

# Grane Rx and Innovative Integrated Health (IIH) Pharmacy Case Study



How PACE organizations reduce pharmacy costs and improve operational performance by shifting from a Center-Based to a Pharmacy-Based Model

July 2021

## INTRODUCTION

This case study provides an in-depth look at the two primary PACE pharmacy models: Grane Rx's Pharmacy-Based model versus a Center-Based model. Grane Rx commissioned Cardinal Health Operational Excellence consultants to complete an independent research study to evaluate the effectiveness of each model and identify how PACE organizations can achieve meaningful gains by moving from the Center-Based to the Pharmacy-Based model.

### Center-Based Pharmacy model

In the Center-Based model, many of the pharmacy responsibilities reside within the PACE organization (PO), while the pharmacy focuses only on prescription fulfillment. PACE staff are responsible for most medication related activities, including medication management, medication reconciliation, in-center medication administration, and medication delivery coordination to participant homes.

### Pharmacy-Based model

In the Grane Rx Pharmacy-Based model, the medication management work that was previously completed within the PACE center is transferred to Grane Rx's dedicated offsite facility specializing in PACE pharmacy services. Once Grane Rx receives a medication order, all processing and delivery activity is transitioned from the PO to the Grane Rx pharmacy for fulfillment, delivery, and other pharmacy responsibilities. The Grane Rx pharmacy coordinates direct medication delivery to participant homes via its White-Glove Delivery Service.

The following case study details the transition of a growing PACE organization in Fresno, CA — Innovative Integrated Health (IIH) — from a PACE Center-Based Pharmacy model to a Pharmacy-Based model utilizing Grane Rx. Cardinal Health monitored and tracked IIH's progress throughout the 60-day transition period. The areas of evaluation included:

- Operational cost avoidance
- Pharmacy service enhancements
- Expedited process cycle times
- Improved quality of service
- Process standardization and consistency

## RESULTS

The results of this study validate significant operational and financial performance improvements for IIH in shifting from the Center-Based to the Grane Rx Pharmacy-Based model. IIH is projected to save over \$1.1 million annually from efficiency gains and cost reductions. As IIH continues to grow and add more centers, the organization and its participants will benefit from optimized operations.

## THE CHALLENGE

Innovative Integrated Health (IIH) faced operational and clinical inefficiencies costing the organization time, money, resources, staff, and participant satisfaction. It was suspected that these inefficiencies were attributable to IIH's Center-Based Pharmacy model utilizing a contracted local retail pharmacy. These challenges included:

- **Delivery Management:** Need to coordinate delivery for cycle medications
- **Delivery Success Rate & Tracking:** Excess failed delivery attempts and an inability to track deliveries
- **Operational Inefficiencies:** Ongoing need to add staff to manage medications as census continued to grow
- **Adverse Drug Events:** Inconsistent medication cycle periods resulting in medication errors
- **Medication Reconciliation:** Manual medication reconciliation for center staff
- **COVID & Other Disease Transmission Concerns:** High-touch blister card medication packaging
- **Software Integration:** EHR integration failures resulting in errors and added costs
- **Literacy:** Communication barriers as a result of English as a Second Language (ESL) and multiple languages spoken
- **Untimely STATs:** Unacceptable turn-around times on STAT medication deliveries

## BACKGROUND

IIH provides elderly individuals with health care services through PACE (Program of All-Inclusive Care for the Elderly), a comprehensive, care management-based healthcare program. Seniors with chronic illness or disabilities participating in the PACE program receive medical care and social services while still being able to reside in their home. IIH serves approximately 1,120 PACE participants in Fresno and Bakersfield, California, and employs 320 staff members.

Up until October of 2020, IIH was contracted with a local pharmacy to provide its PACE pharmacy services utilizing the Center-Based model. This model required substantial resources to manage transportation and logistics for the medication management process.

IIH's operational challenges combined with its anticipated growth prompted the organization to seek an alternate PACE Pharmacy solution. IIH partnered with Grane Rx to transition to a Pharmacy-Based model to address its evolving needs. This transition took place over the course of 60 days beginning August 1, 2020 and ending on October 1, 2020. As of December 2020, IIH had fully adopted and integrated the Pharmacy-Based model in partnership with Grane Rx.

## ANALYSIS

Assessment of pre & post transition conditions provide the basis for this case study and analysis.

### Assessment Focus Areas

1. PHARMACY-BASED VS. CENTER-BASED MODEL
2. MEDICATION TRANSPORTATION
  - A. DELIVERY VOLUME
  - B. DELIVERY LABOR COSTS
  - C. DELIVERY MILES
  - D. DELIVERY SUCCESS RATES
    - I. CYCLE DELIVERIES
    - II. STAT DELIVERIES
3. MEDICATION MANAGEMENT
4. MEDICATION PACKAGING

# 1. PHARMACY-BASED VS. CENTER-BASED MODEL

## PRE-TRANSITION CONDITIONS Center-Based Pharmacy Model

Cardinal Health analyzed IIH's pharmacy processes before the COVID pandemic as well as during to understand both typical and atypical situations associated with the Center-Based model for PACE.

In the Center-Based model, PACE center staff carry the primary responsibility for most medication-related activities by managing the services provided by the local pharmacy and requiring additional staff to do so.

## POST-TRANSITION CONDITIONS Pharmacy-Based Model

On October 1, 2020, IIH completed the transition to Grane Rx and a Pharmacy-Based model. IIH medication management duties were moved out of the center and into Grane Rx's dedicated PACE pharmacy facilities. Responsibilities for delivering participant medications were shifted from the PACE center to Grane Rx and executed via its Meds2Home program.

*"In choosing a new pharmacy provider, we were looking for a partner that could meet our growth and handle the volume. Our plan is to grow to 3,000 participants by the end of 2022. We also wanted a partner with PACE expertise—a pharmacy who had operated in the PACE program before."*

Sharon Melancon  
PACE VP of operations for IIH



## 2. MEDICATION TRANSPORTATION IMPROVEMENTS

### 2A. MEDICATION DELIVERY VOLUME

#### PRE-TRANSITION CONDITIONS PACE Center Responsible for Medication Delivery Burden

The Center-Based model required IIH centers to manage all medication deliveries. After being packaged by the local contracted pharmacy, participant medications were first shipped to the PACE center to be handled by the nursing staff, and then ultimately distributed to individual participant homes by IIH transport and labor.

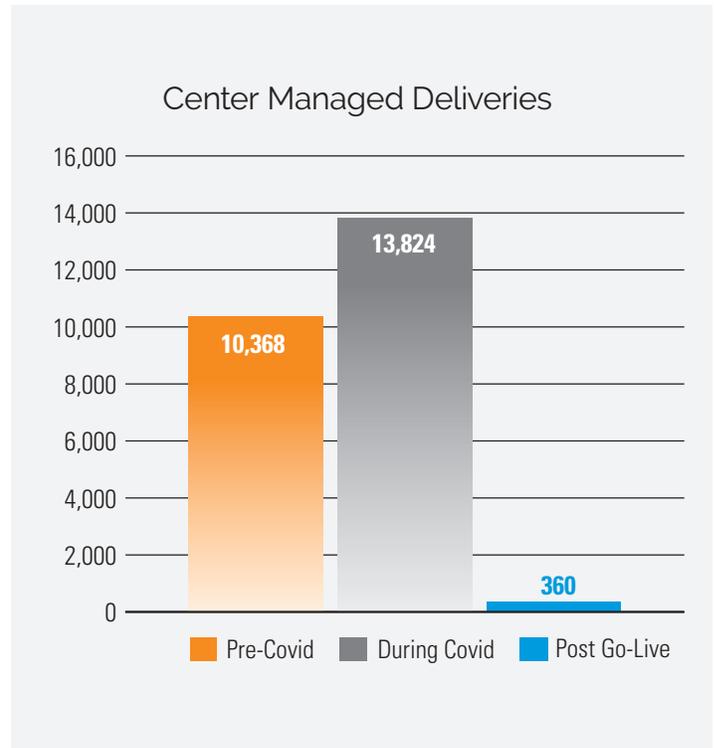
Pre-COVID, approximately 600 participants had cycle medications delivered to their homes each month and over 10,368 deliveries were made annually. These deliveries were typically completed over the weekends by designated drivers and pharmacy technicians.

During COVID, participants were no longer coming into the center increasing the number of home deliveries to 13,824 per year.

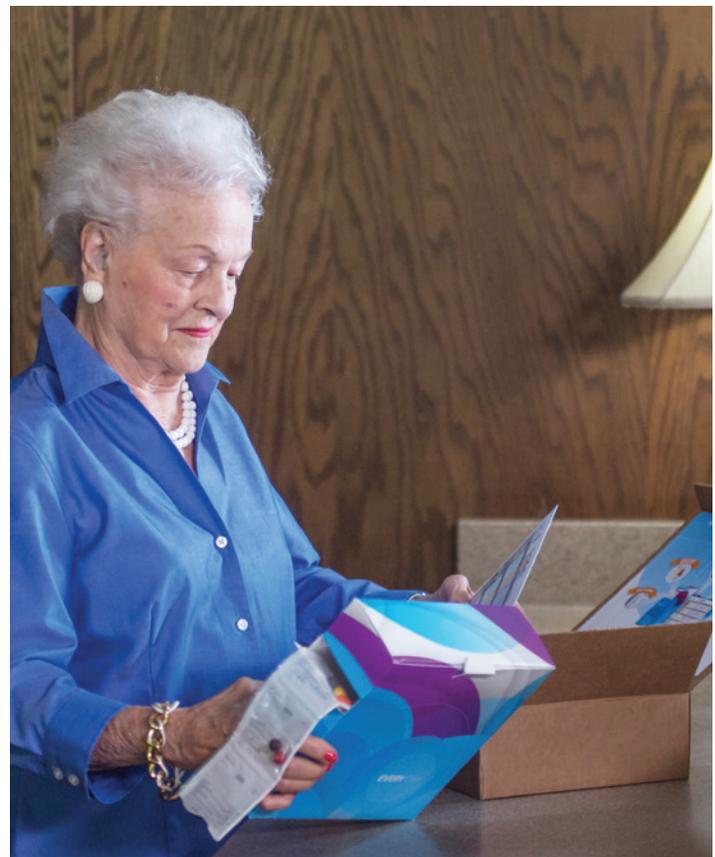
#### POST-TRANSITION CONDITIONS Need for Deliveries is Significantly Reduced

In the Pharmacy-Based model medications are shipped directly from Grane Rx's pharmacy to participant homes. The use of private couriers bypasses the need for medications to be delivered to the PACE center and distributed by center staff.

By implementing the Pharmacy-Based model, Grane Rx reduced the number of cycle medication deliveries that needed to be handled by IIH from 13,824 to 360 deliveries annually during COVID and from 10,008 to 360 annually in non-COVID conditions. The significant reduction in number of cycle deliveries effectively reduced the need for STAT medications as well.



#### Cycle Medication Deliveries Annual Reduction: 13,464 fewer deliveries



## 2B. MEDICATION DELIVERY LABOR COST REDUCTIONS

### PRE-TRANSITION CONDITIONS

**Inconsistent Cycles = Higher Labor Costs**

IIH participant cycle medications were traditionally delivered throughout the month requiring IIH to need a dedicated logistics team to manage the cycles. Pre-COVID, IIH employed one full-time and two part-time drivers who delivered medications between Thursday and Sunday. During COVID, weekly deliveries increased by 60 requiring IIH to hire more delivery drivers. The number of drivers was increased to six on a part-time basis. In both conditions, IIH estimates that it was incurring 1,116 overtime delivery hours annually.

#### Delivery Drivers

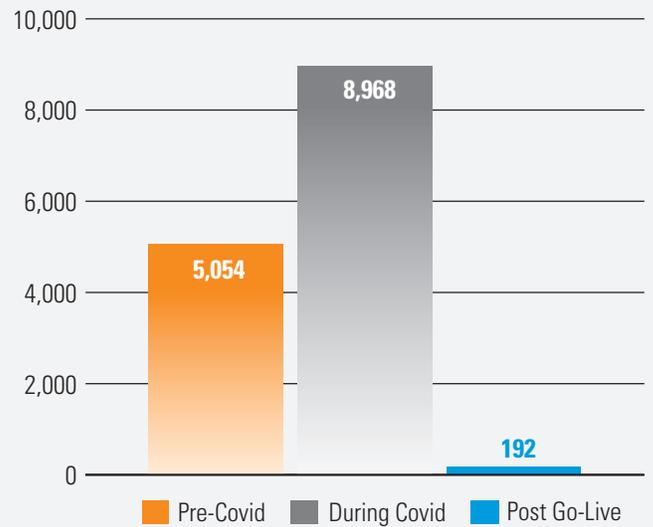


### POST-TRANSITION CONDITIONS

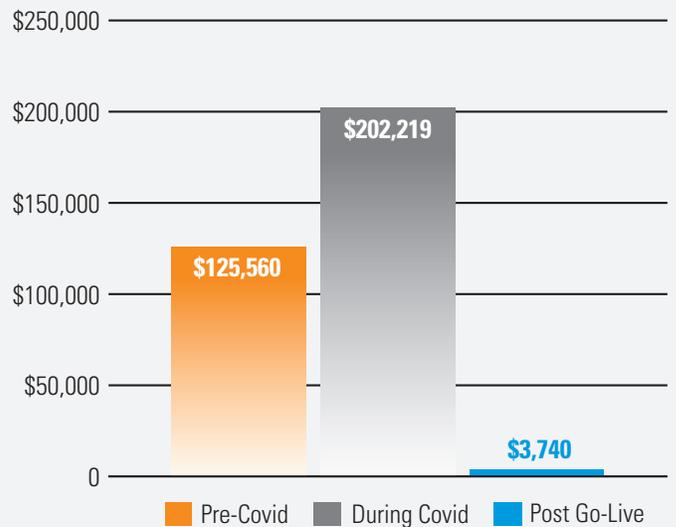
**Reduced Labor Needs Save IIH Time & Money**

The need for labor delivery has been greatly minimized by IIH's adoption of the Pharmacy-Based model saving the center significant time and money on delivery labor.

Hours Delivering Medications by PACE Staff



PACE Center Delivery Labor Costs



**Delivery Labor Costs**  
Annual Savings: \$198,479

## 2C. MEDICATION DELIVERY MILES DRIVEN



### PRE-TRANSITION CONDITIONS

#### Labor Intensive Delivery System

Prior to transitioning models, IIH needed a dedicated delivery team to make weekly medication deliveries to participant homes. During COVID, mileage was estimated at more than 299,208 miles annually causing wear and tear on IIH’s vehicles and added costs for insurance and gas.

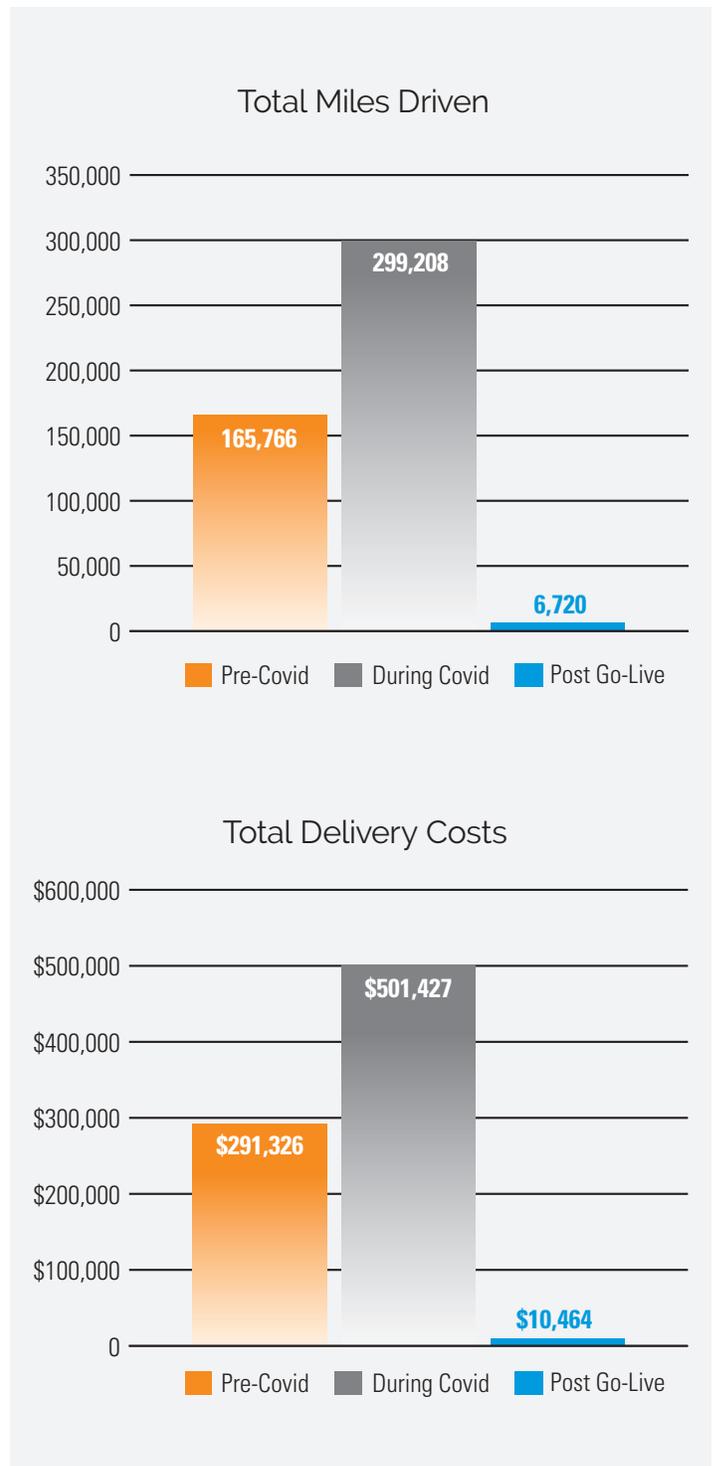


### POST-TRANSITION CONDITIONS

#### 98% Mileage Reduction

After the transition, IIH reduced its annual mileage and associated costs by almost 98%. In addition to the direct savings on gas, labor costs and vehicle maintenance, less miles on the road translate to reduced liabilities for drug diversion, car accidents, medication mismanagement and insurance, not to mention less impact on IIH’s transport fleet.

IIH eliminated nearly all of its medication delivery costs by adopting the Pharmacy-Based model. As a result, the organization can expect annual savings of \$490,963.



**Total Mileage and Vehicle Maintenance\***  
Annual Savings: \$292,488

**Total Delivery Costs**  
Annual Savings: \$490,963

\*Calculated at \$1/mile

## 2D. MEDICATION DELIVERY SUCCESS RATE



### PRE-TRANSITION CONDITIONS

#### Rolling Cycle Medication Schedules Pose Challenges

Under the Center-Based model, IIH was responsible for managing all delivery logistics for participant cycle medications each week. This was an ongoing process requiring significant planning and resources to successfully deliver medications to participant homes on-time.



### POST-TRANSITION CONDITIONS

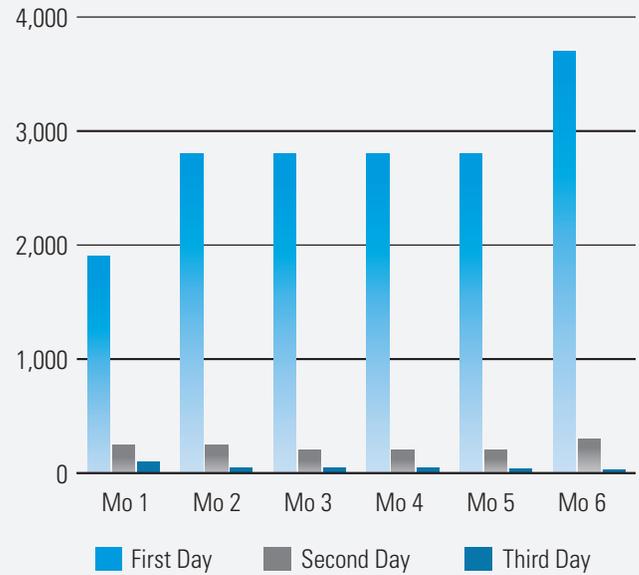
#### Streamlined Cycle Medication Deliveries

Grane Rx carefully tracks its White-Glove Delivery Service's delivery success rates and attempts on behalf of IIH to ensure participant satisfaction. Since transitioning to the Grane Rx Pharmacy-Based model, 88% of IIH participant deliveries were successfully delivered on the 1st attempt, and over 99% of those deliveries occurred between the hours of 8:00 AM - 8:00 PM.

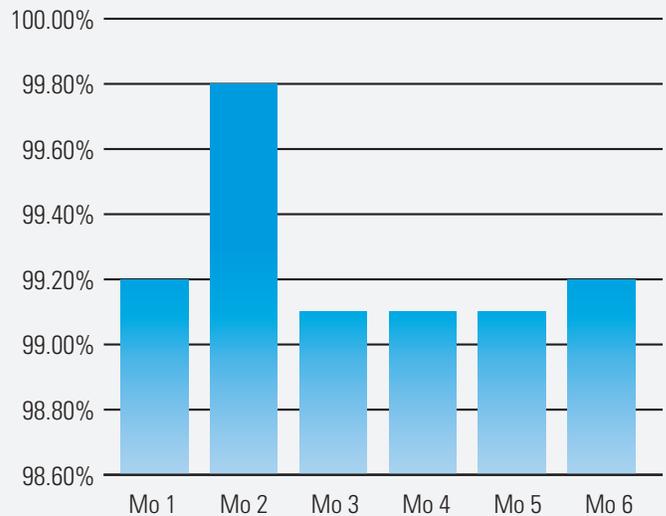
*“Not having to deliver medications is huge for us. It’s a game-changer because it frees up our transportation so we can better serve our participants.”*

Steve Seita  
IIH Director of Business Development for PACE

Post Go-Live Successful Delivery Attempts



Deliveries between 8am-8pm



### Cycle Medications Delivery Success

Successful 1st Attempt: 88%

Between 8am-8pm: 99%

## 2D. MEDICATION DELIVERY SUCCESS RATE (cont.)



### PRE-TRANSITION CONDITIONS Delivery Delays Increase Risks

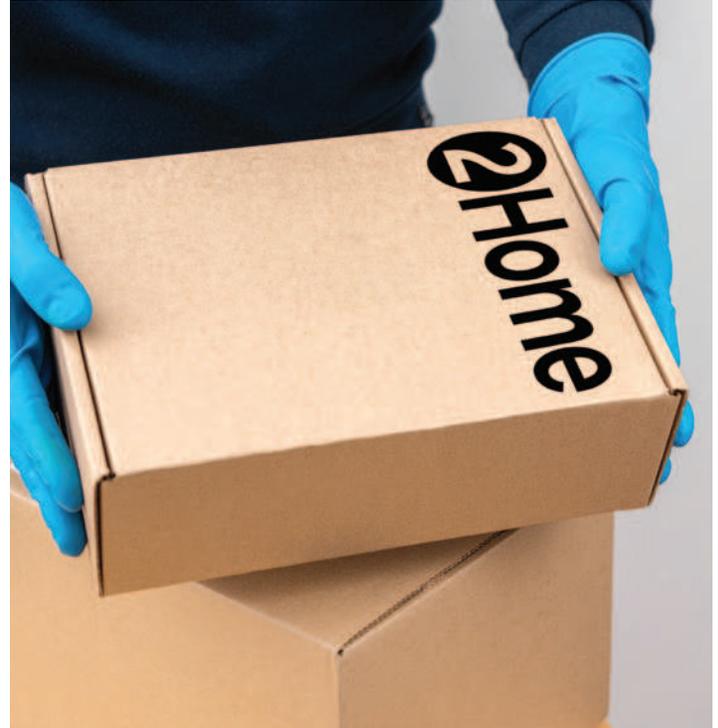
IIH was averaging 5-8 STAT orders a day and most of these orders weren't being delivered until the following day. These treatment delays increased the risk for participant hospitalizations and ER visits.



### POST-TRANSITION CONDITIONS STAT Orders Delivered Within 4 Hours

Included in Grane Rx's pharmacy services is a backup network of over 60,000 pharmacies nationwide that can fill STAT prescriptions on-demand. Grane Rx manages all logistics and coordination to ensure timely delivery of STAT medications to participant homes.

IIH STAT medications were delivered within 4 hours 97% of the time utilizing the Pharmacy-Based model. In addition, IIH has seen months where 100% of STAT orders were delivered within 4-hours.



#### STAT Medication Deliveries

STAT medications are high-priority prescription orders that need to be dealt with immediately or within a limited time frame.

#### STAT Medications Delivery Success

Successful delivery within 4-Hours:  
97% (average)



### 3. MEDICATION MANAGEMENT



#### PRE-TRANSITION CONDITIONS

##### Variable Cycles Necessitate Month-long Management

Historically, IIH managed weekly medication cycles for its participants in 28-day supplies. The cut-off time for medication changes being 16-18 days prior to a participant's cycle start date. Any changes to a participant's medication regimen after the cut-off time period would necessitate additional labor by the center's pharmacy technicians as well as its homecare nurses to correct medication cycles before home delivery.

##### Labor Intensive Medication Management Needs

Two employed IIH pharmacy technicians were needed to manage the weekly medication cycle process. These technicians were responsible for checking and reconciling all cycle medication packs, planning all delivery routes, administering medications to participants at the center, and delivering medications to participant homes.

The pharmacy technicians were also responsible for managing emergent medication changes. The average number of medication changes required to regular cycle medications was estimated to be 5-6 changes per week.

Home nurses were visiting participant homes multiple times per month to make medication changes.



##### Pharmacy Technician Annual Labor Costs

Cycle Medication Management: \$97,344  
Medication Changes (additional cost): \$3,042

##### Nurses Annual Labor Cost

Home Visits: \$3,240\*

##### Annual Medication Management

Total Labor Cost: \$103,626

Includes medication management, medication changes, and home nurse time.

\*Note: Limited data was available for this piece of the study. It's suspected that the cost savings are significantly higher than reported. This is an area with additional cost saving potential.

### 3. MEDICATION MANAGEMENT (cont.)

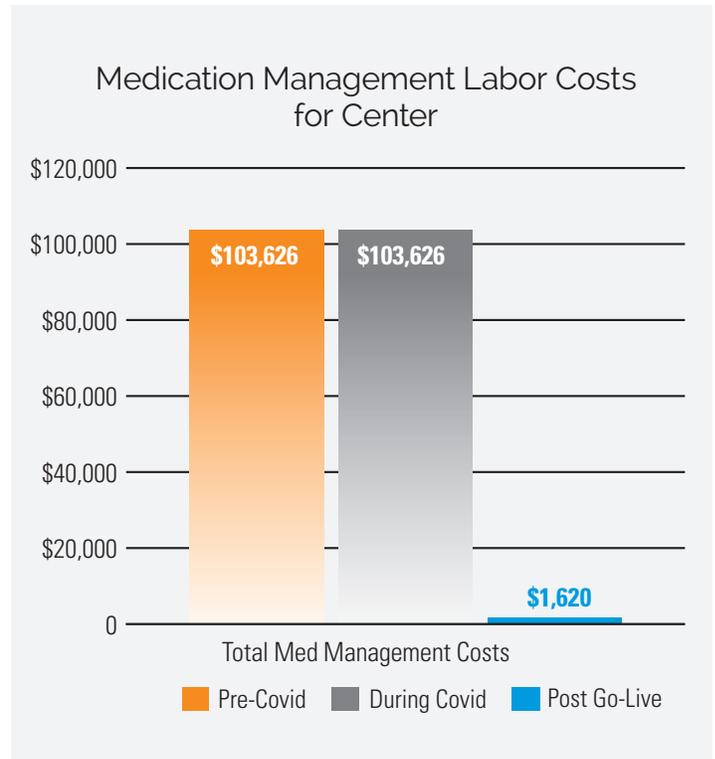
#### POST-TRANSITION CONDITIONS

##### Consistent Cycle Times Reduce Management Needs

IIH adopted a single 28-day cycle start date for all of its participants per Grane Rx protocol. By synchronizing its medication cycles, the medication distribution process for physicians and participants has been substantially simplified. Further, medication cycle order cut-off times have been reduced from 16-18 days to 8 days prior to a cycle start. This shorter window allows physicians to make more necessary medication changes to a participant's regular cycle. The transition to Grane Rx's Pharmacy-Based model has reduced IIH's labor costs for medication changes after the cut-off time.

#### Labor Costs Eliminated for Pharmacy Technician Cycle Management & Home Nurse Visits

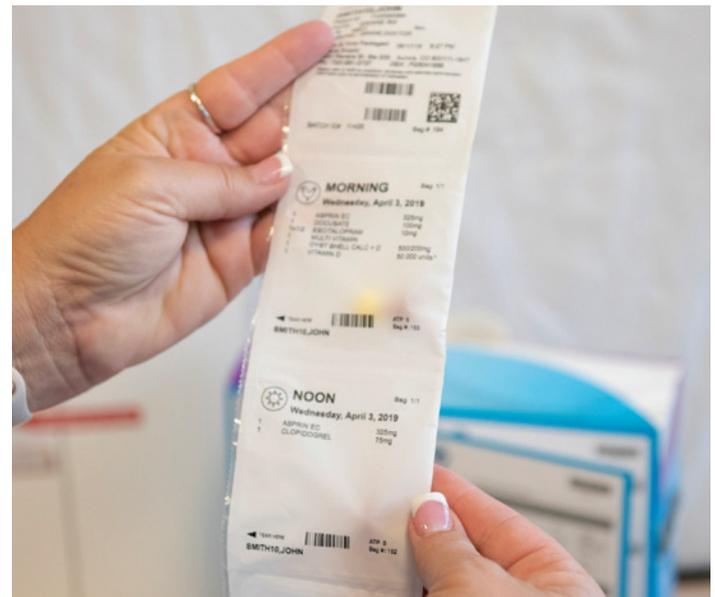
With medications being shipped directly from the Grane Rx pharmacy to participant homes, the need for Center-Based Pharmacy technicians and the associated labor costs to manage the medication cycles process has been eliminated.



**Pharmacy Technician**  
Annual Labor Savings: \$100,386

**Nurses (Home Visits)**  
Annual Labor Savings: \$1,620

**Medication Management**  
Total Annual Savings: \$102,006



## 4. MEDICATION PACKAGING



### PRE-TRANSITION CONDITIONS

#### High-touch, Inefficient Packaging

IIH used various medication packaging types prior to the transition, including multi-medication bubble packs, vials, and blister cards. All PRN and medications to be taken with food came in vials, and manufacturers' bottles were available upon request. CII medications were sent separately in blister cards, and 3-5's were available in blister cards or vials.

#### English as a Second Language (ESL) Poses Health Literacy Barriers

IIH's PACE participants are incredibly diverse, speaking five different primary languages. Prior to the transition, all medications and prescription instructions were offered exclusively in English posing health literacy challenges for IIH participants and a greater potential for adverse drug events (ADEs).



### POST-TRANSITION CONDITIONS

#### Low-Touch, Smart Medication Packaging

The Grane Rx Meds2Home program provides IIH participants with their medications in color-coded, smart-labeled boxes that are personalized for each participant. All medications come in presorted pouches with simple instructions and easy-to-read educational materials that reinforce health literacy to improve medication adherence.

Deliveries are made by certified, private couriers from Grane Rx's White Glove Delivery Service. Grane Rx provides secure delivery assurance on all prescription deliveries. Manufacturers' bottles are available upon request, and all routine controlled medications are included in cycled medpacks.

## 4. MEDICATION PACKAGING (cont.)

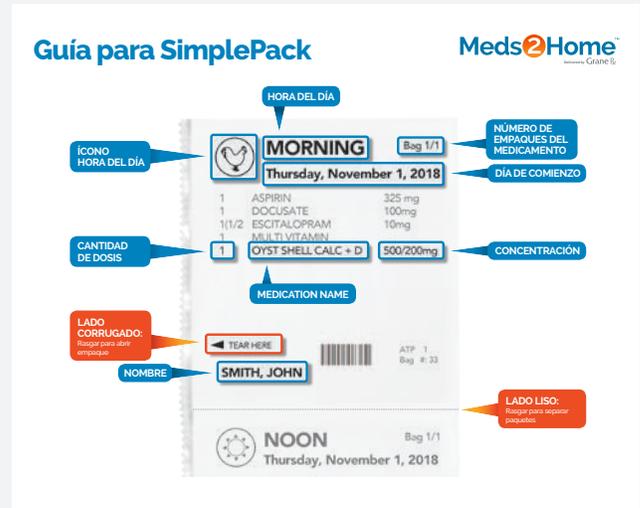
### Language Customization Improves Health Literacy

IIH is now able to offer language customization and a robust visual communication system via the Grane Rx Meds2Home program to aid ESL participants. All packaging content is written at a 5th-grade reading level and is accompanied by pictures, symbols, and colors to reinforce comprehension and literacy. Customized physical medication packaging and calendars are available for English, Spanish, French, and culturally sensitive health resources are translated for participants in 22 different languages.

	English		Karen
	Spanish		Khmer
	Arabic		Korean
	Bengali		Laotian
	Burmese		Mandarin – Simplified
	Cantonese		Mandarin – Traditional
	Farsi		Polish
	French		Portuguese (Brazilian)
	Haitian Creole		Russian
	Hmong		Somali
	Italian		Swahili

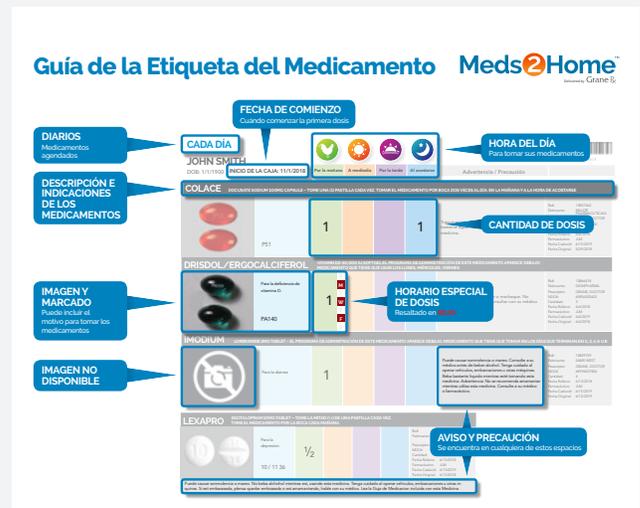
**“What really stood out to us in vetting a pharmacy partner was Grane Rx’s reporting and data analytics. We were impressed with their medication adherence-focused packaging and literacy for participants. The overall pharmacy solution from Grane Rx made Grane Rx an easy choice for us.”**

Sharon Melancon  
PACE VP of operations for IIH



**Guía para SimplePack** Meds2Home

Labels include: HORA DEL DÍA (MORNING), NÚMERO DE EMPAQUES DEL MEDICAMENTO (Bag 1/1), DÍA DE COMIENZO (Thursday, November 1, 2018), CANTIDAD DE DOSIS (1), CONCENTRACIÓN (500/200mg), LADO CORRUGADO (Ridge for opening), NOMBRE (SMITH, JOHN), LADO LISO (Ridge for separating packets), and HORA DEL DÍA (NOON).



**Guía de la Etiqueta del Medicamento** Meds2Home

Labels include: FECHA DE COMIENZO (Cuando comenzar la primera dosis), DIARIOS (Medicamentos agendados), HORA DEL DÍA (Para tomar sus medicamentos), DESCRIPCIÓN E INDICACIONES DE LOS MEDICAMENTOS (COLACE, DRISDOL/ERGOCALCIFEROL, IMODIUM, LEXAPRO), IMAGEN Y MARCADO (Puede incluir el código para tomar los medicamentos), IMAGEN NO DISPONIBLE, and AVISO Y PRECAUCIÓN (Es importante cumplir con estos requisitos).

CADA DÍA	JOHN SMITH	DOB: 1/1/1990	INICIO DE LA CAJA: 11/1/2018	Por la mañana	A mediodía	Por la tarde	Al acostarse
LEXAPRO		Para la depresión.	1/2				
OS-CAL 500MG + D		Suplemento nutricional.	1				
DRISDOL/ERGOCALCIFEROL		Para la deficiencia de vitamina D.	1				
ASPIRIN EC 325 MG TABLET		Para el dolor por artritis.	1	1	1	1	
COLACE			1				1
PLAVIX		Para prevenir ataques cardíacos.		1			
MULTIPLE VITAMIN TABLET						1	
PRIOLOSEC		Para el reflujo estomacal.					1
IMODIUM		Para la diarrea.	1				

# RESULTS

Based on the detailed findings from Cardinal Health's independent study, it is clear that IHH is benefitting from the adoption of Grane Rx's Pharmacy-Based model. Compared with the Center-Based model, IHH is realizing substantial cost savings and operational efficiencies. The gains achieved include the following:



## CONCLUSION

IIH has experienced significant gains across the organization since implementing the Pharmacy-Based model for PACE. Both quantitative and qualitative research show that shifting from a Center-Based to a Pharmacy-Based model is conducive for scaling the organization and replicating its success across IIH's centers. In addition, these changes will lead to substantial cost savings as IIH continues to expand.

## SYNOPSIS

In the Fall of 2020, Innovative Integrated Health (IIH) transitioned from a Center-Based model to a Pharmacy-Based one in partnership with Grane Rx. IIH made this strategic shift to ensure its ability to scale with the organization's projected growth.

Grane Rx engaged a 3rd party, independent research firm to track the effects of IIH's transition on operations, staffing, cost-savings, participant satisfaction, adherence and more. The positive impacts of adopting the Pharmacy-Based model were almost immediate and witnessed across the organization. The following is a summation of the primary findings.

## OPERATIONAL EFFICIENCIES

### Key Takeaways:

- **98% reduction in need for medication deliveries by IIH**
- **99.96% accuracy rate on dispensed medications**
- **Medication cycle order cut-off times cut in half**

IIH gained many operational efficiencies by adopting the Pharmacy-Based model. In leveraging Grane Rx's proprietary Meds2Home program, state-of-the-art pharmacy automation and by synchronizing its participant medication cycles per Grane Rx protocol, IIH's medication management processes have been streamlined and simplified.

Pharmacy dispensing accuracy has also improved in keeping with Grane Rx's 99.96% accuracy rate. AI technologies were/are the drivers behind this accuracy. Grane Rx's tech solutions include infrared scanning and imaging on every package, a rigorous 12-point safety check before meds ship, and 100% automated packaging.

Based on the current trajectory, IIH is set to reduce its medication deliveries by 98% annually and its labor delivery needs as a result. Instead of two FTEs, IIH currently needs a single part-time equivalent. And the need for pharmacy technicians to manage medication cycles and nurses to make home visits have been all but eliminated. Further, IIH's medication cycle order cut-off times have been reduced from 16-18 days to 8 days prior to a cycle start.

## COST SAVINGS

### Key Takeaways:

- **As an organization, IIH is projected to save over \$1.1 million annually in operational efficiencies**

IIH's operational gains have translated into significant cost savings for the organization. On an annualized basis, IIH is saving \$490,963 on medication delivery & labor costs and \$102,006 on pharmacy technicians and home nurse visits. The total annual savings for IIH in switching from a Center-Based model to a Pharmacy-Based one is \$592,969 per PACE center. Between its two PACE centers, IIH can expect to save \$1.1 million annually.

## SERVICE ENHANCEMENTS

### Key Takeaways:

- **Speedy, on-time, and verifiable accuracy on medication deliveries are driving participant satisfaction.**

IIH's transition to Grane Rx's Pharmacy-Based model has brought service enhancements for its participants. Medication delivery success rates have skyrocketed. STAT medications are being delivered within 4 hours 97% of the time instead of 6, 12, or even 24 hours later, as experienced with the Center-Based model. Cycle medications are successfully being delivered 88% of the time on the first delivery attempt and 99% of those deliveries are occurring between the hours of 8 AM and 8 PM. IIH has reported an increase in participant satisfaction as a result of these service and delivery enhancements.

## HEALTH LITERACY AND ADHERENCE TO ADVANCE DIVERSE PARTICIPANTS

### Key Takeaways:

- **Grane Rx Medication materials are available in 22 languages.**

IIH sees anecdotal evidence of increased medication adherence in response to Grane Rx's Meds2Home packaging. The Meds2Home program delivers all participant medications in personalized, smart labeled boxes designed to enhance health literacy.

Language barriers are being broken down through Grane Rx's medication materials translated into 22 different languages. The result is safer, easier, and more precise medication management programs for IIH participants and staff.

**The benefits of transitioning from a Center-Based Pharmacy model to a Pharmacy-Based one have proven fruitful for IIH and its participants. From cost savings and operational efficiency gains to enhanced client service capabilities and dedicated pharmacy care, IIH has captured sustainable processes and savings by adopting Grane Rx's Pharmacy-Based model.**

### Contributors

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[GraneRx.com](http://GraneRx.com)