

TCOM Analytics

Delivering Precise and Personalized Care

Stephen Shimshock PhD
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Agenda

- Introduction to the TCOM and CHIC Teams
- The Generalized Workflow
- The Data Usage Developmental Matrix
- Introduction to Precision Analytics
- Questions?

TCOM Team



Chapin Hall engages in direct, purposeful collaboration. We partner with all levels of government, non-profit organizations, philanthropists, fellow researchers, and others who work tirelessly to address challenges facing children, youth, and families in the United States and beyond.



The Praed Foundation is a public charitable foundation committed to improving the wellbeing of all through the use of personalized, timely and effective interventions.



Collaborative Helping Information (CHIC) Team

The CHIC team aims to:

- design and document cutting edge methods for analyzing and utilizing CANS/ANSA/FAST data within the TCOM framework (Precision Analytics).
- build cultures of “best practitioners” by connecting data usage to practice through the implementation of methodologies like Facilitated Collaborative Inquiry (FCI).
- serve as the hub for an international community of Precision Analytics practitioners.
- serve as curators for TCOM best practices across the globe.
- leverage our knowledge and expertise to provide exceptional coaching/consultation to organizations implementing CANS/ANSA/FAST within the TCOM framework.

Collaborative Helping Information (CHIC) Team

Sponsor: John Lyons

Team Lead: Stephen Shimshock

Core Team

- Nick Mader
- Kate Cordell
- Brian Chor
- Mark Lardner
- Amber Joiner-Hill
- Himanshu Rao
- Michaela Voit
- Mia Calamari

Support Team

- Michelle Fernando
- Stephanie Hong
- Katie Sun
- Angela Pollard
- Laura Rogers
- Andrea Ocampo

The Learning Mindset

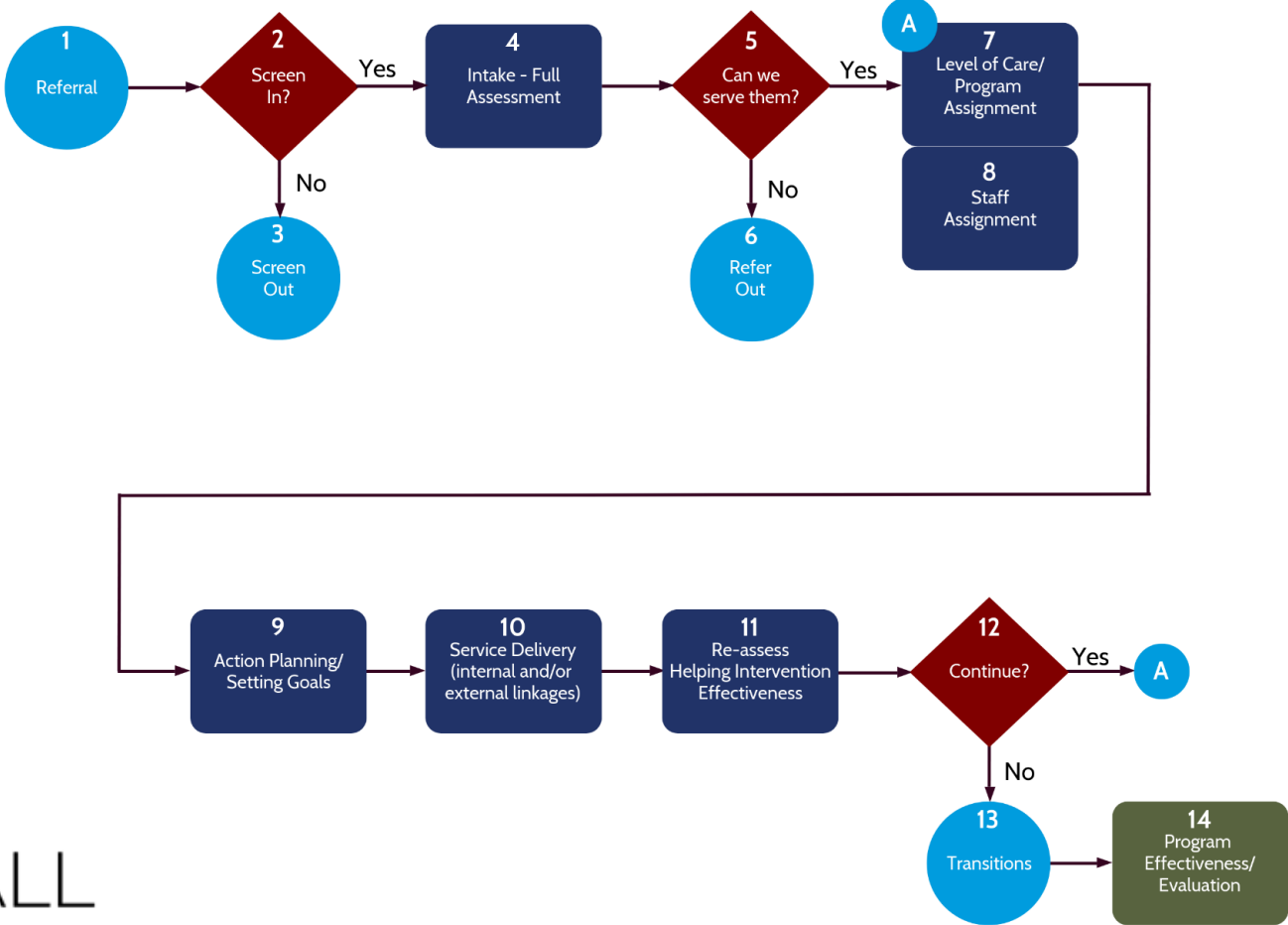
- Every youth and family that interacts with our system is unique test of our system.
- Those that exit can teach us about the quality and efficiency of our system.
- Those who we are serving today, and those yet to come, represent an opportunity for us to a) confirm what we know and b) continue to improve.



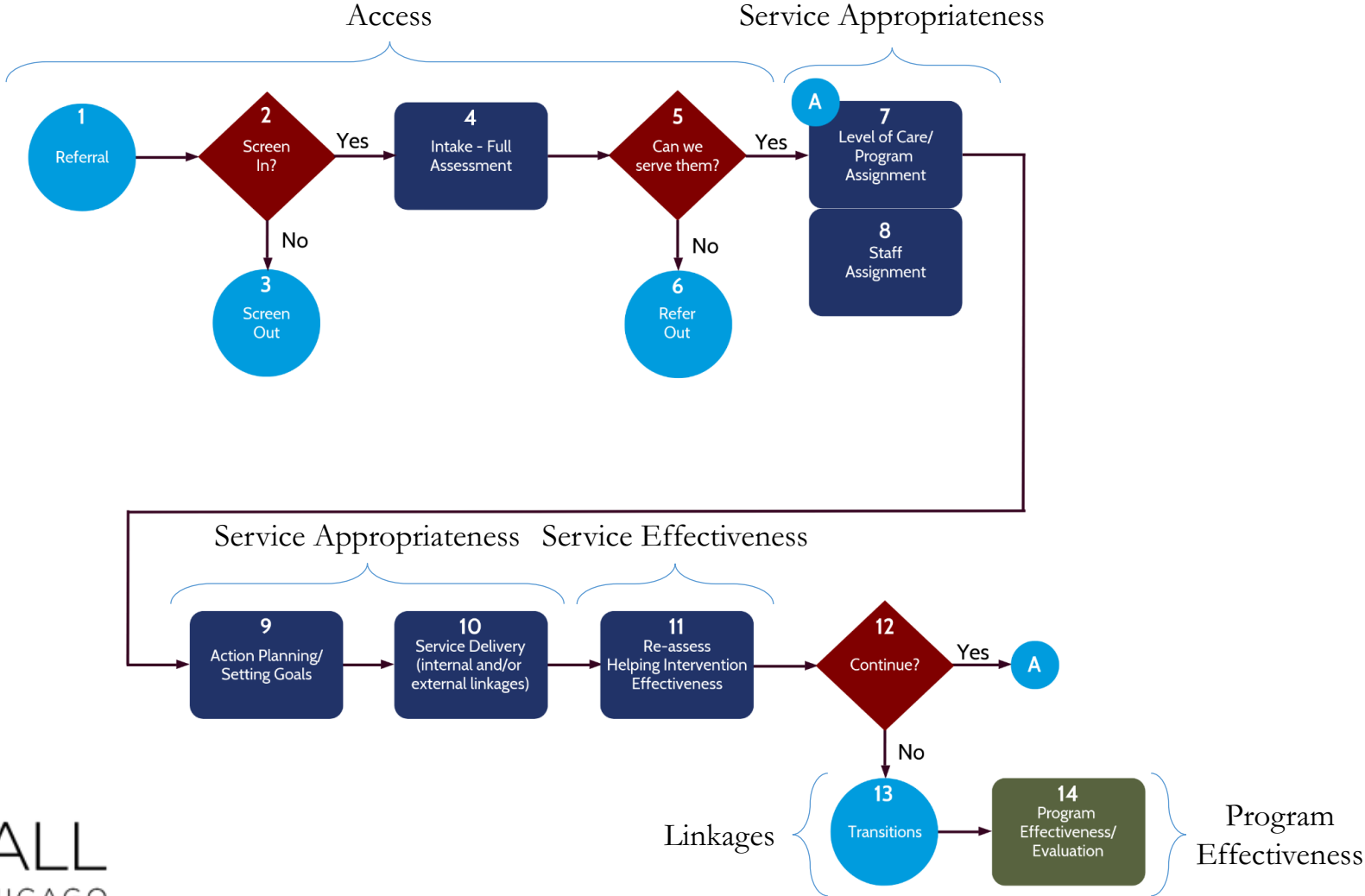
Leading with Questions

“The marvelous thing about a good question is that it shapes our identity as much by the asking as it does by the answering.” – David Whyte







Generalized Workflow



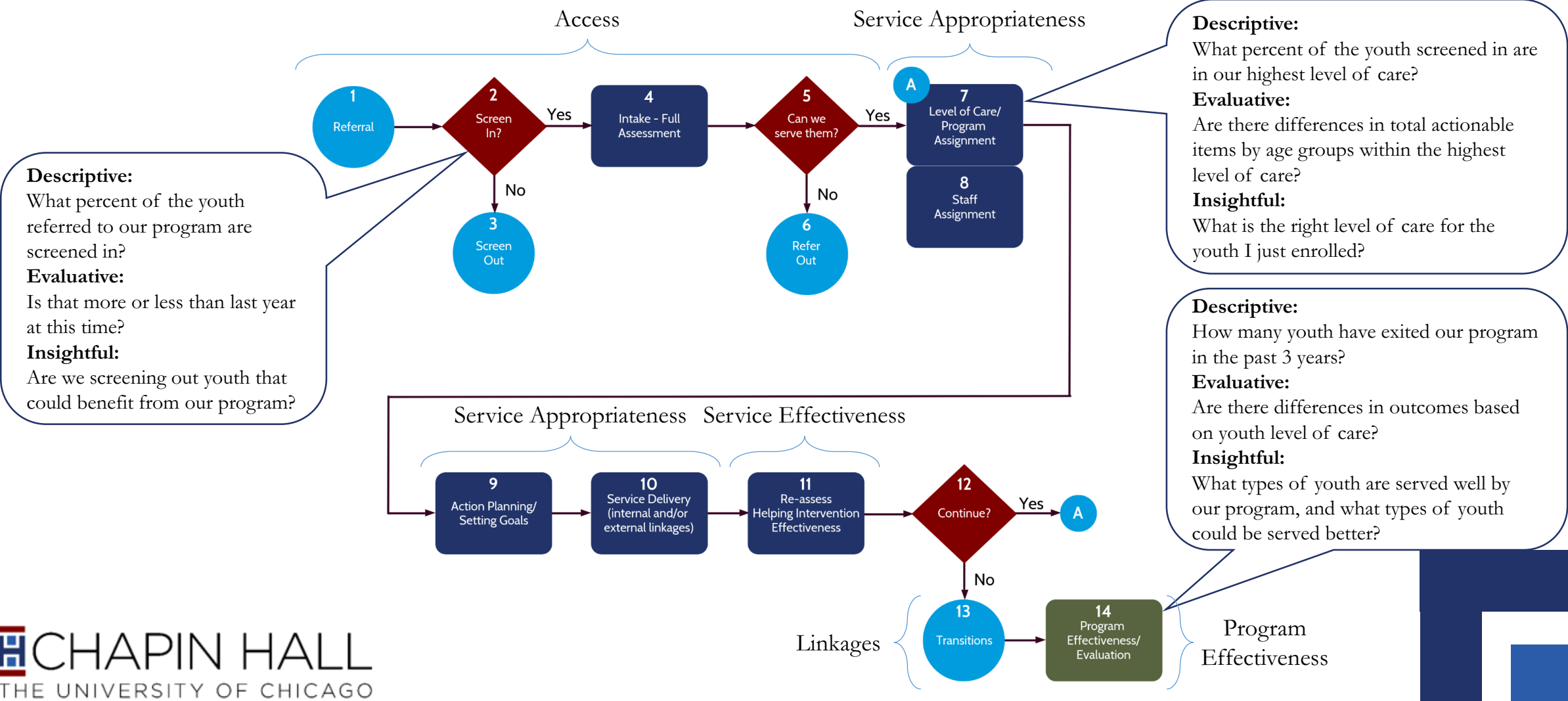
Generalized Workflow



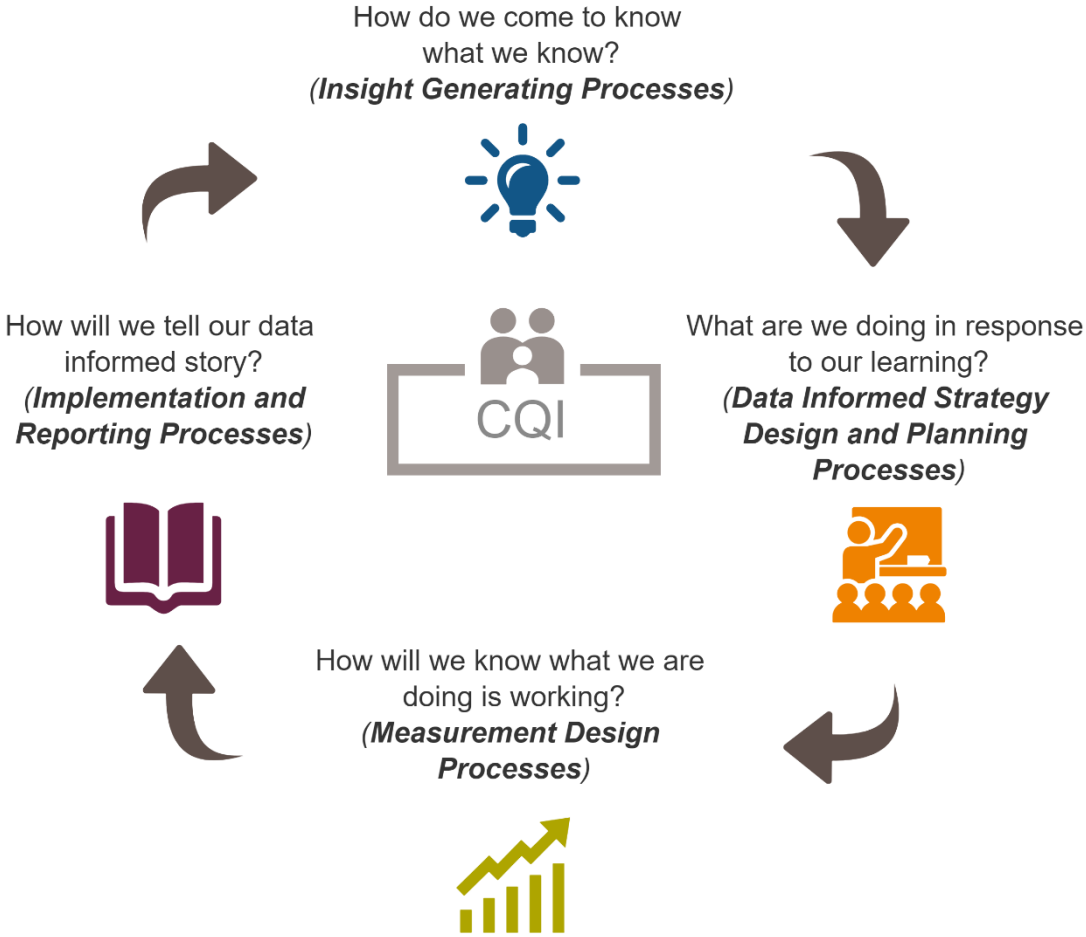
The Data Usage Developmental Matrix

Common Questions				
	 Individual	 Nested Group	 Whole Group	Desired Experience
 Descriptive		How many? What percent? What is it?		Shared Understanding
 Evaluative		What happened? What changed? What is the difference?		Shared Learning
 Insightful		What should we do next? What should we explore? Who needs our attention?		Shared Purpose

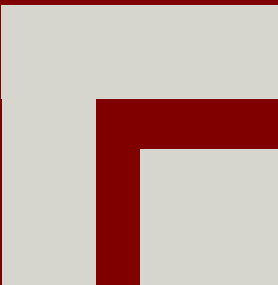
Generalized Workflow with Example Questions



Using Data in the context of Facilitated Collaborative Inquiry (FCI)

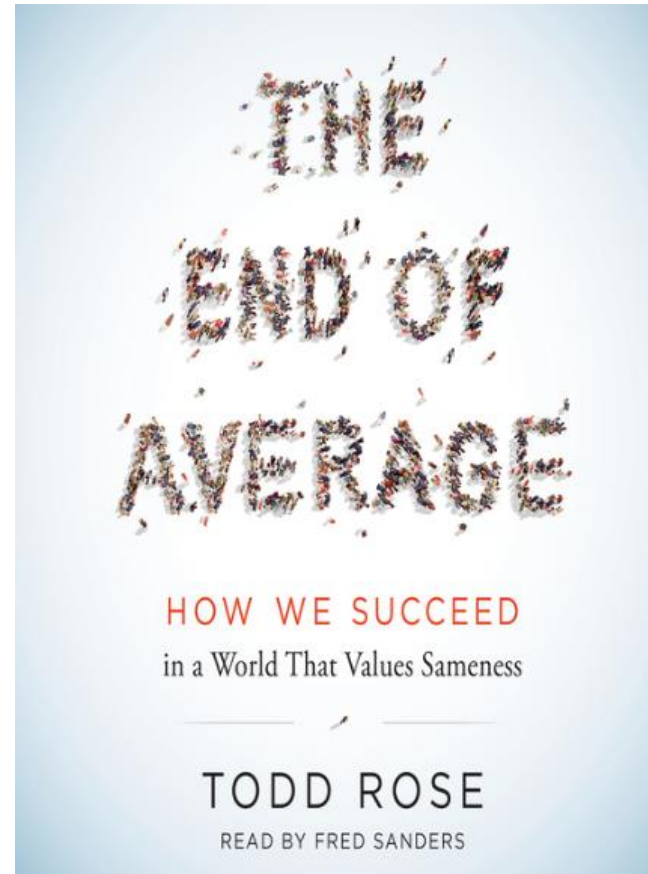


Introduction to Precision Analytics



Precision Analytics

Agency ABC achieves legal permanency for **70%** of the youth it serves.



Am I Average?



Borrowing from Precision Medicine

Precision medicine (PM): According to the Precision Medicine Initiative, precision medicine is "an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person." This approach will allow doctors and researchers to predict more accurately ***which treatment and prevention strategies for a particular disease will work in which groups of people.*** It is in contrast to a one-size-fits-all approach, in which disease treatment and prevention strategies are developed for the average person, with less consideration for the differences between individuals.

<https://ghr.nlm.nih.gov/primer/precisionmedicine/definition>

Am I Average?

Miguel



We have seen **113** youth like Miguel in the past 3 years. Youth like Miguel achieve legal permanency **34%** of the time.

Key Characteristics of the segment:

- 13-17 at Enrollment
- 3 or more previous placements (average 8.3)
- Actionable on the Family item in the Life Functioning Domain

Current Permanency Probability:

20%

Miguel does not have an Identified Permanency Resource which places him at high risk of exiting without permanency. Finding an IPR for Miguel would raise his probability to 44%.

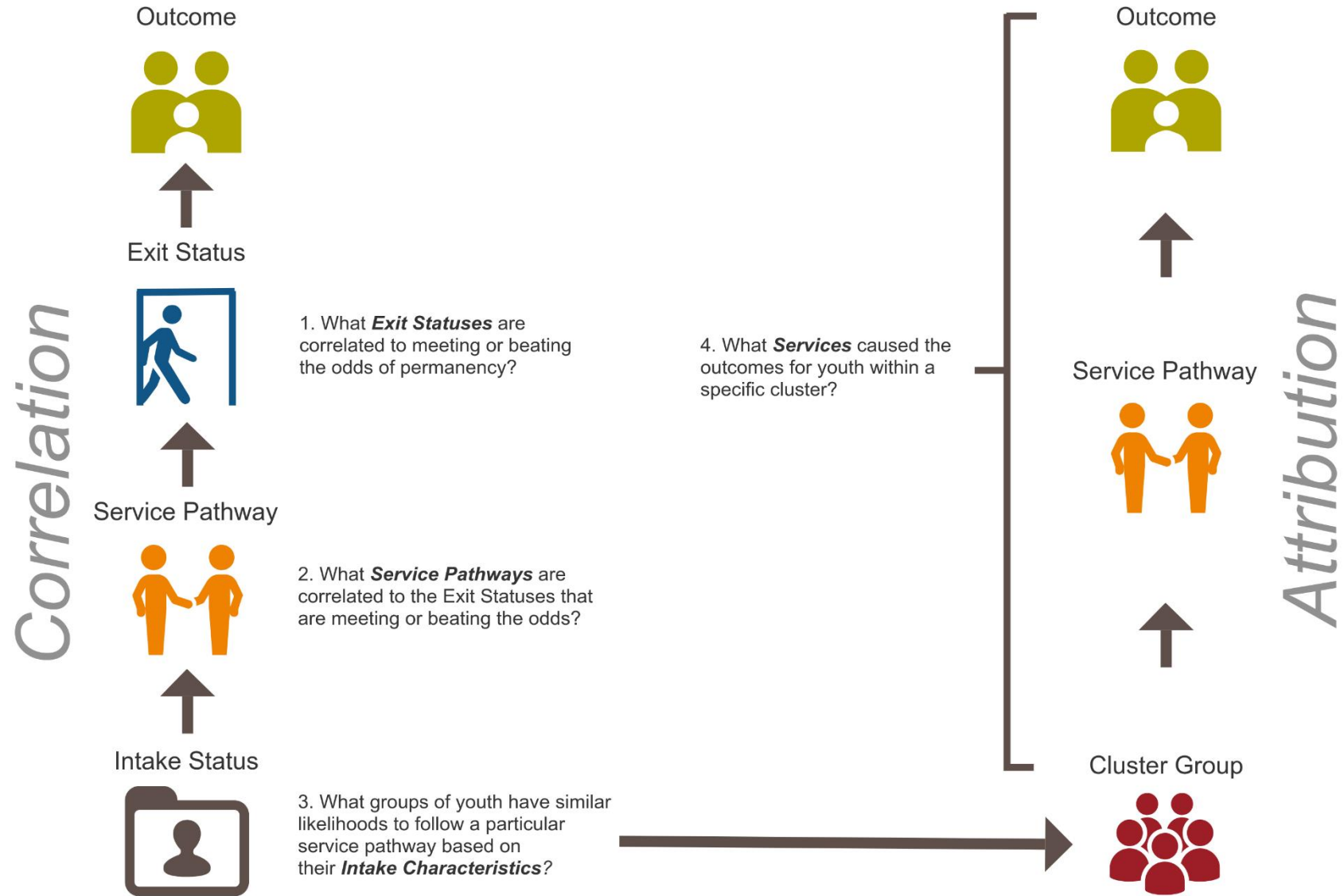
Offices that are beating the odds

Office	Perm Rate	# of youth
Office 2	60%	10
Office 7	43%	14

Getting Started with Precision Analytics



The Parts of Every Story that You Need to Get Started



The Big Idea

- Precision Analytics allows us to precisely identify our most vulnerable youth and families and target our quality improvement efforts where they will have the most impact and return on investment.
- In addition, we now have a foundation from which we can measure the impact of our improved efforts.

The Bigger Idea

Traditionally, extreme rigor is employed to ensure that a **specific** study/experiment could produce **results** that were **generalizable** to a broader group (e.g. people not part of the study). This is done in part because the costs of conducting a study are high. Also, generalizing often results a reduction in specificity.

We are reversing this by using extreme rigor to create a ***generalizable*** machine learning framework that learns from a specific organization's data to produces ***results*** that are ***specific*** to that organization. Effectively, reducing the cost of the study/experiment and maintaining specificity.

Questions?

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