

Hello Baby: Evaluation Strategy and Early Findings

The problem

- Infants have the largest impact on the child protection system in Allegheny County.
 - 17% of all first maltreatment reports
 - 47% substantiation rate
 - 24% of all first placements
 - Highest rates of reentry
 - Spend more time being raised by someone other than their parents than any other group of children
- How to reduce maltreatment and placement frequency

Policy context

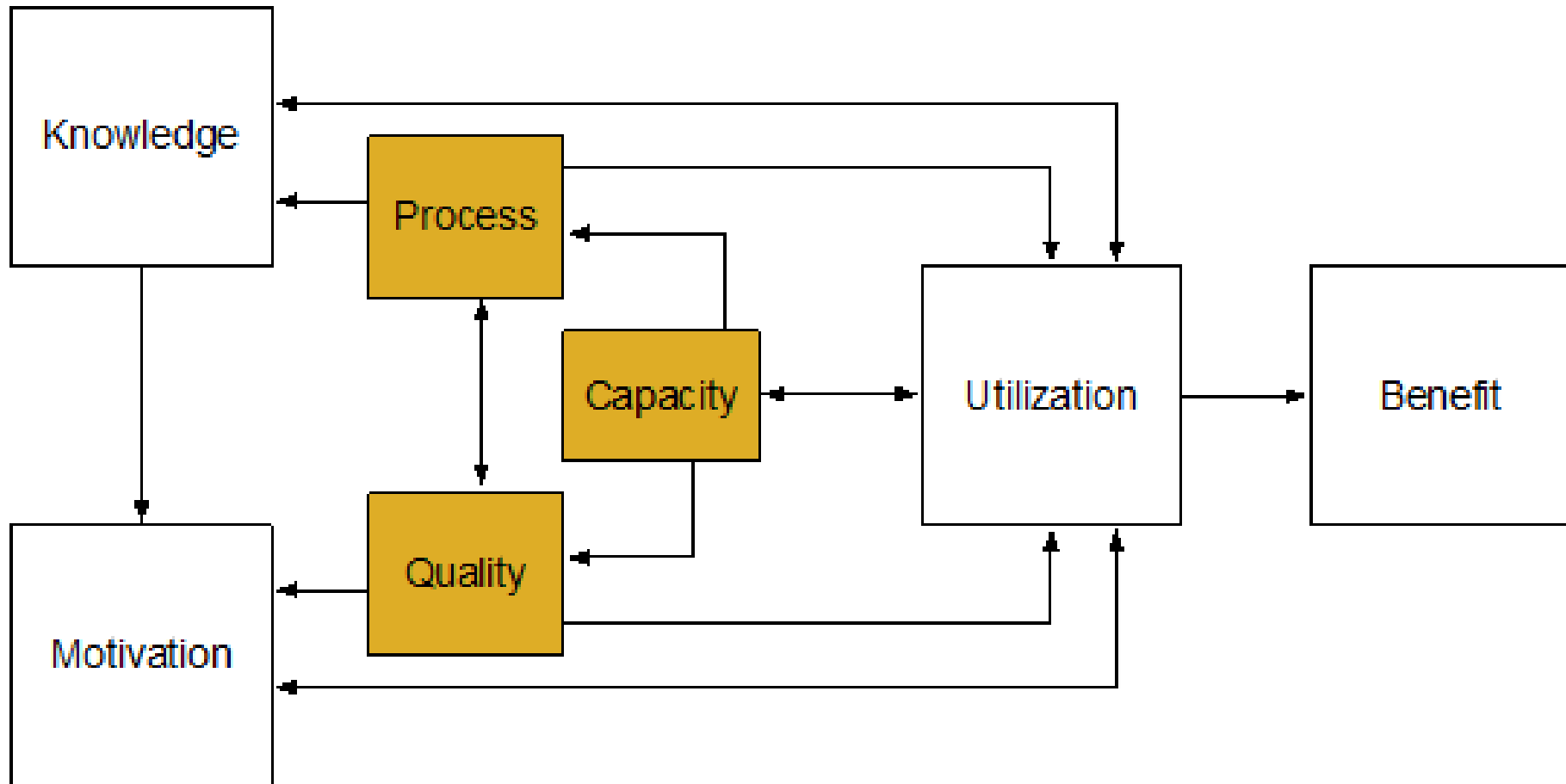
- Growing attention is being given to primary prevention
- Federal funding for prevention
- No template for developing a primary prevention program for infants
- Niche programs with narrowly defined target populations

Hello Baby Opportunity

- The Allegheny Human Services Department's attempt to step forward
 - Whole population
 - Whole child
 - Whole system
- Efficient and effective
 - Each child has a latent probability of being maltreated and/or placed in foster care – a probability that runs from low to high
 - Stratify the latent probabilities and structure service intensity based on the level of risk

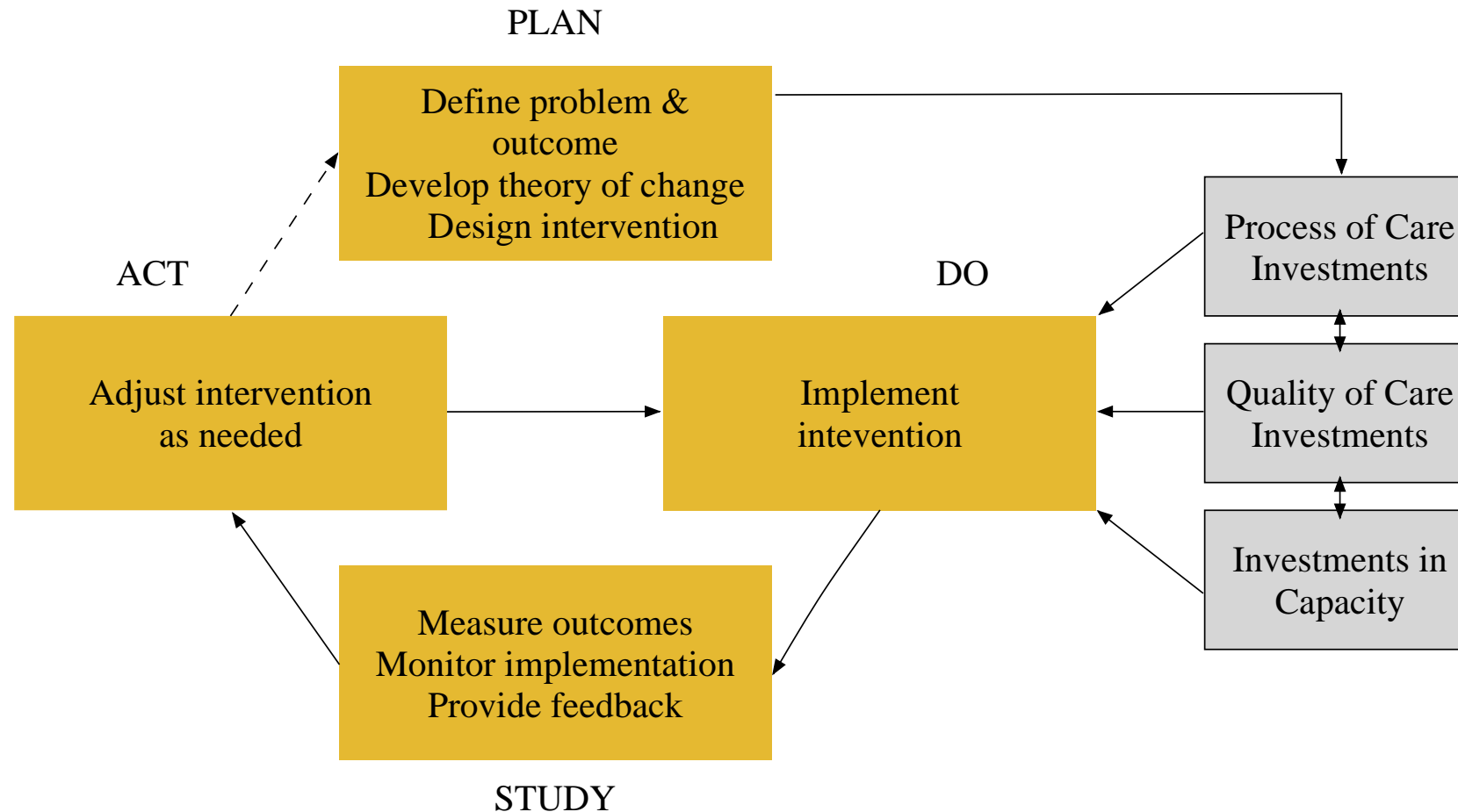
Theory of change

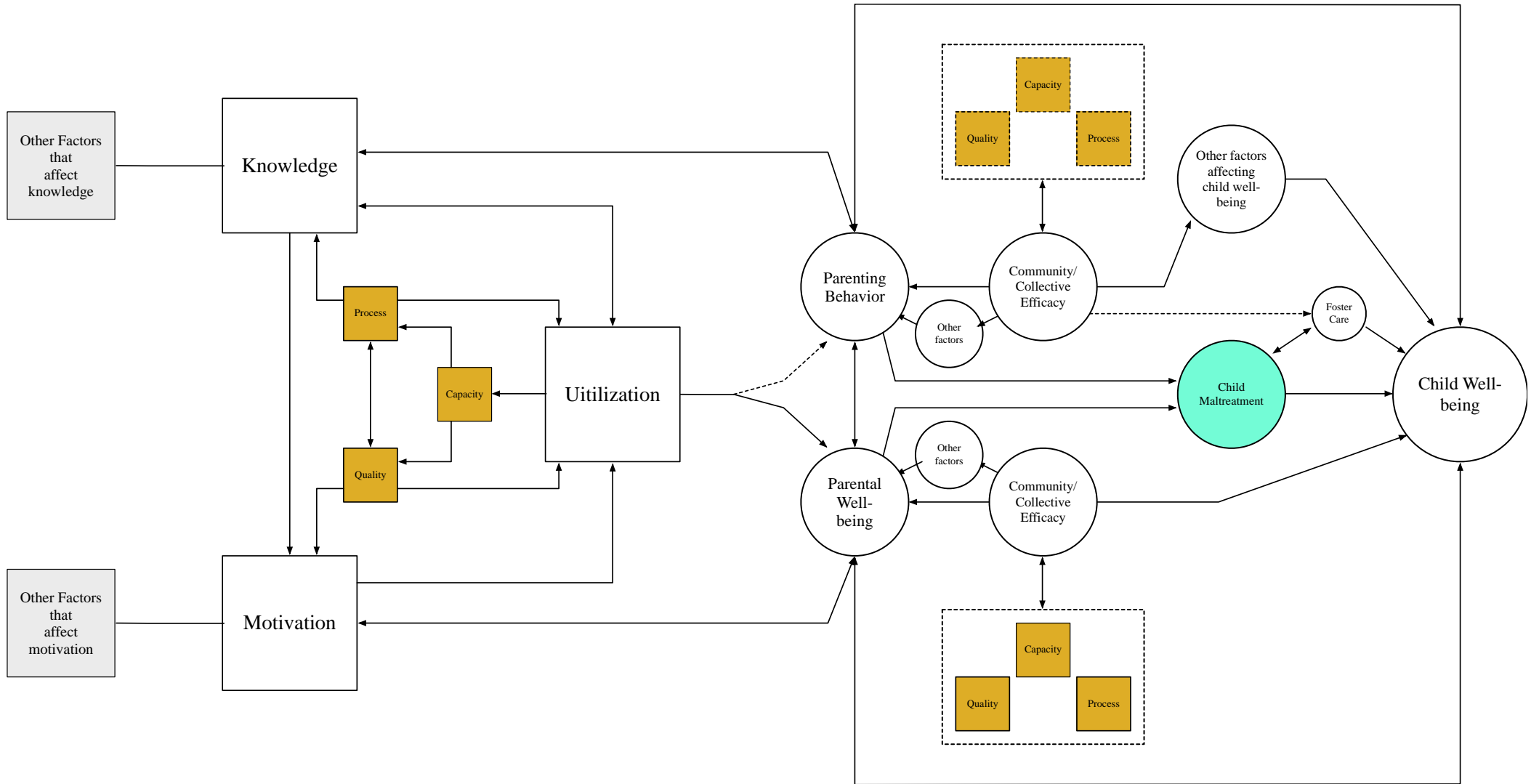
Figure 4: Hello Baby Theory of Change - Overview



The Science of Improvement

Figure 8: The PDSA Cycle with the Process, Quality and Capacity Link to Outcomes





Hello Baby

- Process
 - Contact with mother soon after birth regardless of tier
 - PRM that aligns risk and service tier
 - Quality focuses on worker supervision, trauma orientation, etc.
 - Capacity – staffing and training
- Service bundles aligned with risk tiers
 - Outreach
 - Enrollment
 - Engagement
 - Persistence
 - Process, quality, and capacity are aligned with the desired outcomes

Evaluation Scope

- Process
 - Capture the process, quality, and capacity changes that characterize Hello Baby
- Outcomes
 - Reduce substantiated maltreatment and foster care placement
- Impact
 - Pre-Hello Baby children compared with post-Hello Baby children using an intent-to-treat (ITT) analysis
 - A discrete time hazard model predicts the likelihood that a child will experience an outcome in each time period, given that they have not yet experienced that outcome (after controlling for both static and time-varying covariates).

Process Study

Process Study – Activities

Analyzing **program data** from Synergy, Penelope, & FCU

2021

Site Visit

virtual interviews
with 30 staff

2022

Site Visit

interviews with 35 staff,
focus groups with 16
participants

2023

Site Visit

Interviews with 41 staff,
focus groups with
participants and those
who chose not to
participate in priority tier
services

2024

Site Visit

Continue to pursue parents
who chose not to participate,
and understand outreach,
enrollment, and engagement
patterns in program data

Process Study: A Look Ahead

- Continue to learn how the program is operating and changing
- Continue to learn how participants experience the program through the priority and family support tiers
- Learn why people may choose not to engage with or disengage early from the program
- Track program activities alongside changes in outcomes

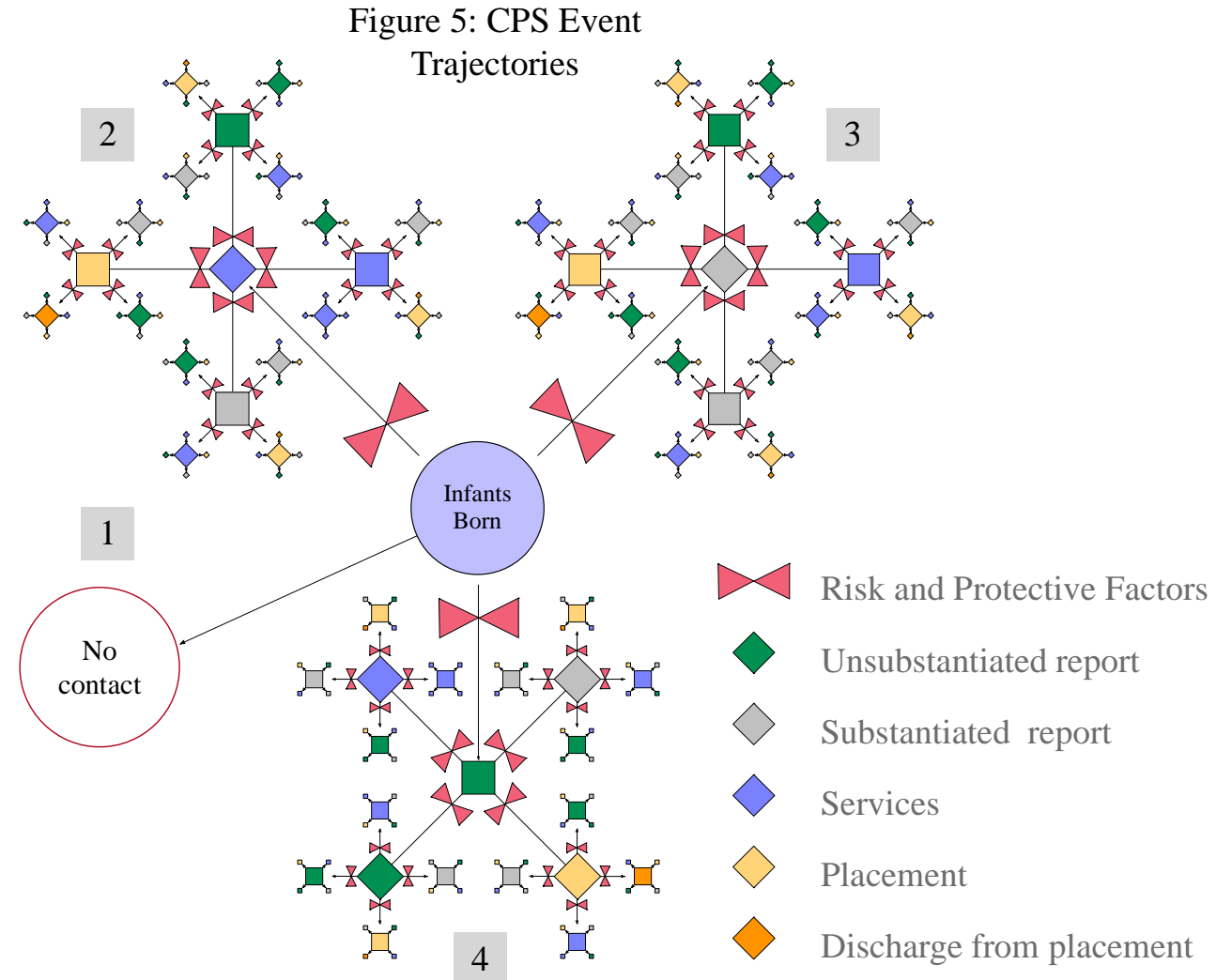
Impact Study

Impact Study – Activities

- **Source data examination and cleaning**
 - Child welfare administrative data (investigation, placement, other system involvement data)
 - Birth records and PRM
 - HB program data (HS data from Penelope, FSC data from Synergy)
- **Data linking and analytic file development**
 - Maltreatment event creation
 - Placement event creation
 - HB involvement event creation
 - Integration of all events into a master event trajectory file
- **Ongoing monitoring indicators design**
 - Target population
 - Program involvement
 - Outcomes
- **Preliminary program and outcome analysis**
 - Healthy Stare assessment analysis
 - Event trajectory and pathways
 - Likelihood of initial investigation/placement since birth, likelihood of placement since initial investigation
- **Study design refinement**
 - Interrupted time series (to analyze maltreatment foster care outcome for pre- and post-Hello Baby population)

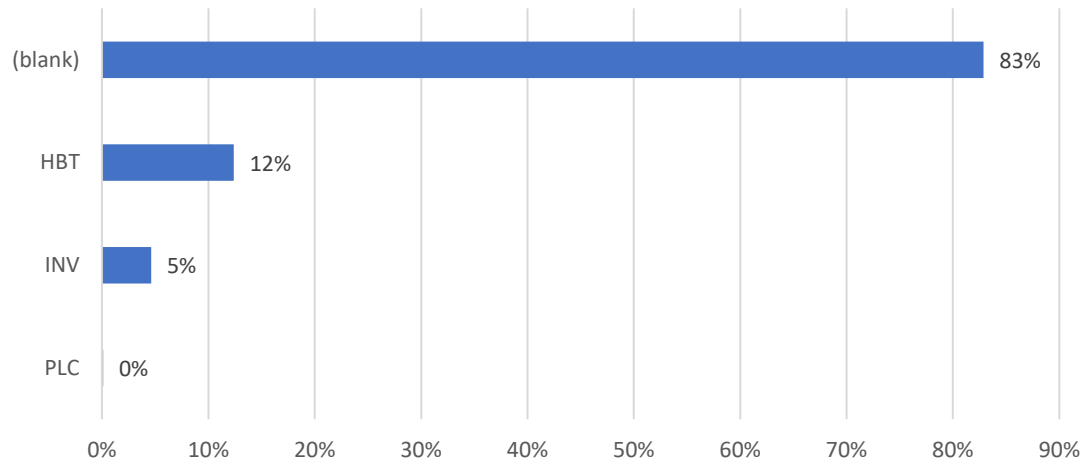
Outreach, Engagement, Enrollment, Persistence

- Timing relative to birth
 - Services onset - engagement
 - Number of services - enrollment
 - Duration of service – persistence
 - Report of maltreatment
 - Substantiated or not
 - Placement in foster care
-
- Service distinctions
 - Child welfare services
 - Child protection services



Let's focus on the root event being BIRTH: what happens next, and the duration between the first and second event?

Given root event=Birth, what happened next

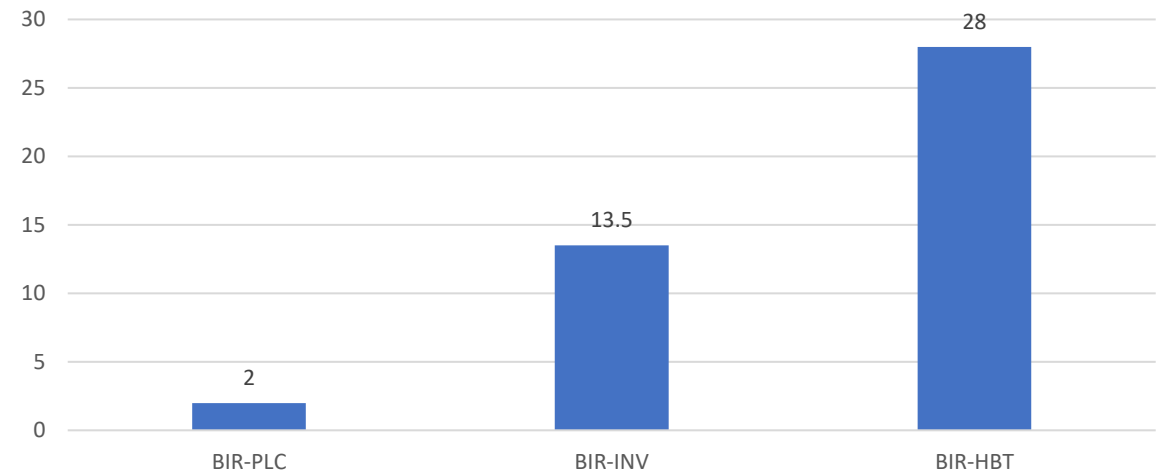


first_cy	2021
ev1	BIR
Sum of Estimate	
rootpair	25
BIR-PLC	2
BIR-INV	1
BIR-HBT	4

Perce	50	75
BIR-PLC	2	4
BIR-INV	13.5	229
BIR-HBT	28	34

first_cy	(Multiple Items)	first_cy	(Multiple Items)
ev1	BIR	ev1	BIR
Sum of COUNT		Sum of COUNT	
ev2	Total	ev2	Total
PLC	29	PLC	0%
INV	1202	INV	5%
HBT	3228	HBT	12%
(blank)	21591	(blank)	83%
Grand Total	26050	Grand Total	100%

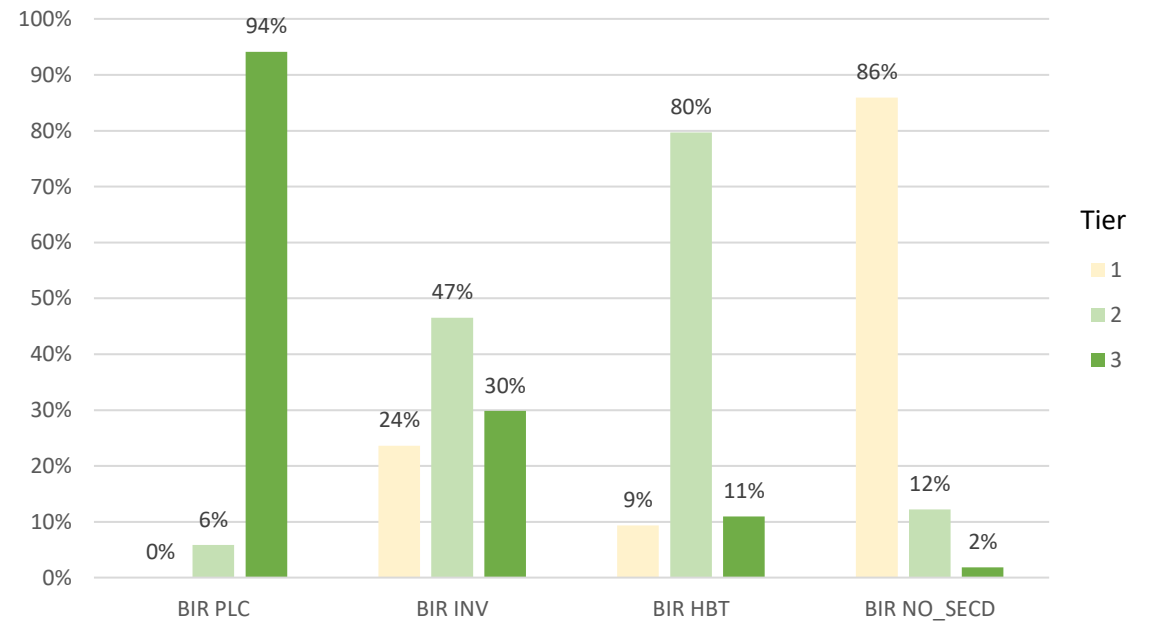
Median duration from birth to the second event



Risk tier associated with root pair events that started with BIRTH

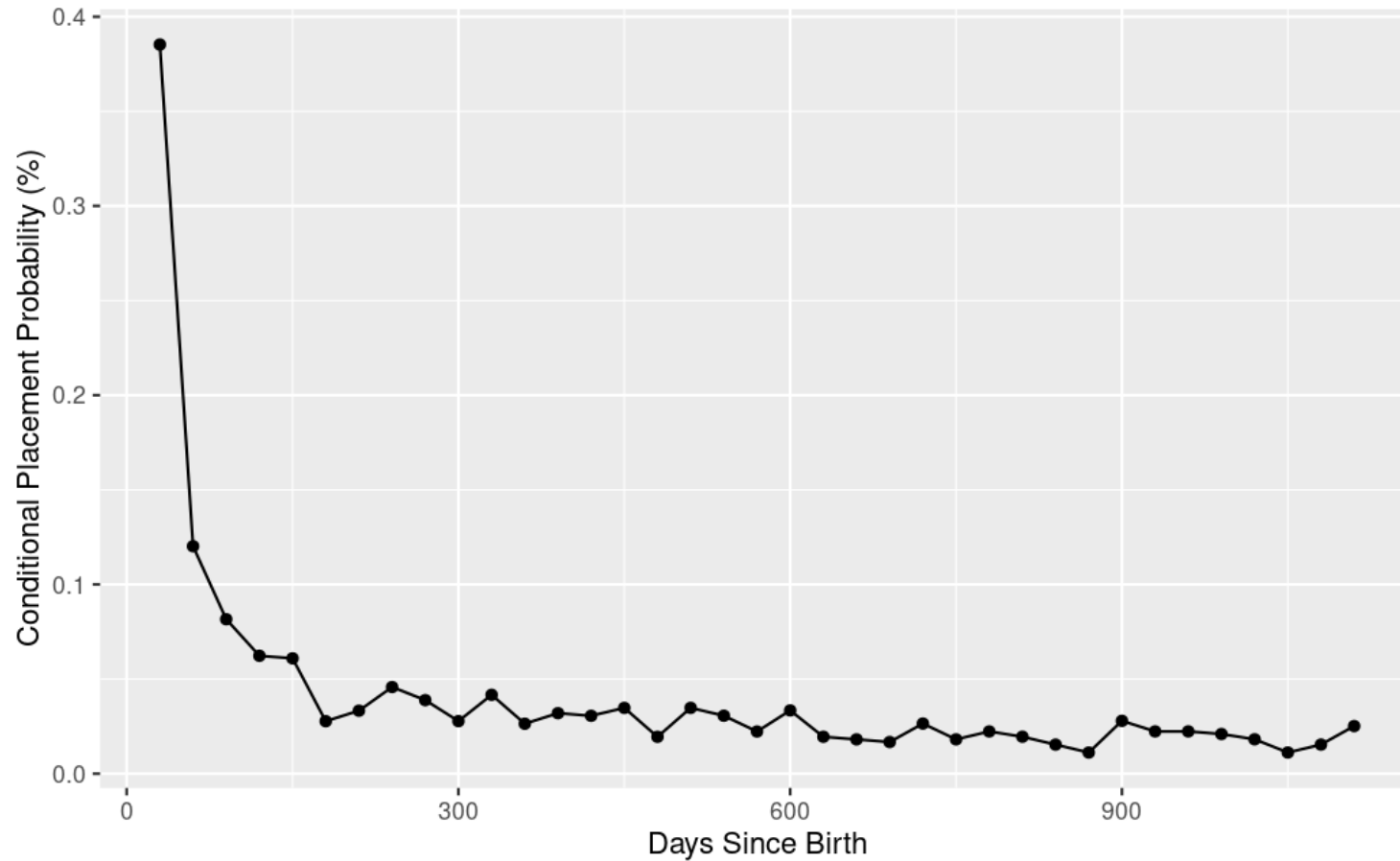
first_cy		2021				
Sum of COUNT rootpair	tier					Grand Total
	0	1	2	3		
BIR PLC			1	16	17	
BIR INV	63	140	276	177	656	
BIR HBT	202	98	836	115	1251	
BIR NO_SECD	48	8670	1233	187	10138	
Grand Total	313	8908	2346	495	12062	

first_cy		2021				
Sum of COUNT rootpair	tier					Grand Total
	0	1	2	3		
BIR PLC	0%	0%	6%	94%	100%	
BIR INV	10%	21%	42%	27%	100%	
BIR HBT	16%	8%	67%	9%	100%	
BIR NO_SECD	0%	86%	12%	2%	100%	
Grand Total	3%	74%	19%	4%	100%	



Early Outcomes

Conditional Probability of Placement in 30-day Intervals from Birth



Impact Study – A Look Ahead

- Continue to work with DHS data experts to resolve the remaining data matching and linkage issues
- Monitor program dosage and outcomes
- Construct comparison group(s) and establish baseline equivalency for the impact analysis
- Finalize model structure, explanatory variables and outcome variables, and the underlying analytic files
- Analyze HB's impact on the target population