Nuts and Bolts: Part 2
Best Practices for Answering Performance Questions

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Today's session

- Today's materials are taken from *EDGE: Evidence-Driven Growth and Excellence*
- Eight month, cohort-based evidence use training program for child welfare managers.
- Three sessions in Tennessee
- Finishing first session in Oklahoma

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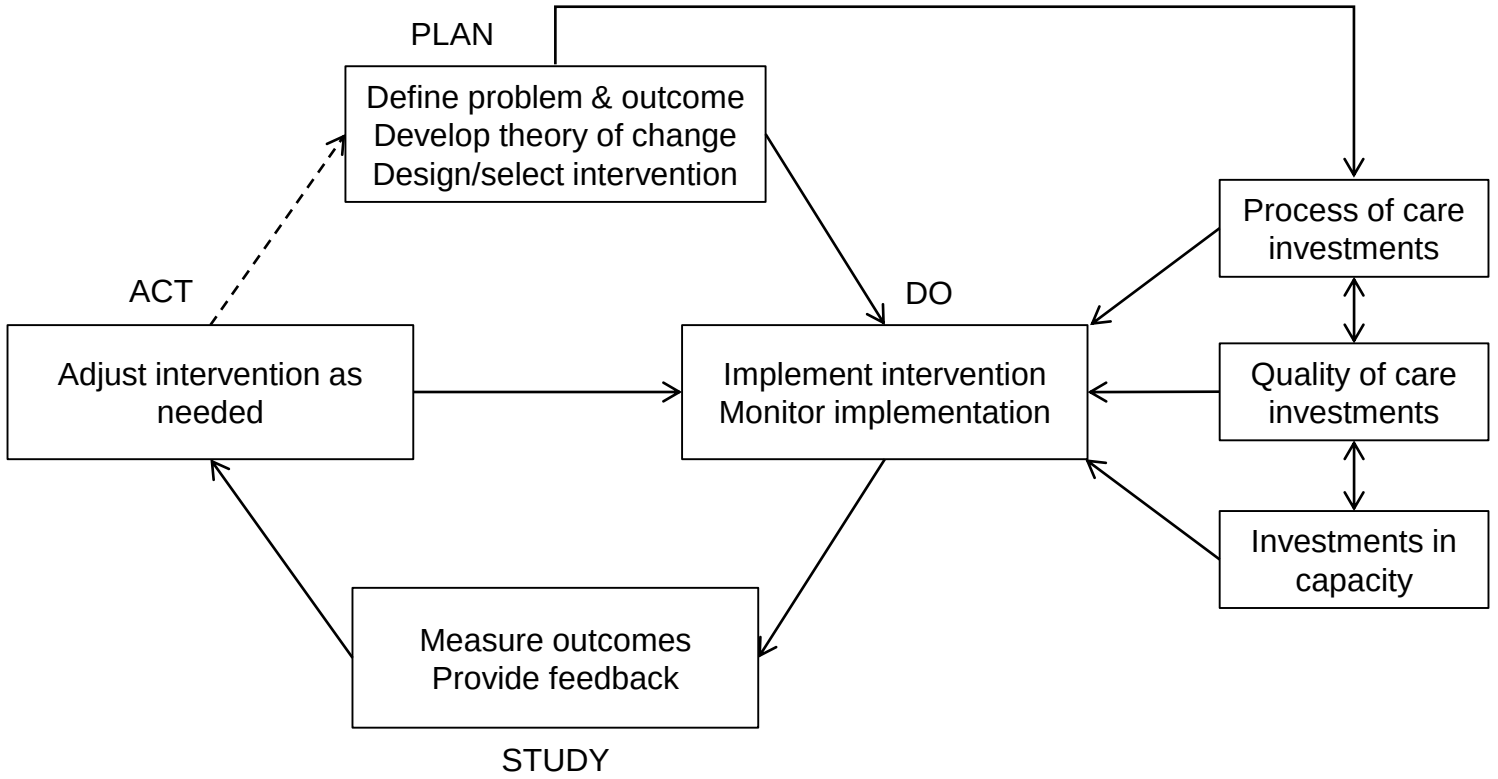
The CQI cycle: Plan-Do-Study-Act



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Nuts and Bolts Part 2

Plan-Do-Study-Act: Evidence supports your PLAN.

I observe [**some outcome that I want to improve**].

How do you know? **Evidence.**

The discipline of converting data into evidence:

- Ask a question about something you can change.
- How do you answer a question about likelihood?
  - e.g., What percent of children entering foster care exit to permanency?
- How do you answer a question about speed?
  - e.g., How long do children typically spend in foster care?

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Priority concepts for analytics

- Know your **question**. Write it down. Measurement starts with a question.
- **Stock** and **flow**: The only way to change the characteristics of the children you have in care now is to change how children enter and exit.
- Know the **population** from which you are measuring. The choice of population depends on the question.
- Almost always, use an **entry cohort** to answer questions about outcomes about typical performance.
- **Likelihood** (or Probability): Examining the past to predict the future.

Choosing the population

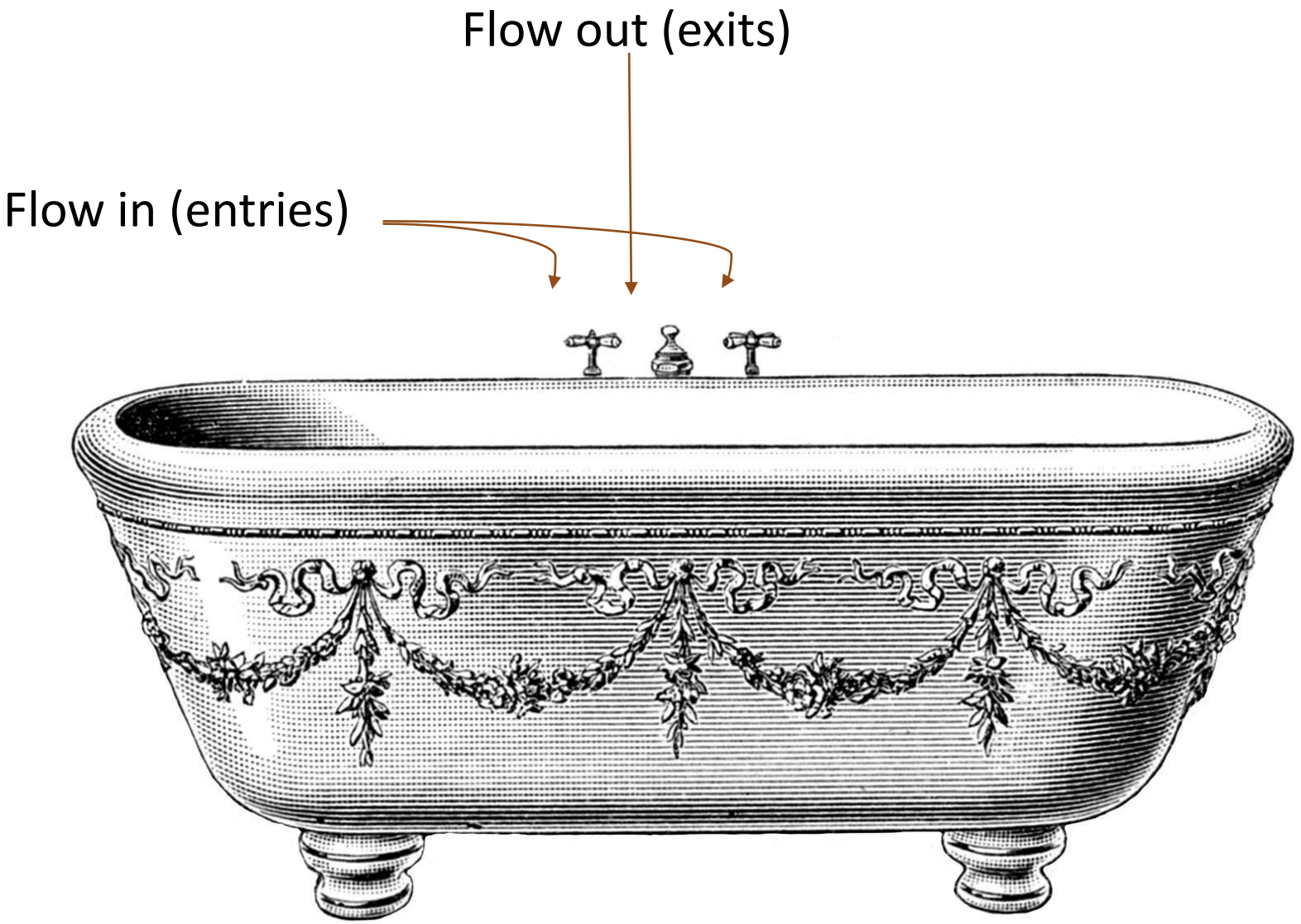
The process of improvement starts with a question.

Questions about **typical** performance, **change over time**, and the **effectiveness of interventions** are the questions that fuel the process of improvement.

Why does it matter which population you choose?

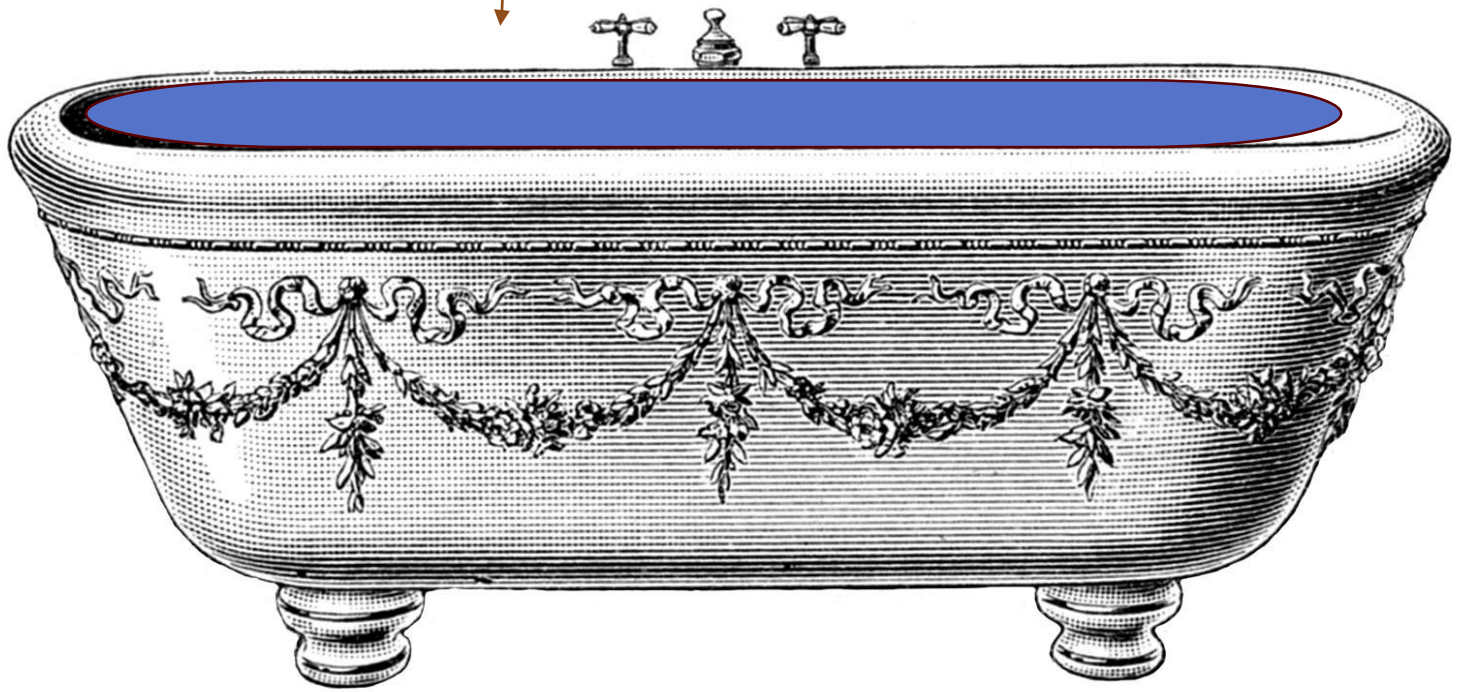
- When some children are systematically excluded from the population, you can no longer make a **statement about what's typical**.
- When you want to measure **change over time**, you have to account for all children moving through the system during that period of time.
- When you want to measure the **effect of an intervention over** time you have to include everyone the intervention touches in your analysis.

Stock and Flow



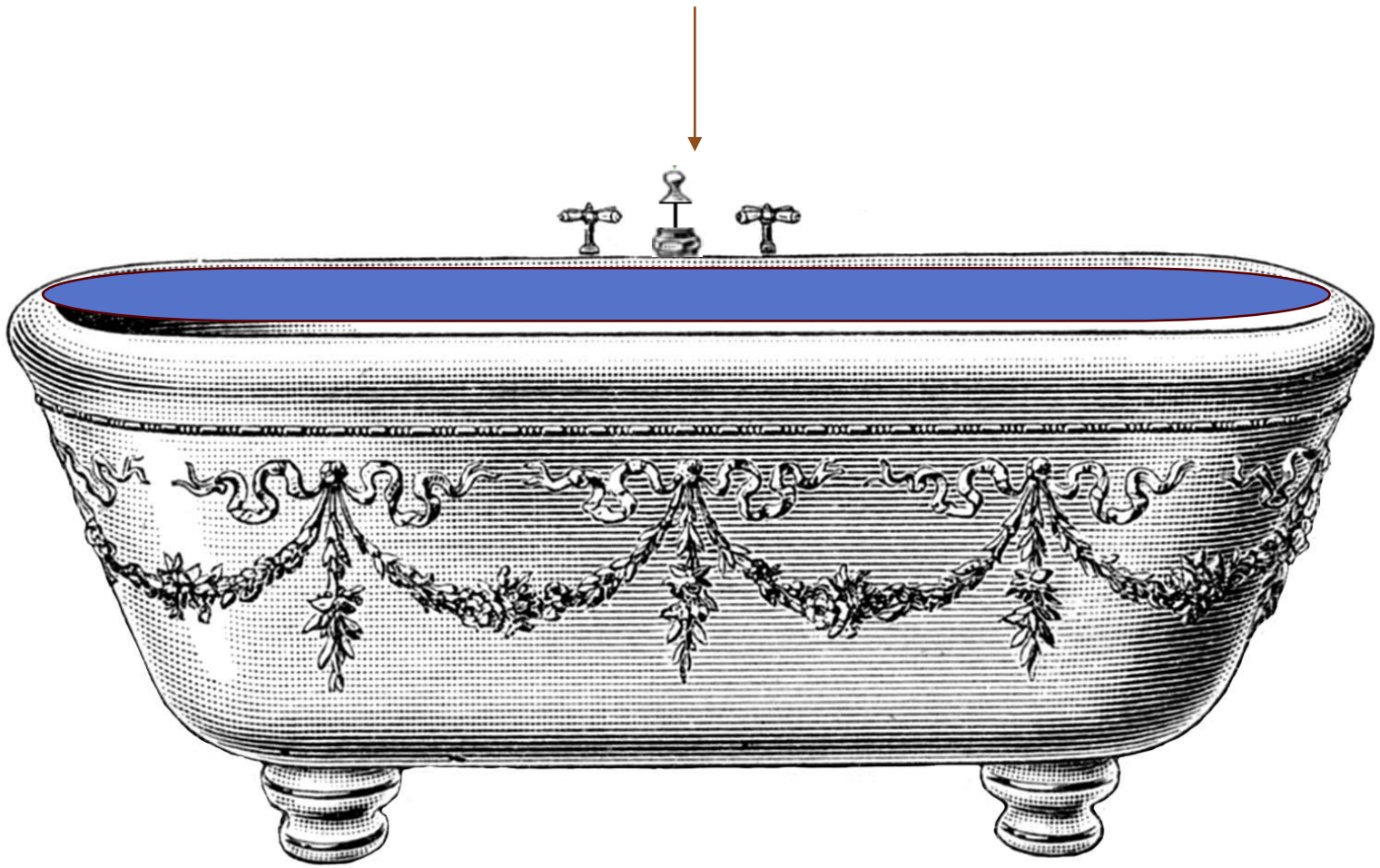
Stock and Flow

Flow in faster than the flow out?



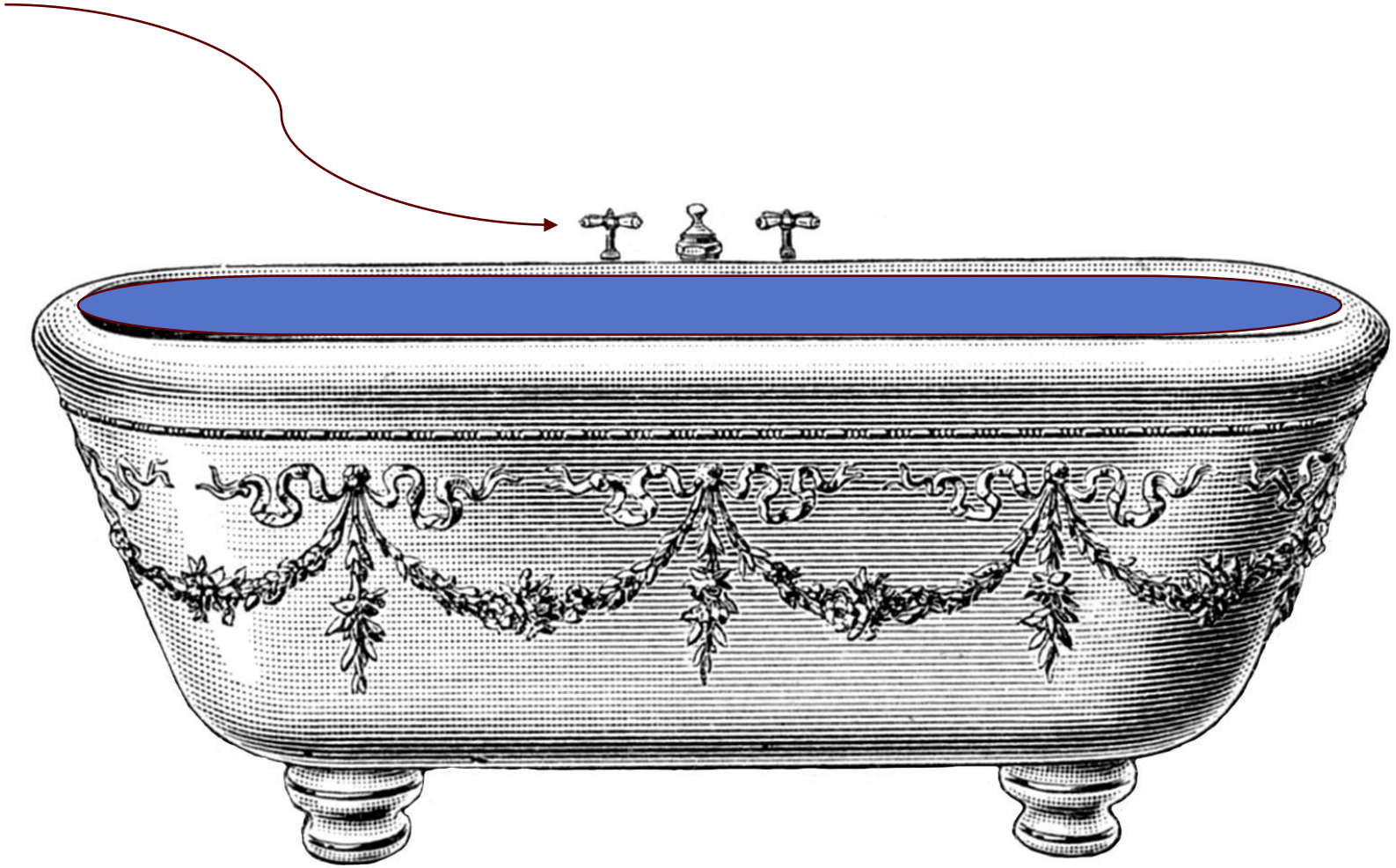
Stock and Flow

Flow out faster than the flow in?



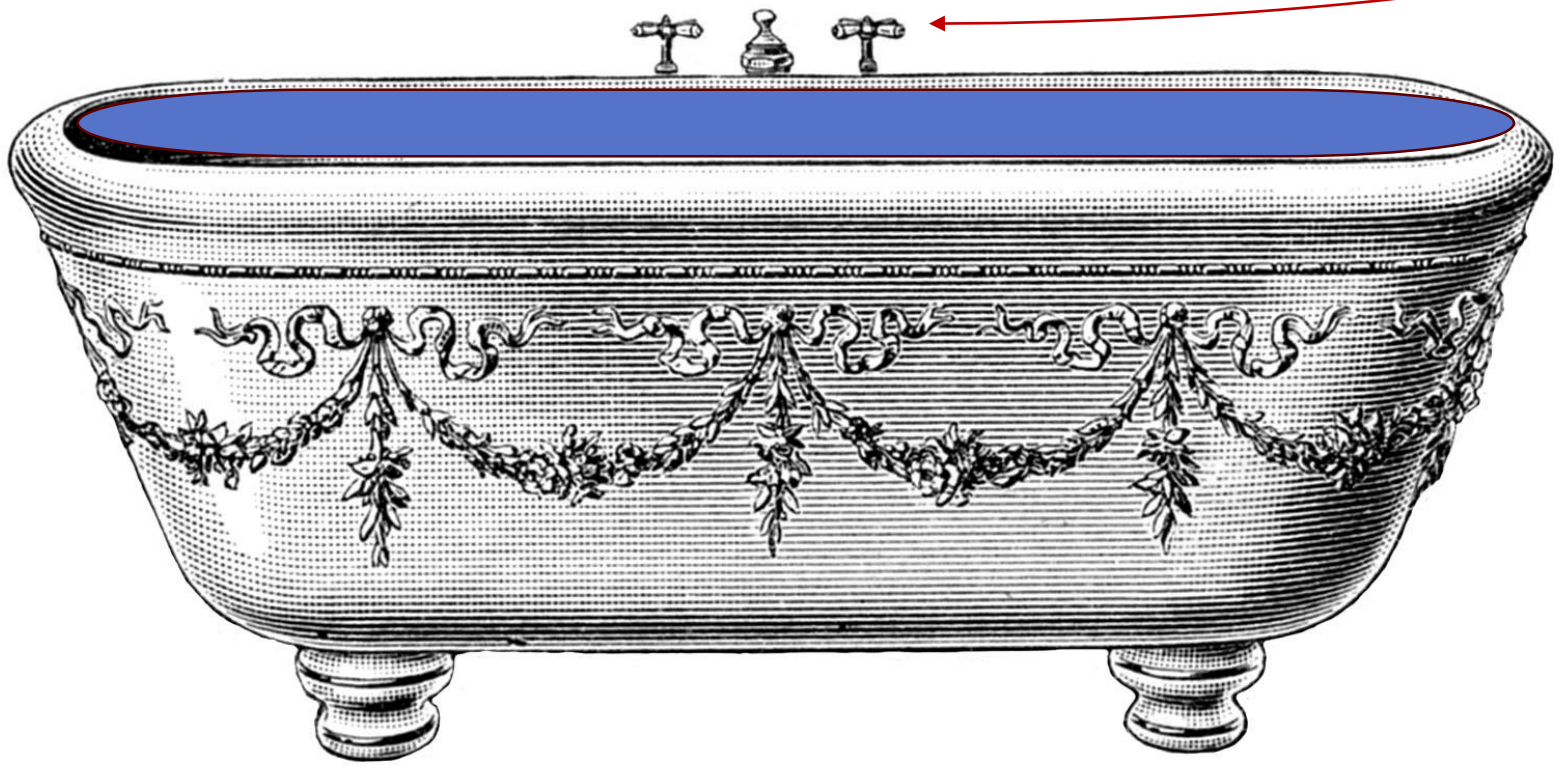
Stock and Flow

Cold flowing in faster than hot?



Stock and Flow

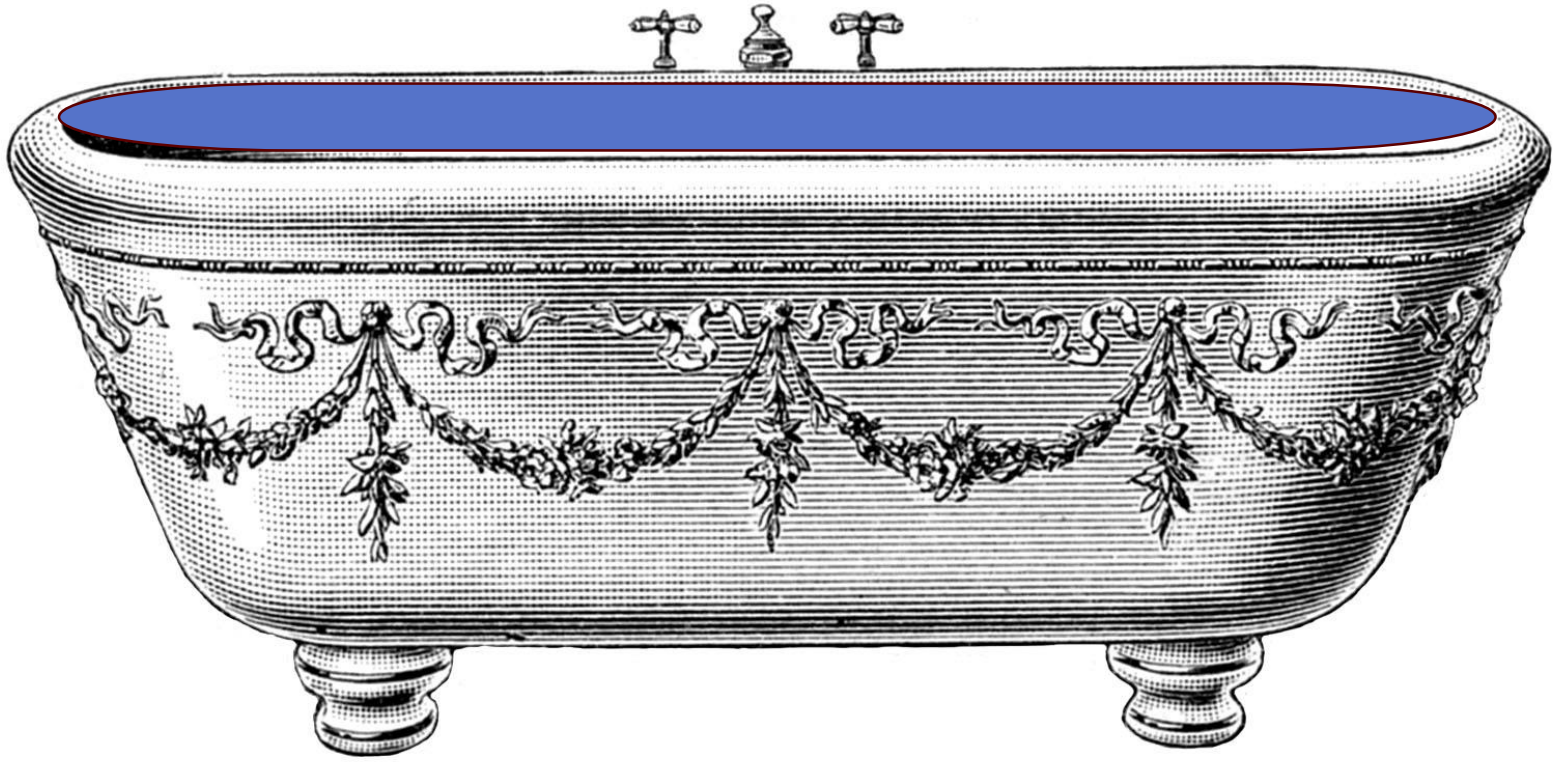
Hot flowing in faster than cold?



Stock and Flow

Get out of the habit of asking questions that describe the stock. The only way to change the stock is to change the flow.

Get into the habit of asking questions that describe the flow. The answer to those questions are actionable.

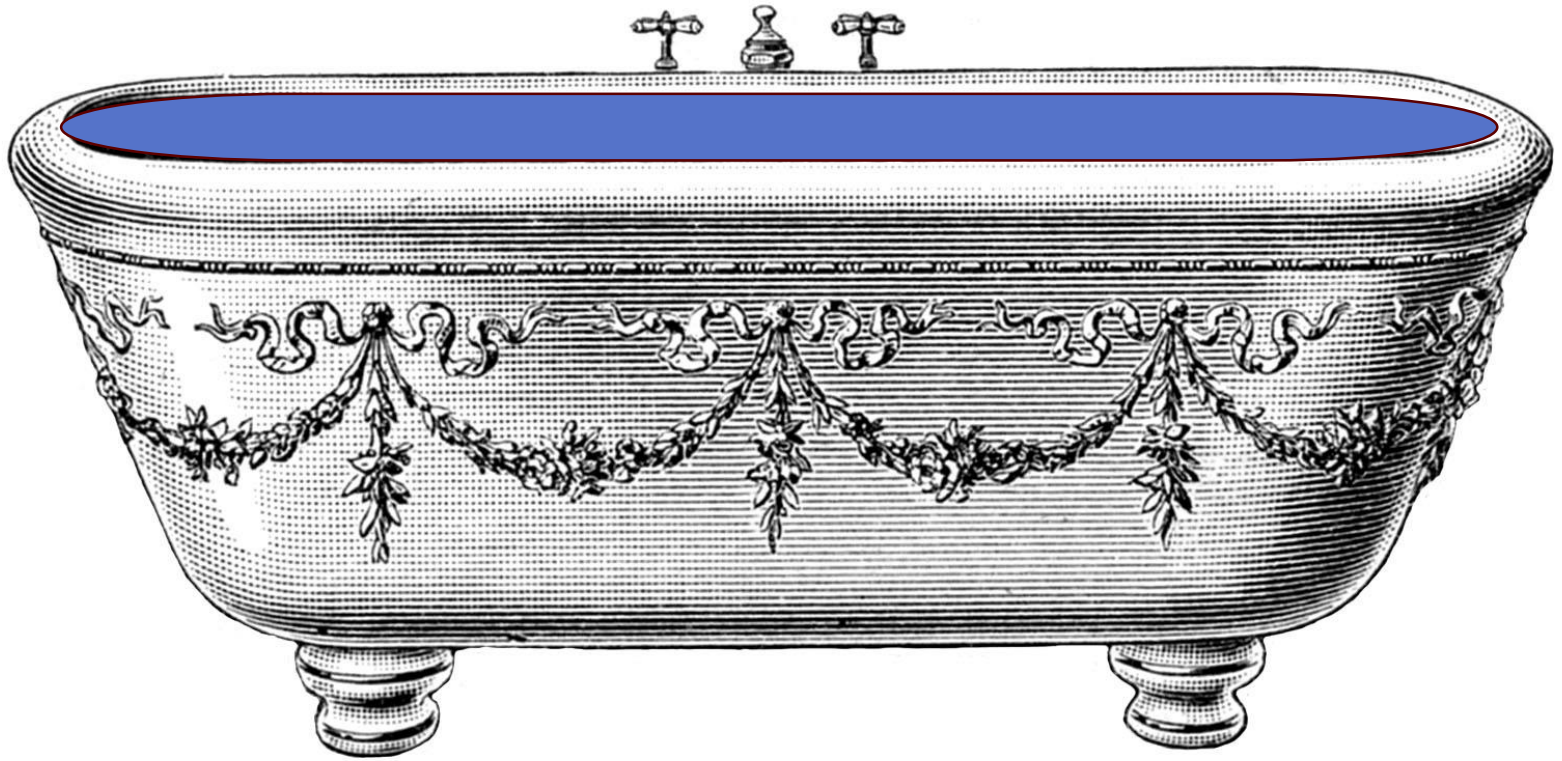


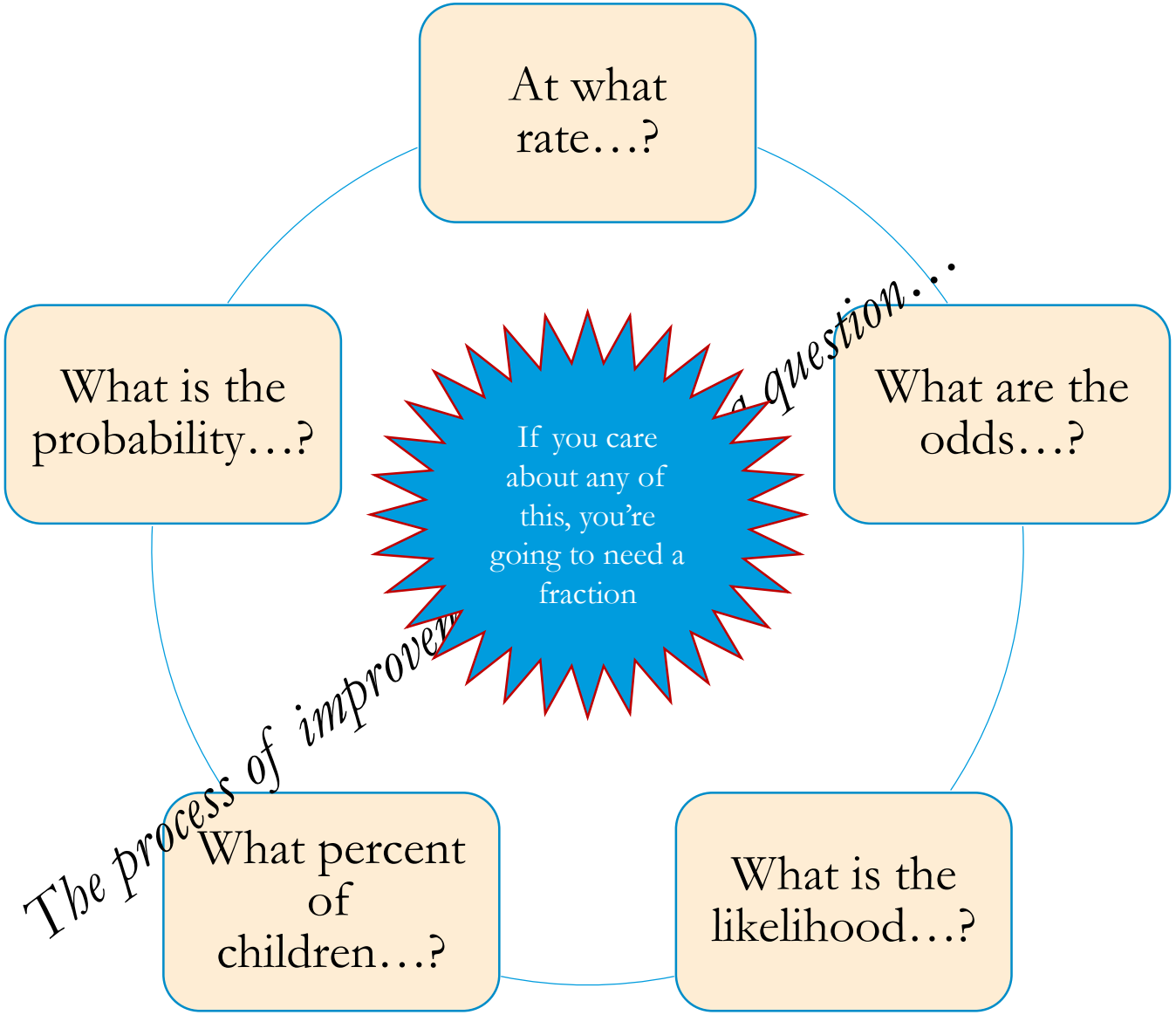
Stock and Flow

In other words, **ask a question about something you can change.**

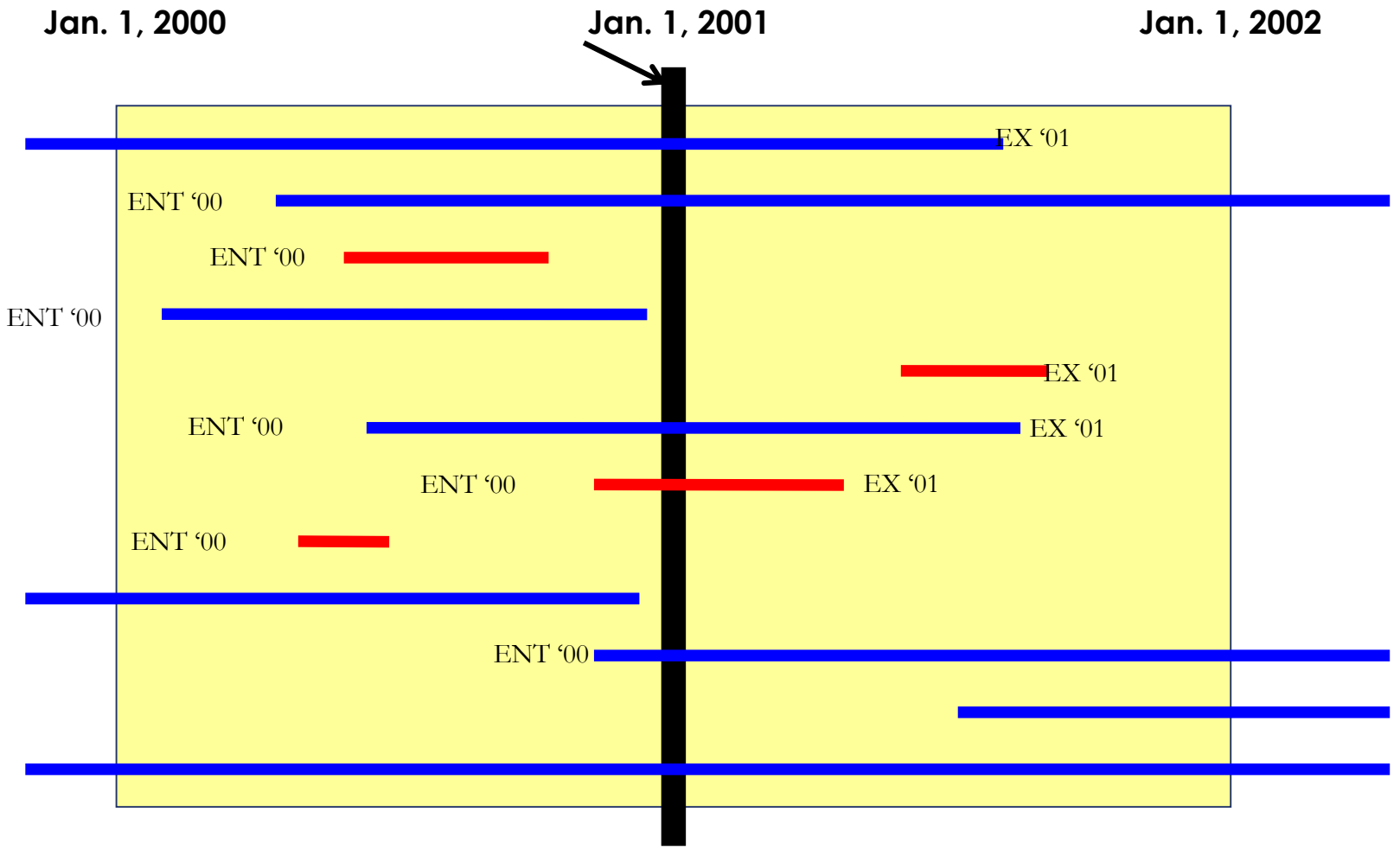
In a child welfare context, we want to change:

- **The likelihood** that something will happen.
- **The amount of time** it takes for something to happen.




At what rate…?
What are the odds…?
What is the likelihood…?
What percent of children…?
What is the probability…?
If you care about any of this, you're going to need a fraction
The process of improvement is a question…

Who is being counted?



Source: Aron Shlonsky, Columbia University School of Social Work (formerly at CSSR)

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Summary: The analytic population

The process of improvement starts with a question.

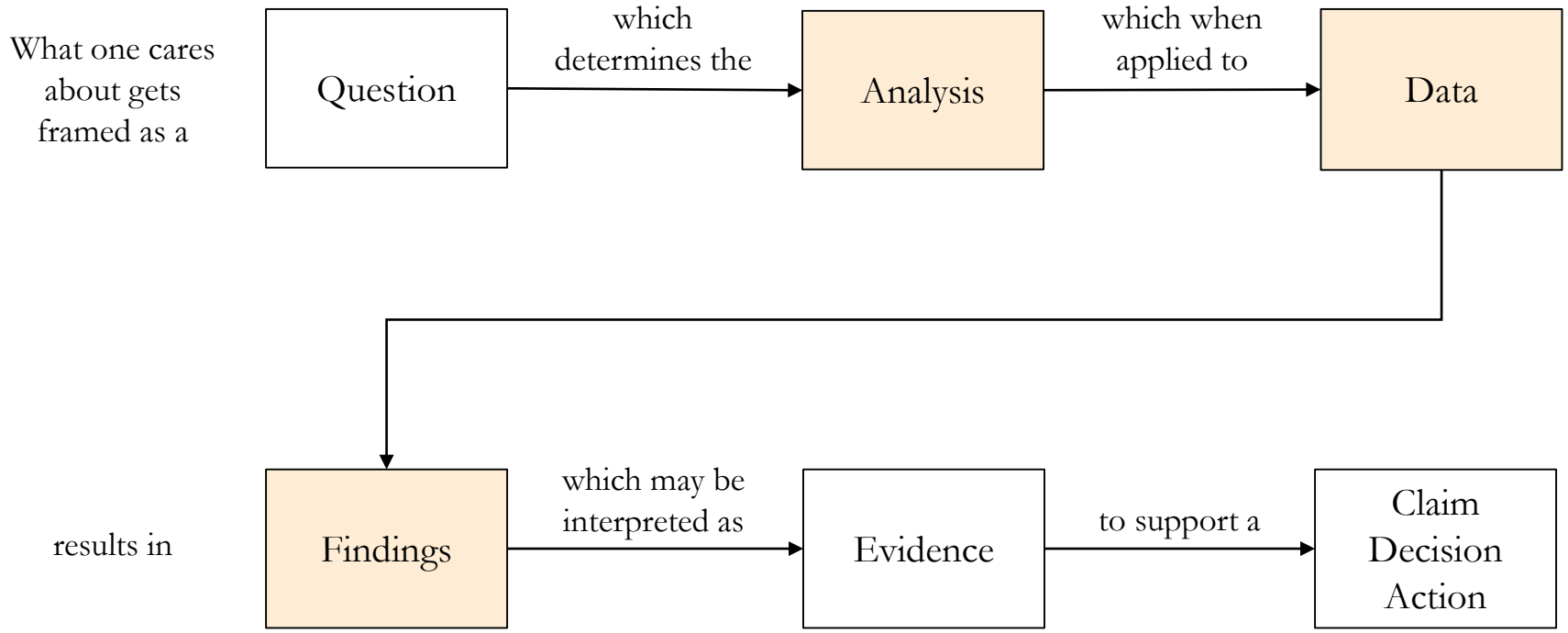
Questions about typical performance, change over time, and the effectiveness of interventions are the questions that fuel the process of improvement. **Ask a question about an outcome you can change.**

The **population** you should analyze **depends on the question** being asked. There are three common populations: entry cohort, exit cohort, and point in time.

If your question is about typical performance, change over time, or the effectiveness of interventions, your population has to include everyone who is at risk of experiencing the outcome of interest (the **risk set**).

When your analysis calls on you to calculate a **fraction**, your analytic population goes in the **denominator.**

Recall this…


What one cares about gets framed as a
Question
which determines the
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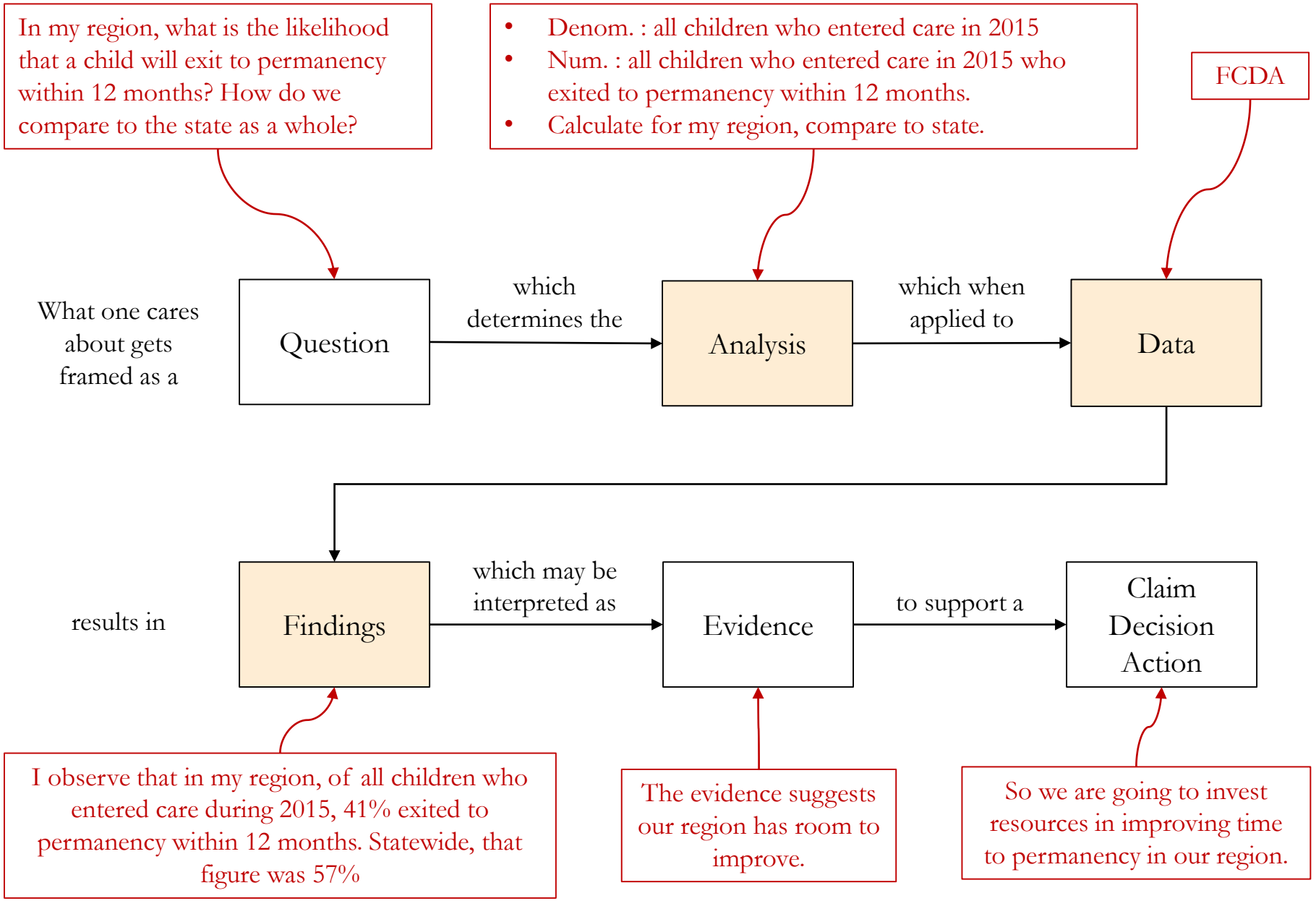
In my region, what is the likelihood that a child will exit to permanency within 12 months? How do we compare to the state as a whole?
Denom. : all children who entered care in 2015
Num. : all children who entered care in 2015 who exited to permanency within 12 months.
Calculate for my region, compare to state.
FCDA
What one cares about gets framed as a
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I observe that in my region, of all children who entered care during 2015, 41% exited to permanency within 12 months. Statewide, that figure was 57%
The evidence suggests our region has room to improve.
So we are going to invest resources in improving time to permanency in our region.

Summary: The analytic population

When asking for or consuming any data analysis:

- Know the question.
- Know the population that was analyzed to answer the question.
- Always, ask: Is it the right population for the question? *If it isn't, set the analysis aside.*


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