

**NIH  
HEAL  
INITIATIVE**

Preventing Opioid Use  
Disorder in Older Adolescents  
and Young Adults

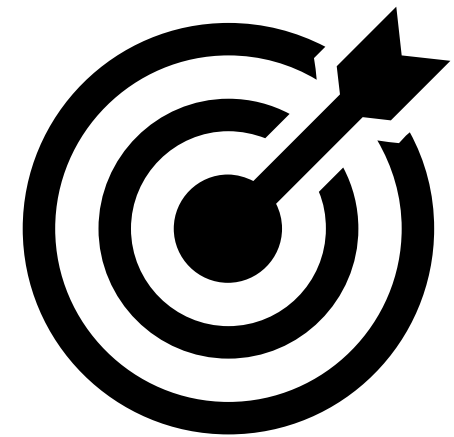
# Activity-Based Costing

September 30, 2022

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Cost-effectiveness analysis (CEA)

Cost-benefit analysis (CBA)

Cost-utility analysis (CUA)

Effectiveness

Benefit

Utility

# Cost Analysis

- Cost data collection
  - Precision: relying on annual program-level expenditures vs. **activity-based** (i.e., micro-costing)
  - Perspectives: payer, health care sector, societal, state/taxpayer, provider
- Choice of perspective dictates:
  - Which resources to include in the analysis
  - How to value the resources that are included

# Intervention Costs to Consider

Cost Concepts	Definition	Examples
Start-up/fixed costs	Mandatory to implement a program (“sunk” whether you enroll 0 patients or 100 patients)	<ul style="list-style-type: none"><li>• Staff trainings</li><li>• Equipment</li><li>• Licensing</li></ul>
Time-dependent costs	Vary with time rather than the quantity of output (e.g., patient visits)	<ul style="list-style-type: none"><li>• Building/facilities rent</li><li>• Equipment leases</li></ul>
Variable costs	Vary with output (e.g., number of patients)	<ul style="list-style-type: none"><li>• Staff</li><li>• Supplies</li><li>• Medications</li></ul>
Economic costs	Direct expenditures plus opportunity costs incurred while implementing a program	<ul style="list-style-type: none"><li>• Volunteer effort</li><li>• Subsidized rent</li><li>• Donated supplies</li></ul>

# ABC: Resource Valuation and Price Weights

- For each phase of intervention implementation, the activities, resource quantities, and unit prices are tracked

Price Weight per Resource  
X Units of Resource

Resource	Price Weight
Staff hours in training	Hourly wage
Intervention manuals	Cost to produce a manual

- Appropriate price weights depend on perspective
  - Societal: opportunity cost of resources to society
  - Payer: actual payments made to providers

# ABC: Start-up and Implementation Costing

*Use same ABC approach for all intervention phases*

- For each activity, measure quantity and unit price of each resource used

*What's different during implementation from start-up ABC?*

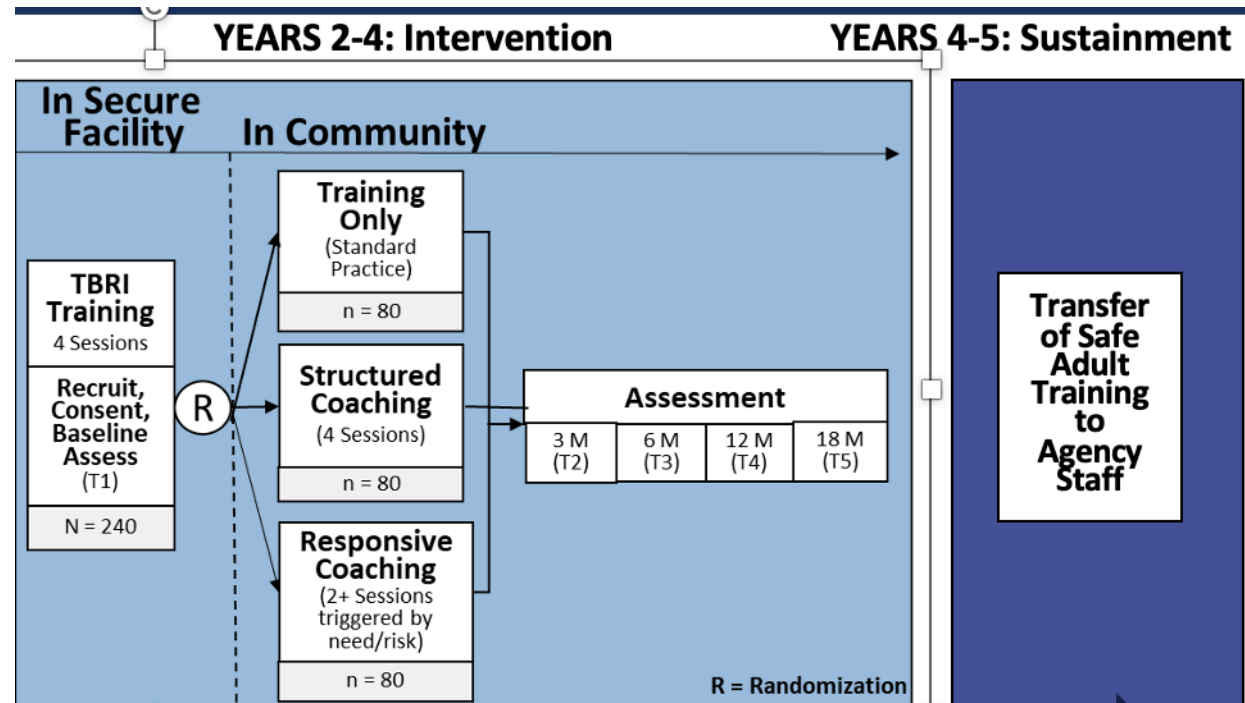
- Costs need to be estimated **per study participant**
  - Preferably patient specific to study subgroups
- Different categories of costs reflect ongoing management of the intervention

# Preventing Opioid Use Among Justice-Involved Youth as They Transition to Adulthood: Leveraging Safe Adults (LeSA; 4UG3DA050250 , 4UH3DA050250)

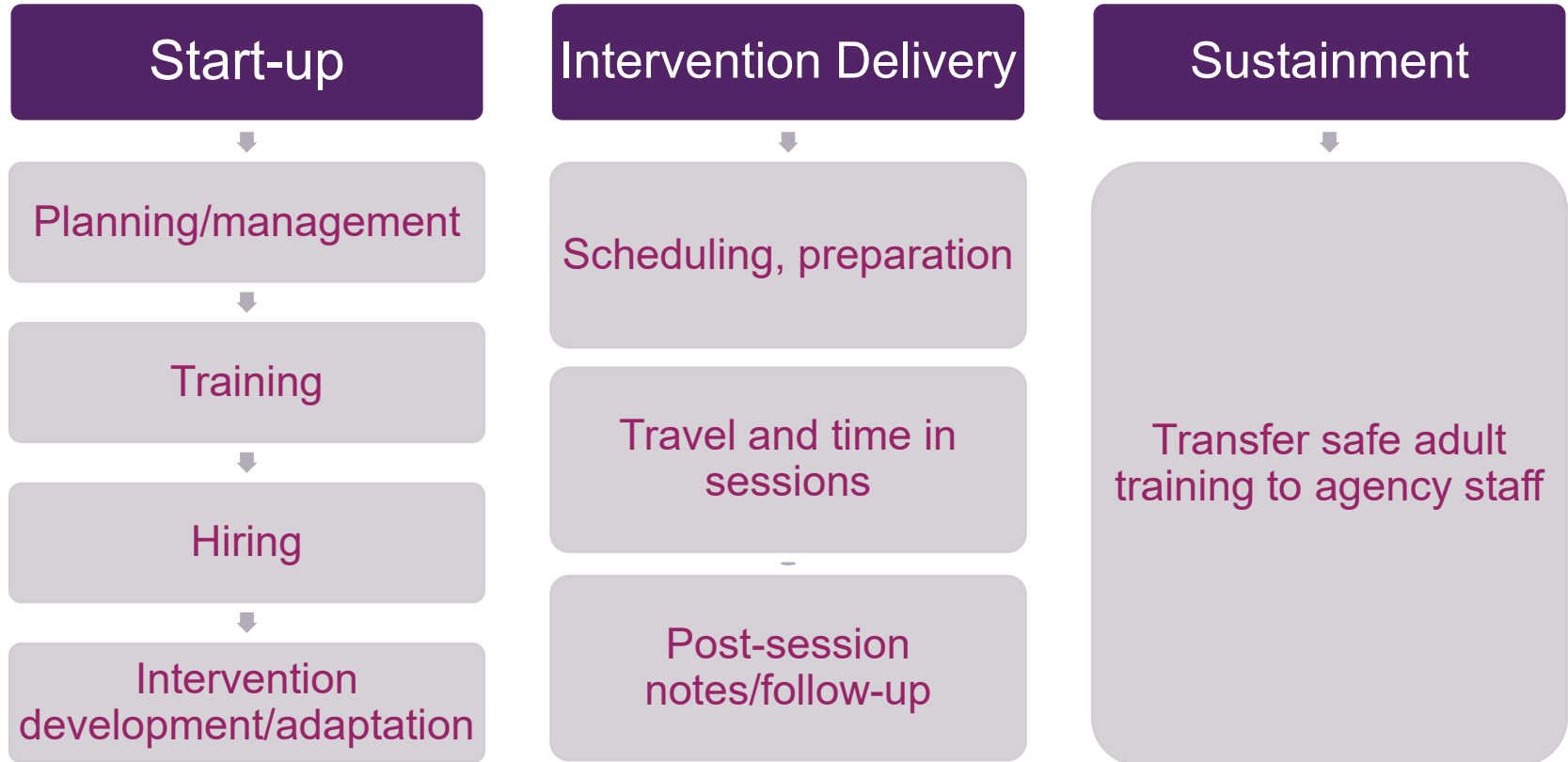
Assisting justice-involved youth in developing relationships with adults who serve as guides and mentors using evidence-based Trust-Based Relational Intervention® (TBRI®)



Principal Investigator  
Danica K. Knight, PhD



# LeSA: Activities and Resources



# Occupation mapping to find hourly wages

Position	Credentials	O*NET Occupation	Hourly Wage (national)
Probation services director	BA Criminology	“Probation Officers and Correctional Treatment Specialists”	\$26.10
Case manager	LPCI	“Mental Health and Substance Abuse Social Workers”	\$22.43
Interventionist	LMSW	“Social Science Research Assistants”	\$22.84
Facility administrator	BA Psychology	“Medical and Health Services Managers”	\$48.55



# Summary

- ABC is a micro-costing method for estimating intervention costs
- ABC allows for more precision in measuring and valuing time and other resources
- Start-up costs are presented as the total cost during the start-up period
- Intervention costs are presented as a per-participant cost that will vary at the individual level on the basis of intervention engagement
- Per-participant costs can be compared to individual outcome data to estimate cost-effectiveness models for a full economic evaluation

# Thank you!

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