
| Female | 860 | 211 | 130 |
| Age^a | | | |
| 0 to 12 | 507 (70%) | 124 (17%) | 89 (12%) |
| 13 to 26 | 614 (70%) | 155 (18%) | 103 (12%) |
| 27 to 46 | 433 (73%) | 106 (18%) | 53 (9%) |
| 47 and older | 196 (80%) | 36 (15%) | 12 (5%) |
| Average Number of Dispenses | | | |
| 2 to 7 | 611 (77%) | 81 (10%) | 97 (12%) |
| 8 to 13 | 637 (73%) | 155 (18%) | 81 (9%) |
| 14 and up | 502 (66%) | 185 (24%) | 79 (10%) |
| Refill Volume by CF Medication Type | | | |
| CFTR Modulators ^b | 11,311 (67%) | 3,854 (23%) | 1,680 (10%) |
| Pancreatic Enzyme Replacement Therapy | 1,917 (70%) | 589 (21%) | 247 (9%) |
| Dornase alfa | 4,000 (70%) | 1,127 (20%) | 602 (11%) |
| Inhaled Antibiotics | 2,421 (81%) | 343 (11%) | 244 (8%) |
| Refill Volume by Plan Type | | | |
| Medicaid | 11,119 (71%) | 2,769 (18%) | 1,704 (11%) |
| Medicare | 3255 (80%) | 625 (15%) | 206 (5%) |
| Commercial | 5275 (61%) | 2,519 (29%) | 863 (10%) |
| Average Number of Therapies | 1.6 | 1.37 | 1.57 |

^a Age determined as of the latest measurement date (e.g., 12/31/23)

^b CFTR modulators: elexacaftor/tezacaftor/ivacaftor, tezacaftor/ivacaftor, lumacaftor/ivacaftor, and ivacaftor

Outcomes:

Using the standard benchmark PDC \geq 80%, our findings show high adherence rates for all refill channels, with digital showing a statistically significant increase compared to phone that could contribute to better clinical outcomes. This underlines the importance of providing varied refill options to ease therapy management for patients and caregivers. The study highlights technology's role in crafting strategies to improve medication adherence, aiming to enhance health outcomes for PwCF. Further research is needed to examine PDC comparisons across refill methods, with a particular focus on promoting initial patient enrollment in digital methods. This will allow for more comprehensive comparisons among groups of comparable sizes.



References:

¹ Cystic Fibrosis Foundation Patient Registry. 2022 Annual Data Report. Bethesda, Maryland. ©2023 Cystic Fibrosis Foundation.

² Mayer-Hamblett N, Ratjen F, Russell R, et al. SIMPLIFY Study Group. Discontinuation versus continuation of hypertonic saline or dornase alfa in modulator treated people with cystic fibrosis (SIMPLIFY): results from two parallel, multicenter, open-label, randomized, controlled, non-inferiority trials. *Lancet Respir Med.* 2023;11(4):329-340. [https://doi.org/10.1016/S2213-2600\(22\)00434-9](https://doi.org/10.1016/S2213-2600(22)00434-9).

³ Zumi Mehta, Khalid M. Kamal, Richard Miller, Jordan R. Covvey & Vincent Giannetti (2021) Adherence to cystic fibrosis transmembrane conductance regulator (CFTR) modulators: analysis of a national specialty pharmacy database, *Journal of Drug Assessment*, 10:1, 62-67, DOI: 10.1080/21556660.2021.19123524.

Transforming Lives With Compassionate Care

Contact us to learn more at 877.291.1122 | Fax: 877.291.1155

VISIT US ONLINE

FoundCare.com  @AcariaHealth

©2024 AcariaHealth. All rights reserved. 5_2409

Foundation Care 
An AcariaHealth Solution