

2022



STRONGER

vizient. CONNECTIONS SUMMIT

Sept. 19–21, 2022

#vizientsummit



**Texas Children's
Hospital®**

Quantifying and Reducing Medication Waste in Health Care

Erin St. Angelo, PharmD, Procurement and Contracting Director
Kelsey Waier, PharmD, System Wide Pharmacy Operations Director

UCSF



Adam Witas, CPhT, Application Architect
Gee Mathen, BS, Director of Pharmacy Clinical Applications & Technical Services

Texas Children's Hospital

Disclosure of Financial Relationships

Vizient, Inc., Jointly Accredited for Interprofessional Continuing Education, defines companies to be ineligible as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

An individual is considered to have a relevant financial relationship if the educational content an individual can control is related to the business lines or products of the ineligible company.

No one in a position to control the content of this educational activity have relevant financial relationships with ineligible companies.

Learning Objectives

- Apply the medication waste/inventory management equation created at UCSF to your own inpatient pharmacy business model to demonstrate potential cost avoidance and/or dollars saved per average patient day.
- Explain what a product information management system can do and how it can benefit your organization.
- Explain how multiple data sources can be integrated together to identify and predict usage to help in daily ordering.



**Texas Children's
Hospital®**

Quantifying and Reducing Medication Waste in Health Care

Erin St. Angelo, PharmD, Procurement and Contracting Director
Kelsey Waier, PharmD, System Wide Pharmacy Operations Director

UCSF



Adam Witas, CPhT, Application Architect
Gee Mathen, BS, Director of Pharmacy Clinical Applications & Technical Services

Texas Children's Hospital



Erin St. Angelo, PharmD
Procurement and Contracting Director

Kelsey Waier, PharmD
System Wide Pharmacy Operations Director

UCSF Medication Waste Algorithm

Waste Cost
Per Adjusted
Patient Day =

Total waste cost ÷
Adjusted patient day

Total waste
cost =

[EXP Identify scanned waste +
Controlled substance waste +
Dispense prep waste +
EXP Identify Fee + Destruction fees]
- Credits

Adjusted
patient day=

Inpatient Days ×
[Outpatient Revenue ÷ Total Patient
Revenue]

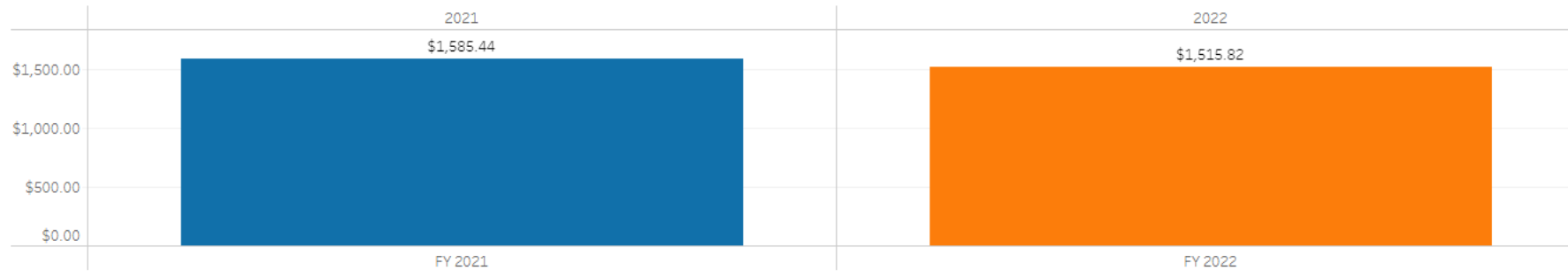
UCSF Medication Waste Algorithm

Waste Cost Per Adjusted Patient Day = [Total Waste Cost] / [Adjusted Patient Day]

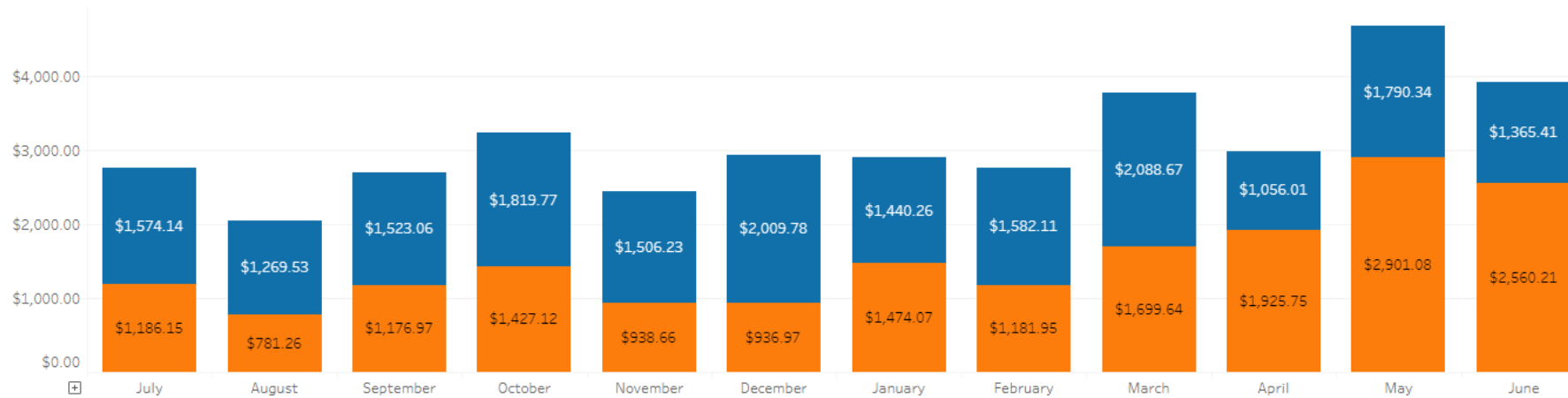
Total Waste Cost = [EXP Identify Scanned Waste] + [Controlled Waste] + [Dispense Prep Waste] + [EXP Identify Fee] + [Destruction Fees] - [Credits]

Year of MonthYear
■ FY 2021
■ FY 2022

Average Waste Cost Per Adjusted Patient Day



FY-FY Waste Cost Per Adjusted Patient Day



Key Initiatives

- Product management workgroup formed
 - Pharmacy workgroup led by central production facility director and procurement and contracting director
- Standardized process developed to review product change requests
- Considers cost, labor, waste, multidisciplinary education/communication needs, informatics requirements, operational burden, and maintenance needs

Key Initiatives

- Product conversion
 - 503B to commercially available product
 - In-house compounded product to commercially available product
 - IVPB to IVP
 - Brand to generic
 - Primary concentration changes
 - Limitation of available strengths/sizes



Texas Children's Hospital[®]

Gee Mathen, BS

Director of Pharmacy Clinical Applications & Technical Services

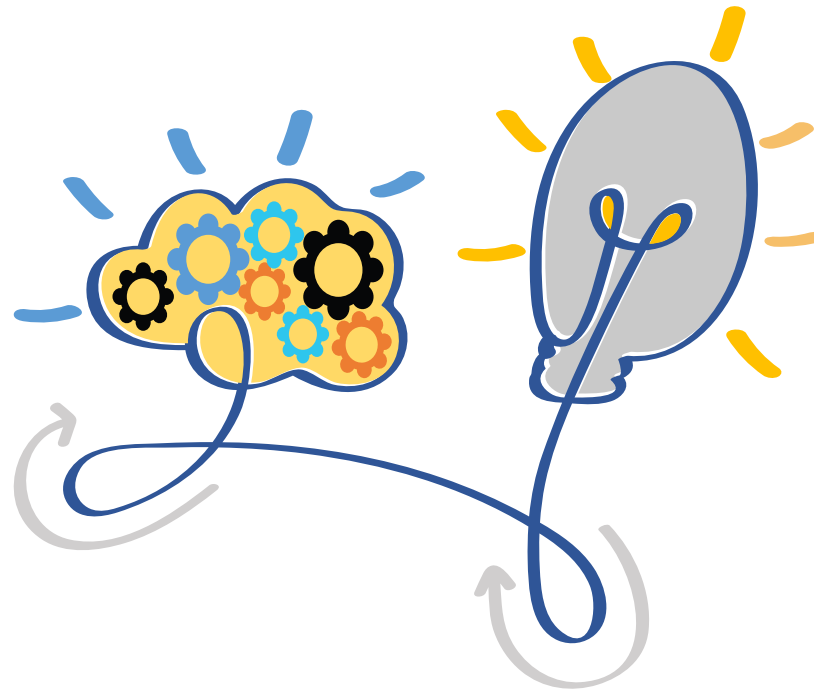
Adam Witas, CPhT
Application Architect

Background

PROBLEM

\$2.5m of \$160 annual medication buy is wasted due to expiration

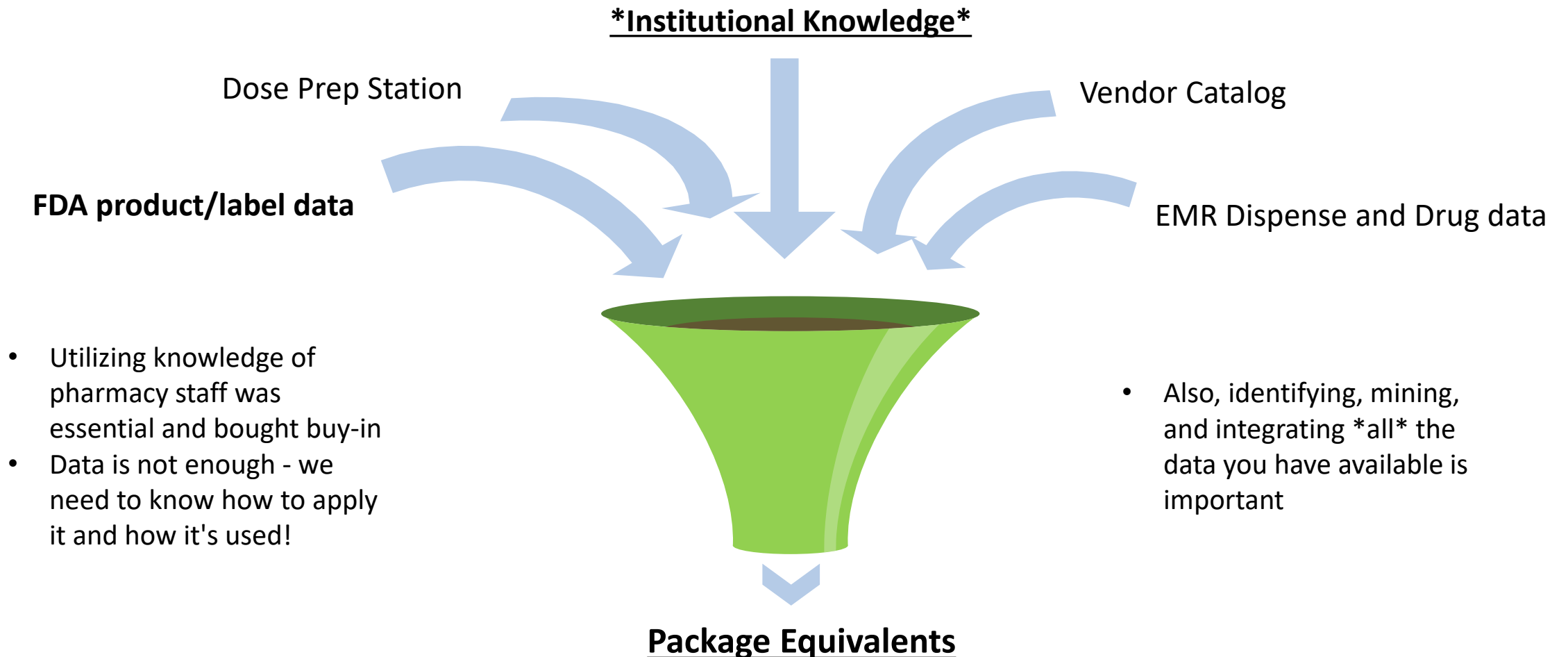
- Lack of knowledge about how much drug is needed
- Ordering based on history, perception, and intuition
- Staffing, QOH accuracy, and ordering process also play a role



GOAL

- Use data to quantify how much product is actually used
- Leverage data to know how much of each med needs to be where and when
- Make the delivery and resupply of those drugs as automatic and efficient as possible

Data Integration



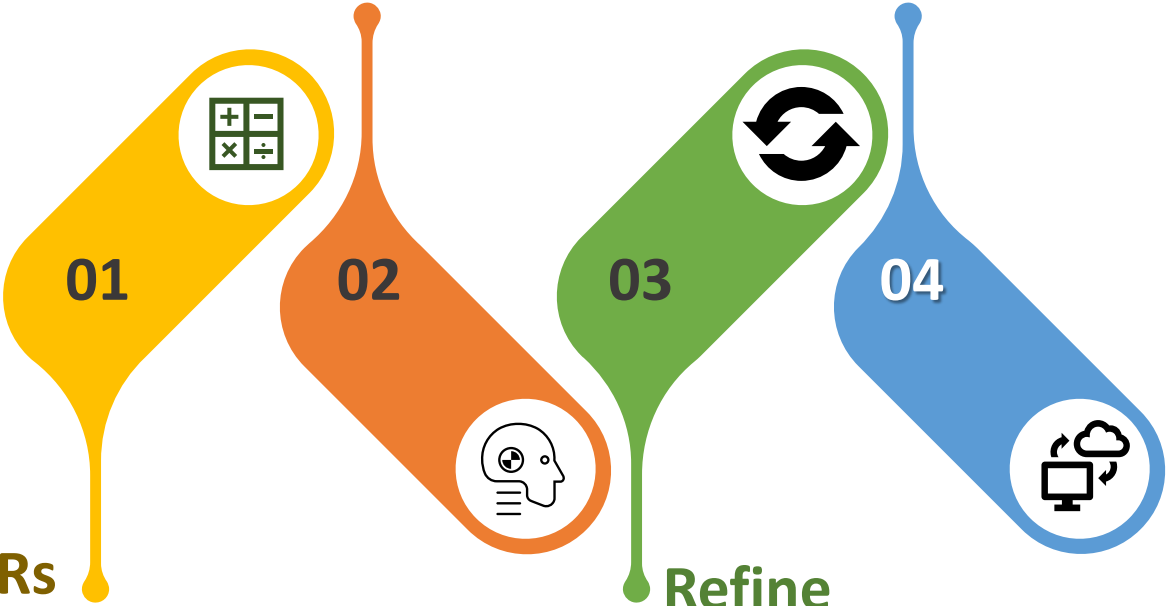
Implementation

Test, Validate

Check that predication match actual usage

Automate & Integrate

Automated reporting tools essential to making the new process easy and reliable for staff



Set PARs

Usage data allows determination of objective target inventory levels

Refine

User feedback factored heavily in improving and refining data model

Outcomes

REDUCED EXPIRATIONS

1

80% reduction in average monthly returned/expired medication in pharmacies where implemented

Immediate data about needed inventory levels allows for faster return or distribution of unnecessary stock

2

FEWER AND EARLIER RETURNS

EASIER ORDERING

3

Efficiency gains because less employee time is spent on ordering, counting, and restocking

The understanding needed to build the model exposed opportunities for process changes

4

PROCESS IMPROVEMENTS

Panel Discussion

2022

VIZIENT CONNECTIONS SUMMIT



vizient.

Lessons Learned

- Identify how your organization quantifies value and build this into your cost savings initiatives
- Operational leaders should be engaged in the development process as early as possible.
- Run the process in a pilot mode and have pharmacists in the area validate ordering recommendations before moving to automation.

Key Takeaways

- Be sure to create a metric and track all medication product changes!
 - Small changes can lead to large savings
- Review potential reports from EHR before building something from scratch - there is likely a tremendous amount of analysis already being done.
- For new build/development, there are more data sources available than you realize, both in public repositories and in the databases of your pharmacy systems.

Questions?

UCSF Health



Contact:

Erin St. Angelo: erin.st.angelo@ucsf.edu

Kelsey Waier: kelsey.waier@ucsf.edu

Adam Witas: awwitas@texaschildrens.org

Gee Mathen: gxmathen@texaschildrens.org