TODAY'S PRESENTERS

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GOALS FOR TODAY

Discuss the special topics report on predicting completion in Healthy Marriage and Responsible Fatherhood (HMRF) programs

Describe the power of the model for predicting completion and highlight key findings

Gather input on how the findings can be most useful for HMRF practitioners and others

CONTEXT AND PURPOSE

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WHY DOES PARTICIPATION MATTER?

Evidence-informed intervention **✖** Consistent participation **=** Improved outcomes

WHAT FACTORS ARE ASSOCIATED WITH PARTICIPATION?
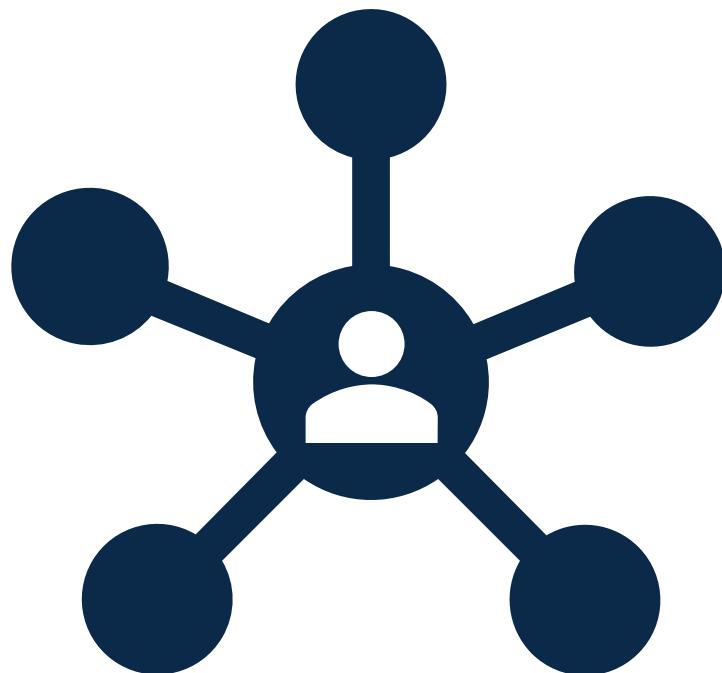
- Little research on this topic

- FRAMING research project examined workshop factors associated with participation at the workshop-series level

  - Longer and more frequent sessions were associated with greater attendance across populations

  - Workshop factors alone did not account for much of the difference in attendance

  - Findings published in OPRE Report No. 2021-103, Structuring Healthy Marriage and Responsible Fatherhood Workshops for Strong Attendance: Workshop Characteristics Associated with Client Participation

FOCUS ON COMPLETION OF PRIMARY WORKSHOPS

- For the current 2020 cohort, the Administration for Children and Families (ACF) is emphasizing participant completion of primary workshops

  - Completion = Participant attendance in 90 percent of target primary workshop hours

- ACF and grantees seek ways to help all participants complete workshops

- A better understanding of factors that influence completion can help grantees develop and guide program improvement efforts

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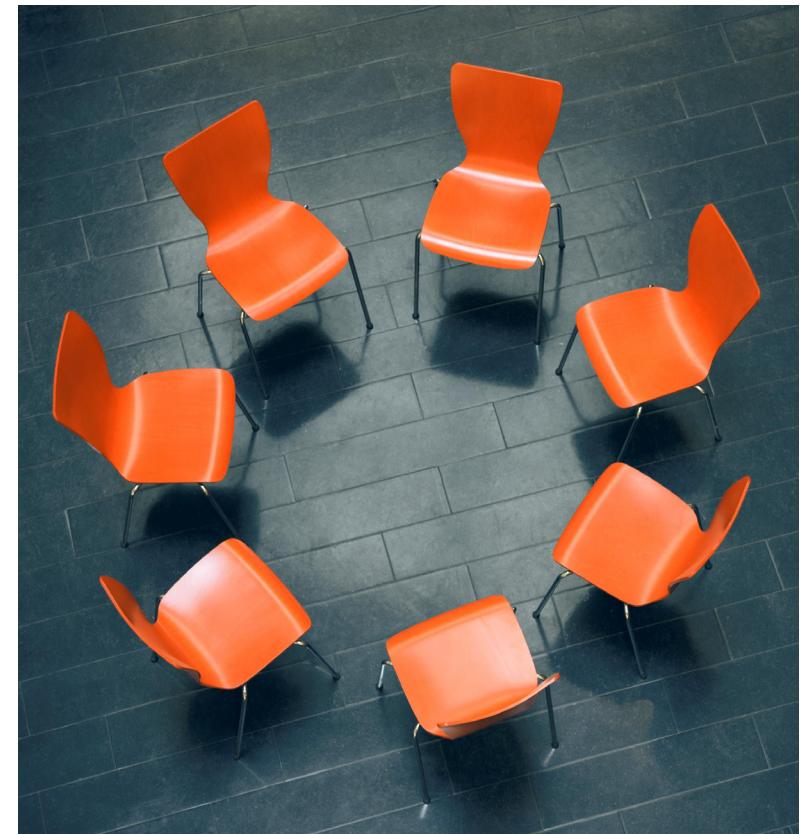
PURPOSE OF BUILD HMRF SPECIAL TOPICS REPORT

1

Use data collected by the 2015 HMRF cohort to identify workshop and client characteristics that will predict completion in primary workshops

2

Explore both the predictive model's feasibility (proof of concept) and which interactions are most important for predicting completion

3

Share findings with you through this webinar, a research-to-practice brief, and a technical appendix

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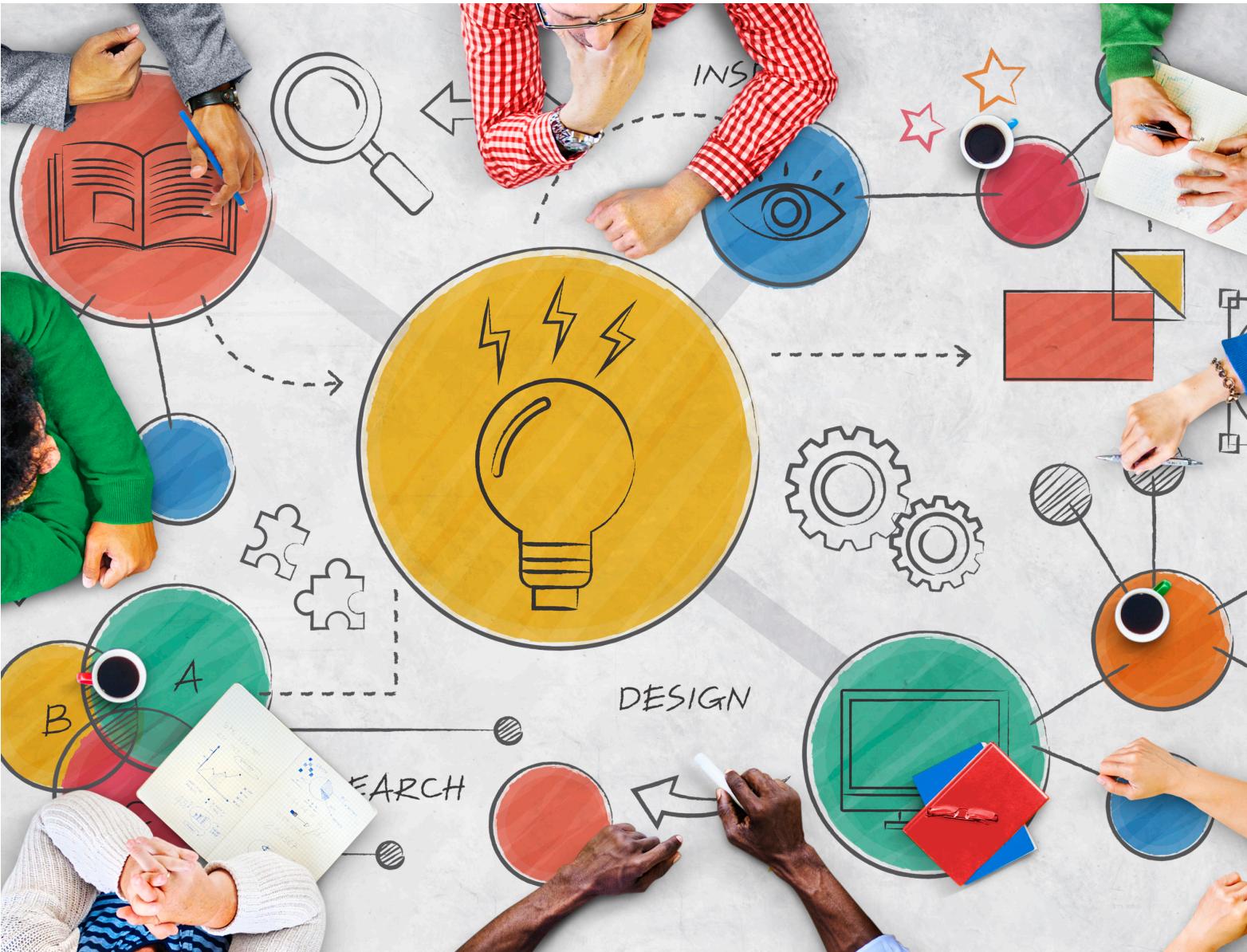
ANALYTIC APPROACH AND METHODS

GRANTEES AND PARTICIPANTS INCLUDED

43 grantees from the 2015 cohort with data from January 2018–September 2020

HM adult couples

Grantees: 21

Participants: 10,182

Workshop series: 724
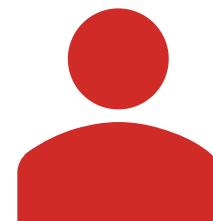
HM adult individuals

Grantees: 22

Participants: 7,909

Workshop series: 847

RF community individuals

Grantees: 17

Participants: 5,742

Workshop series: 825

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TYPES OF DATA USED

Workshop characteristics

- 30 primary workshop–focused variables documenting workshop characteristics

- Primarily binary variables (yes or no)

  - For example, Weekday session: 1 = held on a weekday; 0 = held on a weekend

- Additional examples include:

  - Day of the week and time of day delivered

  - Frequency of sessions

  - Length of sessions and session series

  - Type of content delivered

  - Number of facilitators leading the series

Client characteristics

- 60 participant-focused variables documenting baseline demographics

- Primarily binary variables (yes or no)

  - For example, Gender: 1 = female; 0 = male

- Additional examples include:

  - Age

  - Race/ethnicity

  - Educational attainment

  - Employment status

  - Perception of co-parenting quality

  - Perception of relationship quality

ANALYSIS STRUCTURE

Predictor variables

- 30 workshop characteristic variables
- 60 client characteristic variables

Outcome variable

- Attended 90 percent of target hours or not

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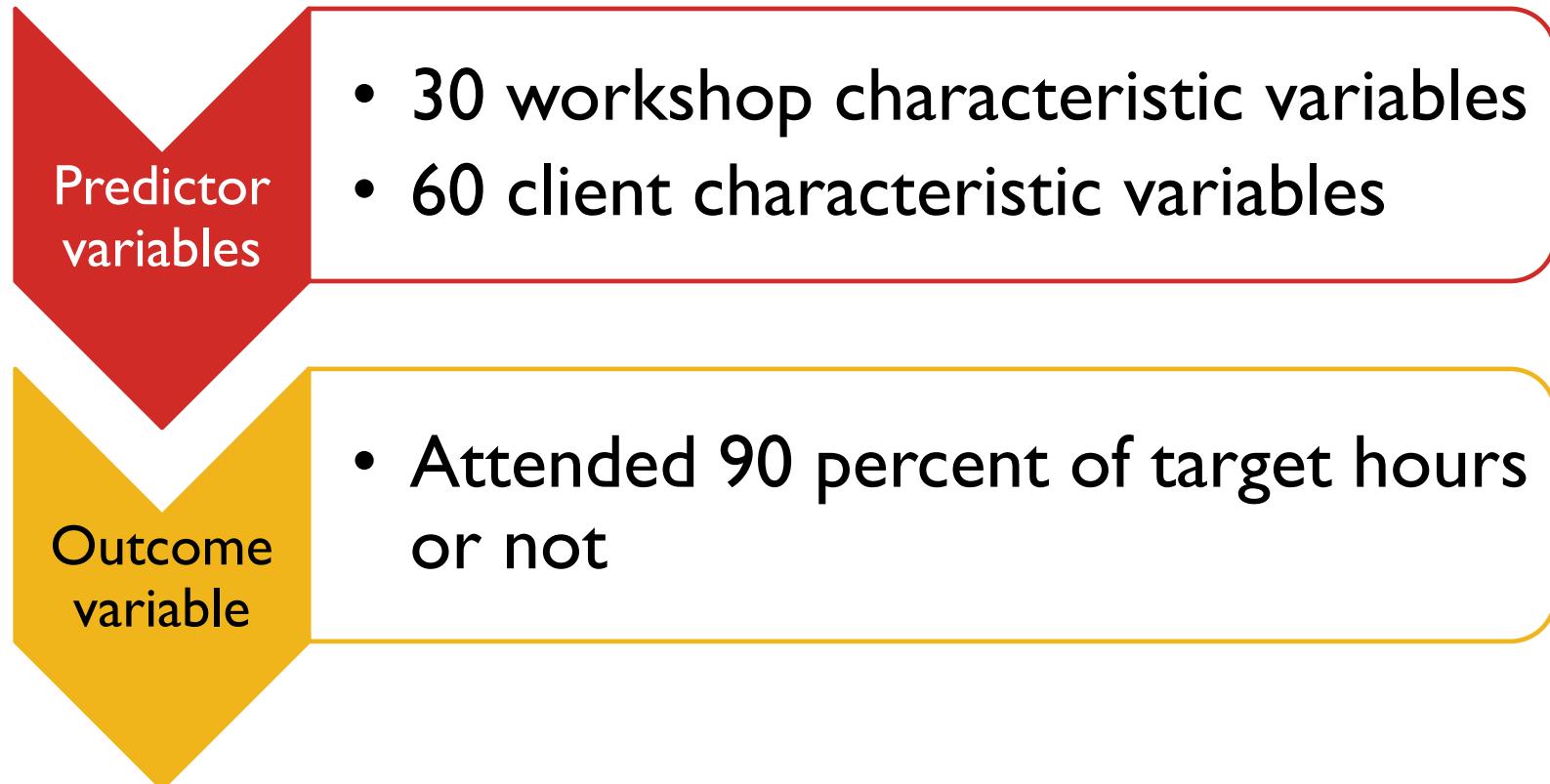
ANALYSIS: TREE-BASED ALGORITHMS
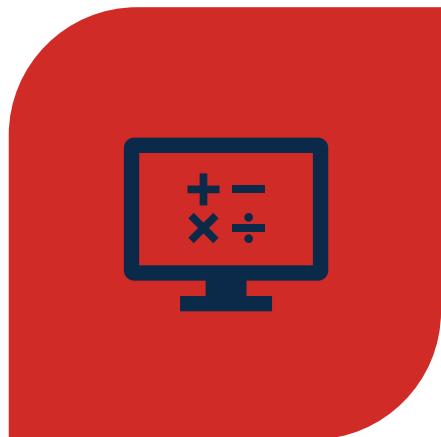
We used a powerful predictive analytic approach
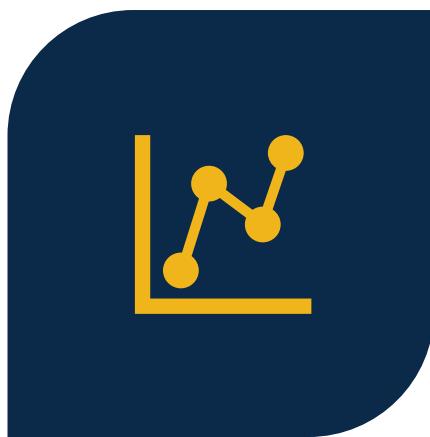
Forms a stable predictive model by repeating the analysis 1,000 times with different people and variables
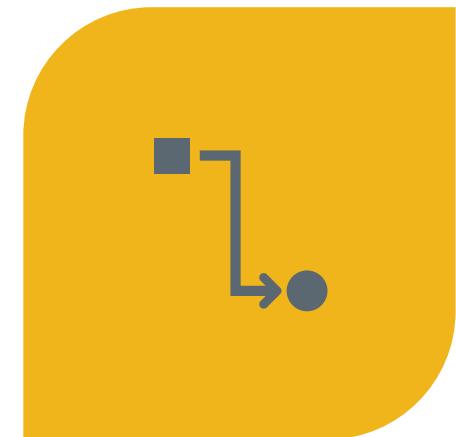
The model shows us which factors are associated with higher probability or chances of completion

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EXAMPLE REGRESSION TREE
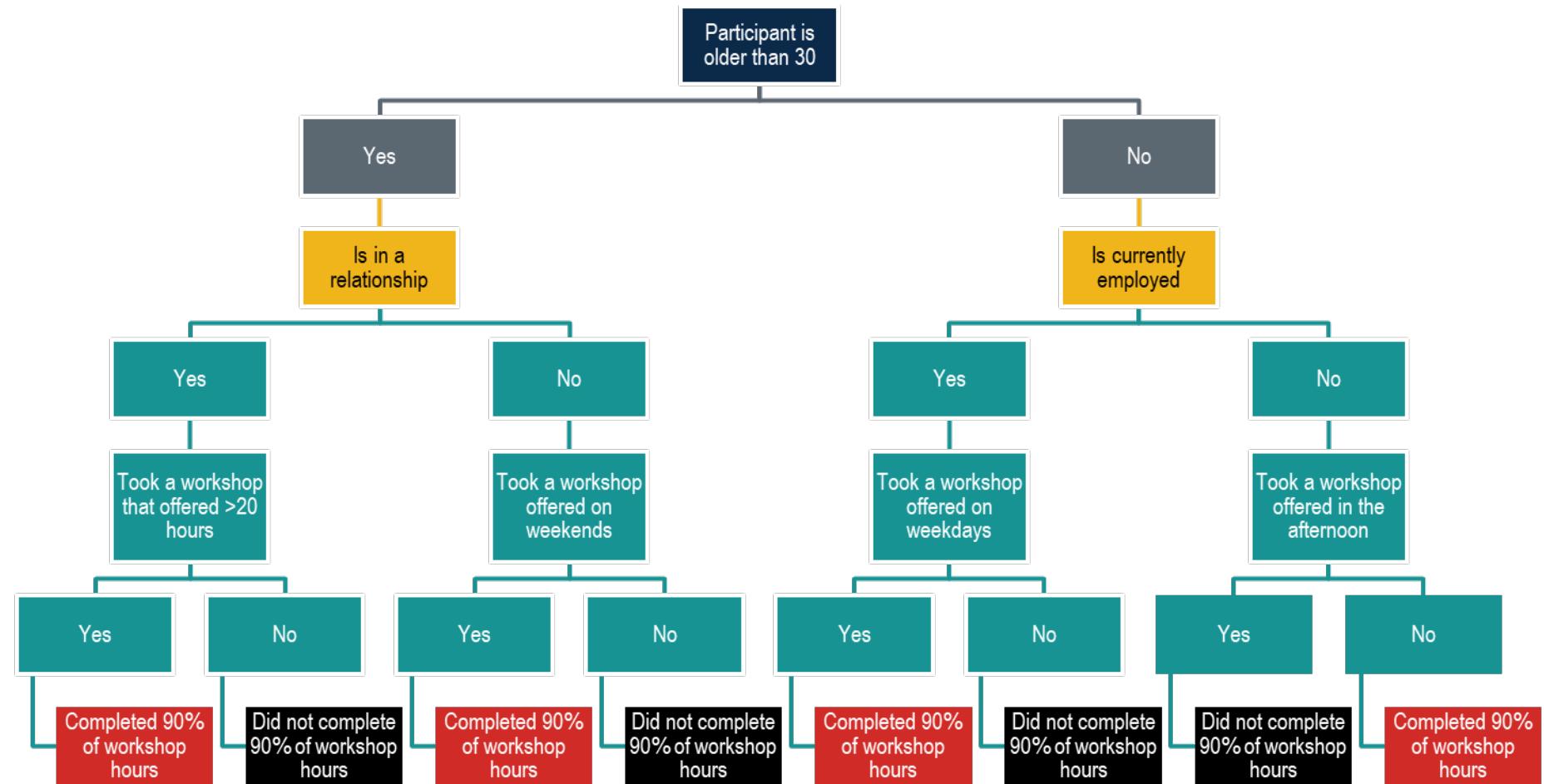
EXAMPLE OF RANDOM FOREST (1)
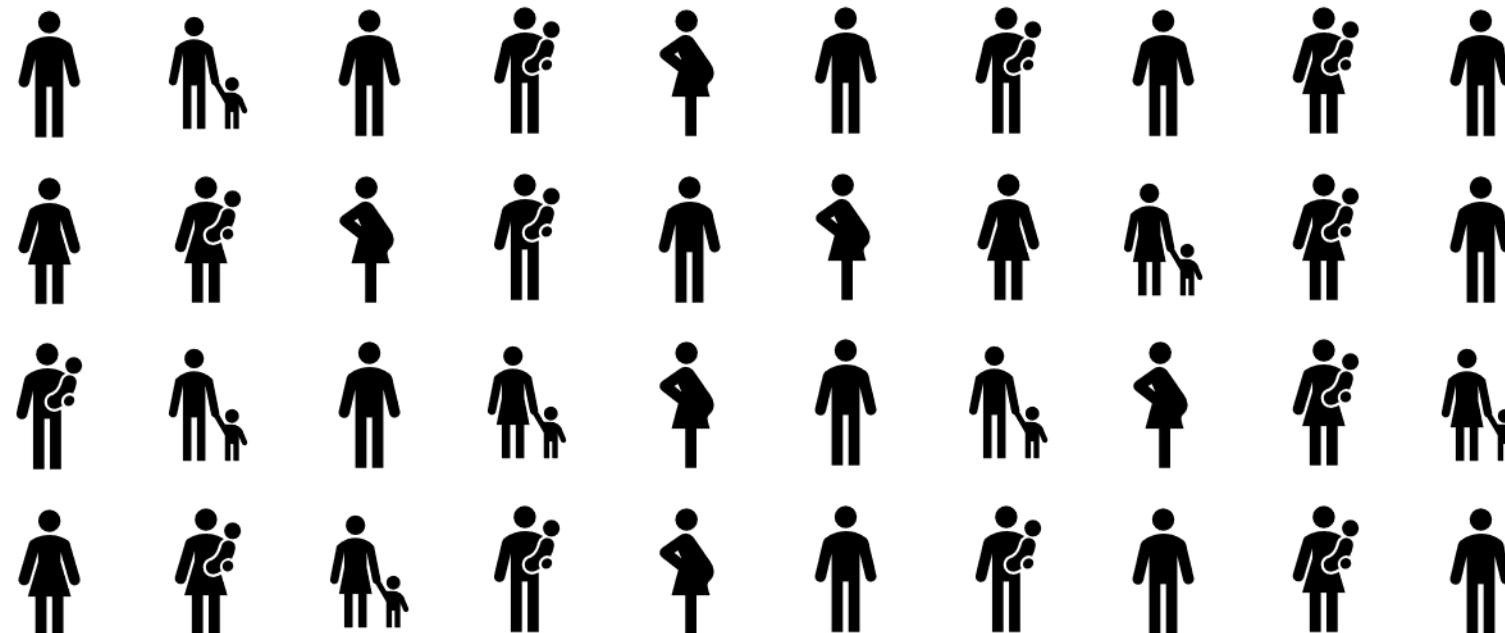
Develop predictive model

Test predictive model

EXAMPLE OF RANDOM FOREST (5)

Test predictive model → **% of test sample correctly classified as a completer or not a completer**

QUESTIONS?

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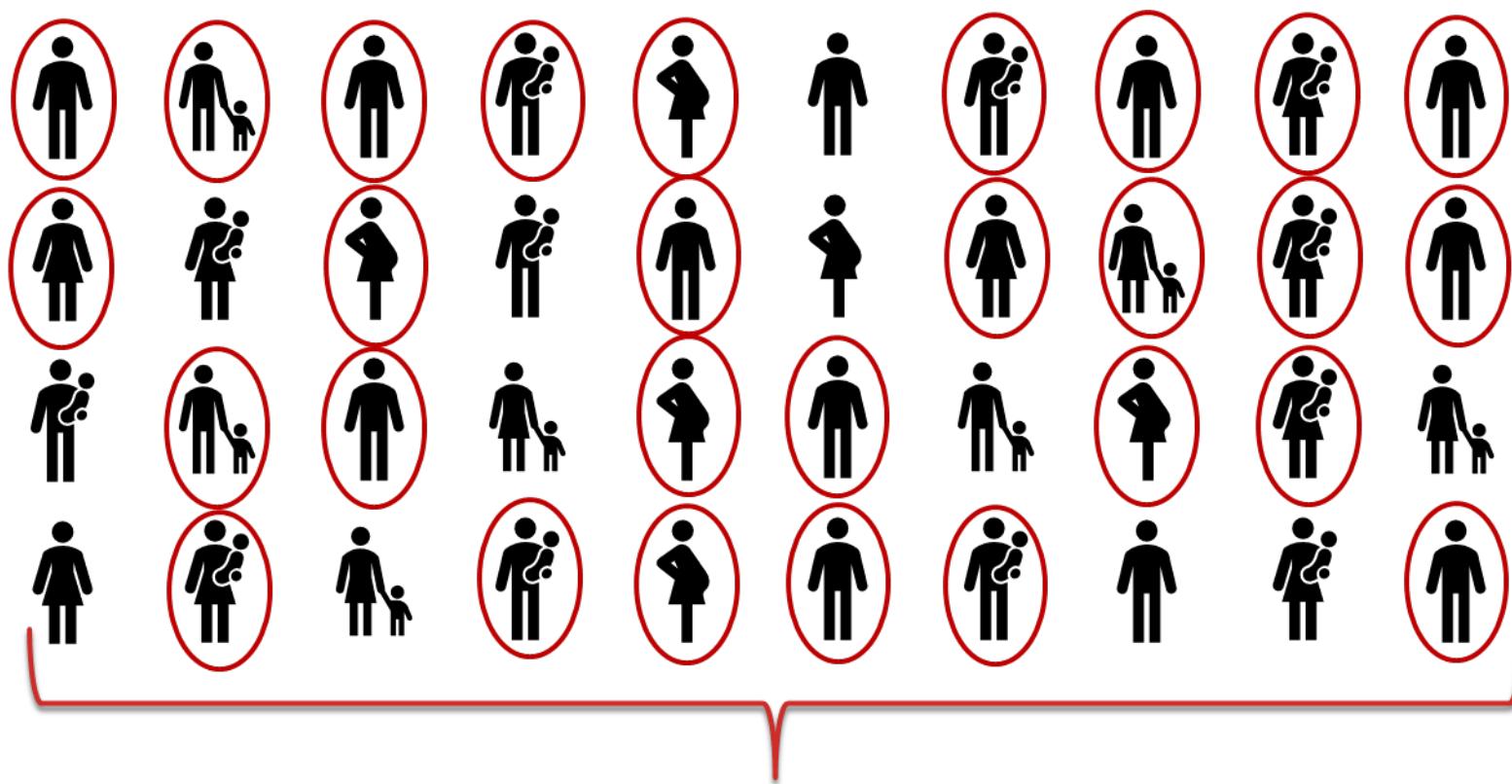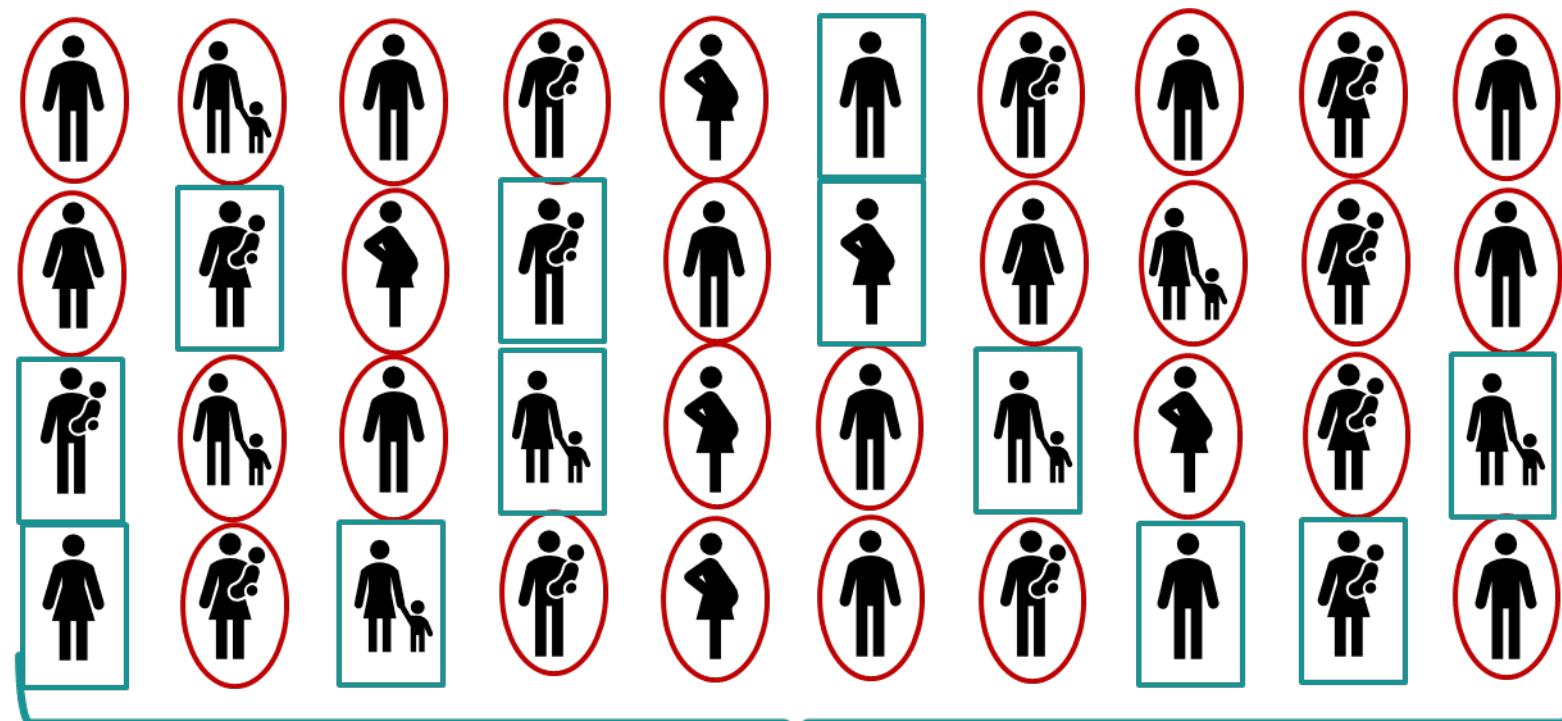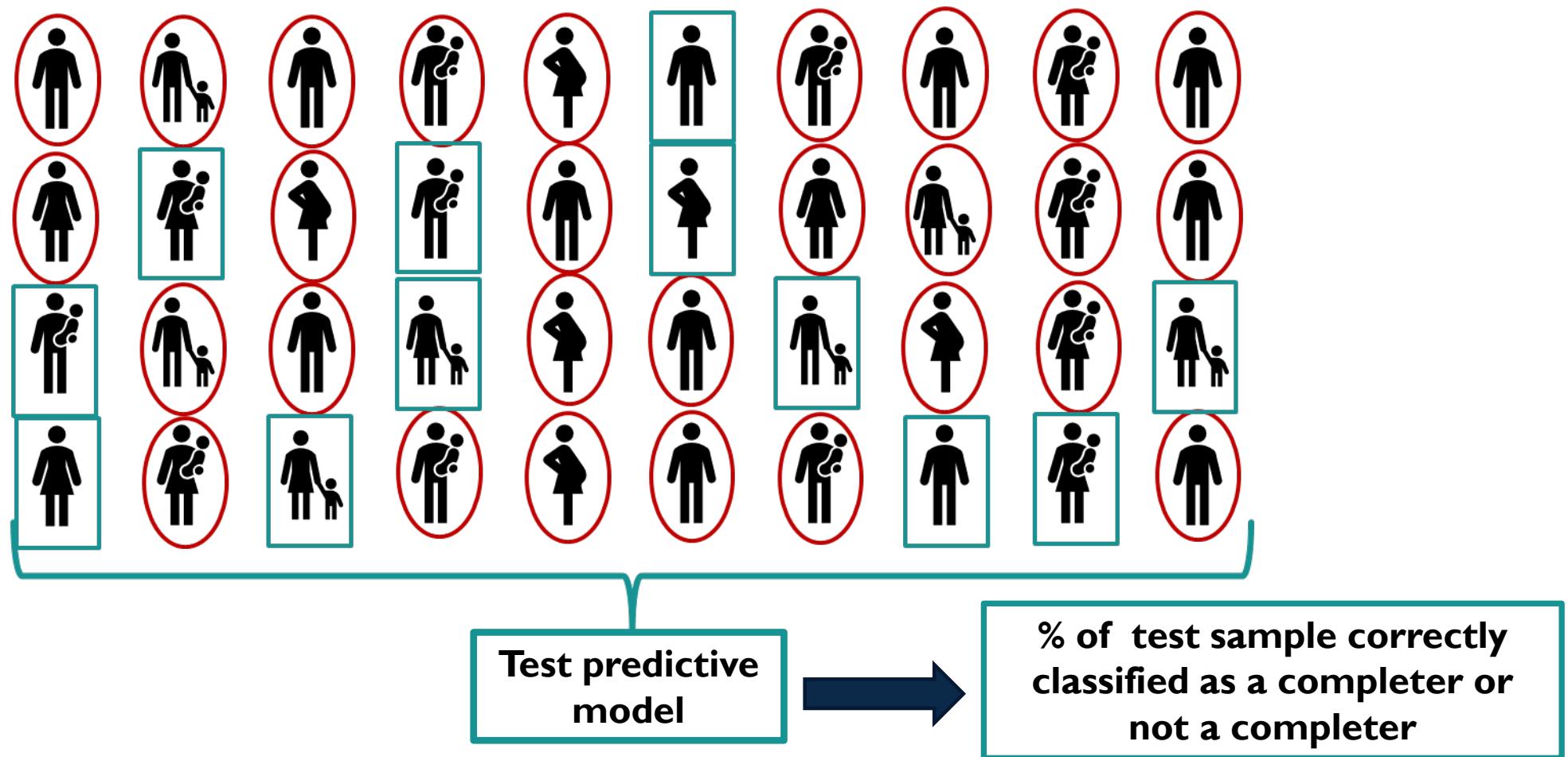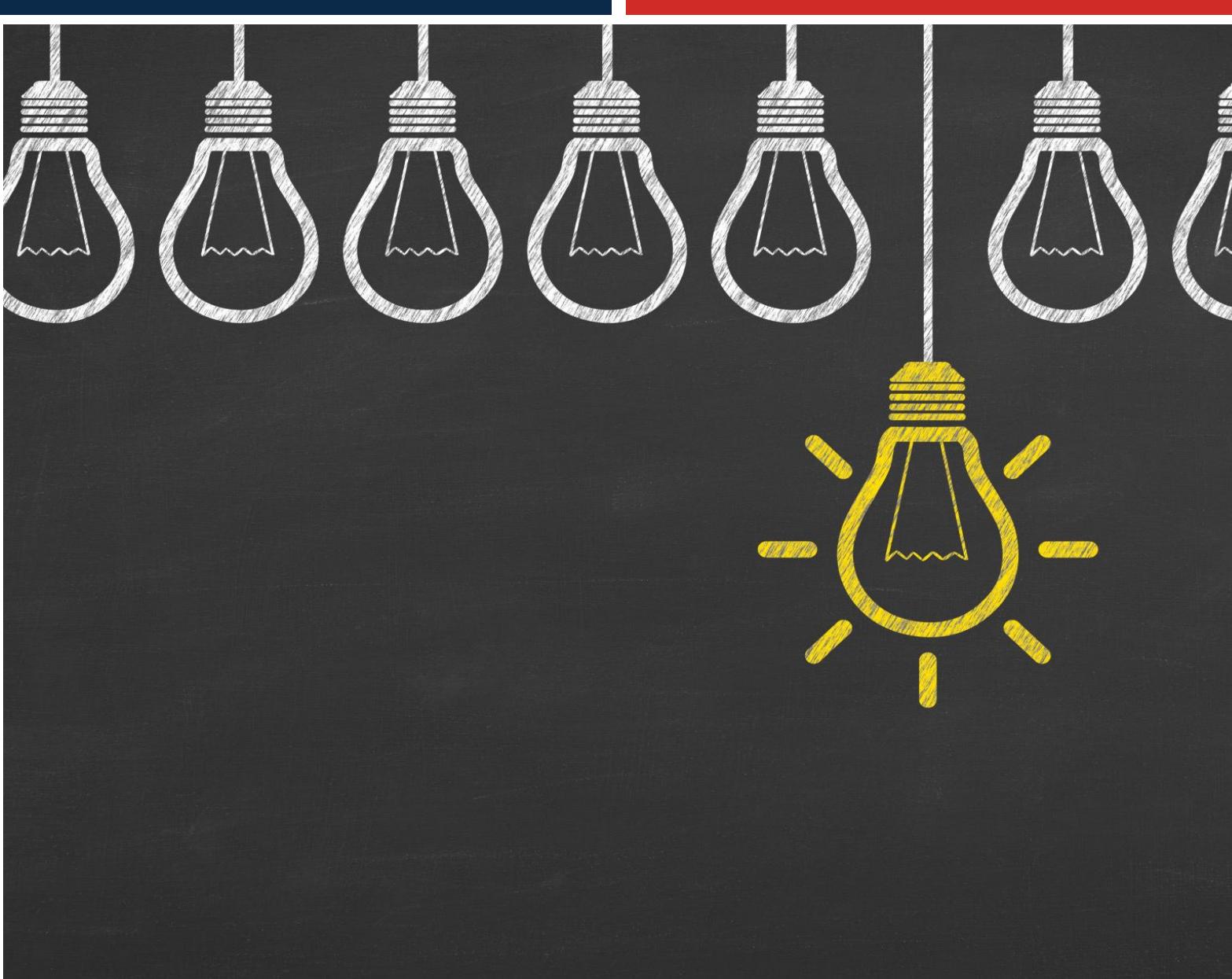
FINDINGS

A POWERFUL TOOL FOR MODELING *EQUITABLE* SERVICE PROVISION

- We identified a good set of variables to predict completion and created a highly accurate model
- However, prediction is complex
  - Many small interactions between workshop and client characteristics matter
  - A change to workshop structure does not guarantee increased participation
- Context matters
  - Programs should consider both workshop and client characteristics to reach targets
- Model can be used to more equitably structure workshops, so people have the option to attend what works best for them
  - To illustrate optimal and suboptimal combinations of workshop characteristics that predict participation for a range of HMRF participants, we developed a series of scenarios
  - Scenarios like these could be used to help grantees more equitably serve their communities and meet clients where they are

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SCENARIO A: GRANTEE SERVING HM COUPLES (1)

- This grantee serves a large metropolitan area.

- The grantee's typical service population includes primarily White or Hispanic couples who are already parents, are pregnant with a subsequent child, and are in a steady romantic relationship.

- The primary workshop curriculum provides more than 20 hours of content.

- Recently, this grantee has seen an influx of unmarried couples who are pregnant with their first child.

- The program is curious about how to best structure its workshops to serve both its typical population and this new group of participants.

Married couples with children

Participant profile

Summary of characteristics

- Most couples are ages 18 to 24
- Participants are Hispanic, White, and Black
- Most couples make less than $500 to $1000 per month
- The majority of couples have a high school diploma
- The majority of couples either rent their home or stay for free with relatives or friends
- Most couples enrolled in the program to improve their parenting skills

Optimal workshop characteristics

- Weekends and weekdays
- Afternoon sessions
- One facilitator
- Duration over 4 hours
- 2-4 times per week
- 20+ participants
- Series led by grantee
- 3-5 sessions

Sub-optimal workshop characteristics

- Weekday only
- Evening sessions
- Multiple facilitators
- Duration 1-2 hours
- Weekly
- No participant limit
- Series led by grantee
- 10+ sessions

Probabilities of completion

- 82%
- 11%

Unmarried couples expecting their first child

Participant profile

Summary of characteristics

- Most couples are ages 25 to 34
- The majority of participants are White or Hispanic
- Most couples make $1000 to $2000 per month
- The majority of couples have a high school diploma
- The majority of couples own or rent their own home
- Most couples enrolled to improve their parenting and relationship skills

Optimal workshop characteristics

- Weekends and weekdays
- Afternoon sessions
- One facilitator
- Duration over 4 hours
- 2-4 times per week
- 20+ participants
- Series led by grantee
- 3-5 sessions

Sub-optimal workshop characteristics

- Weekday only
- Morning sessions
- Multiple facilitators
- Duration 1-2 hours
- Weekly
- No participant limit
- Series led by grantee
- 10+ sessions

Probabilities of completion

- 84%
- 15%

This grantee could offer one workshop structure to best serve all of its participants.

SCENARIO B: GRANTEE SERVING HM INDIVIDUALS (1)

- This grantee serves a suburban area outside a major metropolitan city.

- The grantee typically serves employed women who vary in age and are in a steady romantic relationship. Most of the women have children.

- The primary workshop curriculum provides 12 to 19 hours of content.

- Recently, the grantee formed a new referral partnership with a pregnancy clinic in its community and had an increase in enrollment of unemployed women expecting their first child.

- The grantee is curious about whether it should offer a different workshop structure to best serve this new group.

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Employed women with children

Participant profile

Summary of characteristics
- Most women were ages 25 or older
- The majority of participants are White
- Most women make $1000 to $2000 per month
- The majority of women have at least some college or higher educational attainment
- The majority of women own or rent their home
- Most women enrolled to improve their relationship skills

Optimal workshop characteristics
- Weekends and weekdays
- Morning sessions
- One facilitator
- Duration over 4 hours
- 2-4 times per week
- No participant limit
- Series led by grantee
- 3-5 sessions

Sub-optimal workshop characteristics
- Weekday only
- Afternoon sessions
- One facilitator
- Duration 1 hour
- 2-4 times per week
- 20+ participants
- Series led by grantee
- 10+ sessions

Probabilities of completion: 71% / 30%

Unemployed women expecting their first child

Participant profile

Summary of characteristics
- Most women are ages 18 to 34
- The majority of women are Hispanic
- Most participants make less than $500 per month
- The majority of women have a high school degree or less
- Most women rent their home or stay for free with relatives or friends
- Most women enrolled to improve their parenting and relationship skills

Optimal workshop characteristics
- Weekends and weekdays
- Afternoon sessions
- One facilitator
- Duration over 4 hours
- 2-4 times per week
- No participant limit
- Series led by grantee
- 3-5 sessions

Sub-optimal workshop characteristics
- Weekday only
- Evening sessions
- One facilitator
- Duration 1 hour
- 2-4 times per week
- No participant limit
- Series led by grantee
- 10+ sessions

Probabilities of completion: 66% / 26%

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The incoming clients are likely to reach completion with the same workshop structure as the current clients, except with afternoon instead of morning sessions.

SCENARIO C: GRANTEE SERVING RF COMMUNITY INDIVIDUALS (1)

- This grantee serves a large urban area.

- The grantee's typical clients are middle-aged Black men who are in a steady romantic relationship. Most of the men are employed, either part-time or full-time, and live in stable housing.

- The primary workshop curriculum provides 24 to 29 hours of content.

- This grantee recently expanded into a new community and had an increase of unemployed Black men younger than 25 start to enroll.

- The grantee is interested to see which workshop structure would best serve this new group of fathers.

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Middle-aged, employed men

Participant profile

Summary of characteristics

- Men are primarily Black
- Most men make $1000 to $3000 per month
- Most men have at least some college or higher educational attainment
- The majority of men own or rent their home
- Most men enrolled to improve their parenting skills

Optimal workshop characteristics	Sub-optimal workshop characteristics
Weekday only	Weekday only
Afternoon sessions	Afternoon sessions
Multiple facilitators	Multiple facilitators
Duration 2-4 hours	Duration 1-2 hours
Daily	Weekly
No participant limit	No participant limit
Series led by partner	Series led by grantee
10+ sessions	10+ sessions

Probabilities of completion

- 62%
- 17%
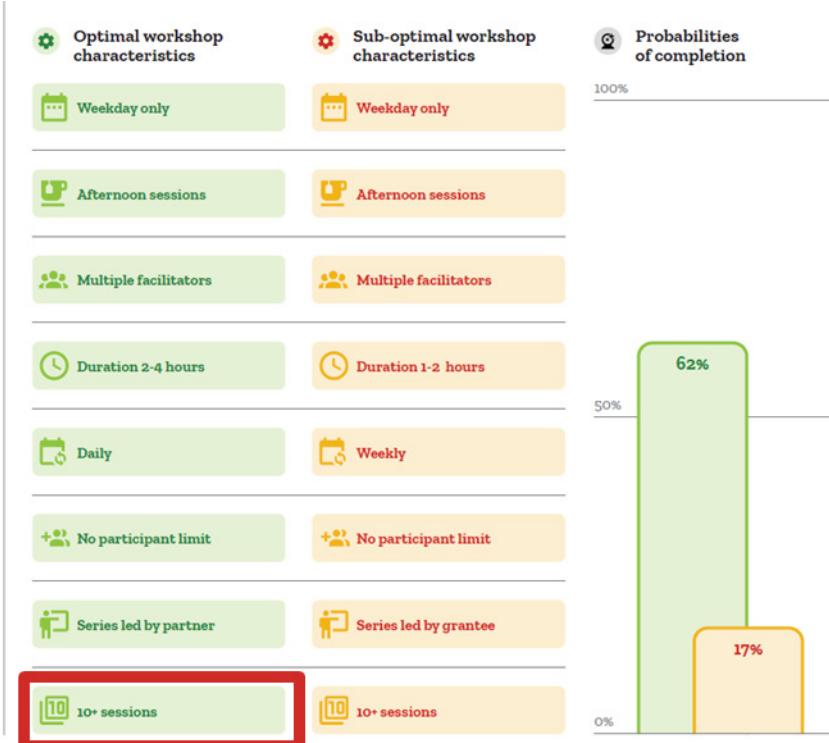
Young, unemployed men

Participant profile

Summary of characteristics

- Men are primarily Black
- The majority of men make less than $500 per month
- Most men have a high school diploma or less
- The majority of men rent their home or stay for free with relatives or friends
- Most men enrolled to improve their parenting skills and to find a job

Optimal workshop characteristics	Sub-optimal workshop characteristics
Weekday Only	Weekday Only
Afternoon sessions	Afternoon sessions
Multiple facilitators	Multiple facilitators
Duration 2-4 hours	Duration 1-2 hours
Daily	Weekly
No participant limit	No participant limit
Series led by partner	Series led by grantee
3-5 sessions	10+ sessions

Probabilities of completion

- 63%
- 12%

This grantee could offer a similar workshop structure but with fewer sessions for the young, unemployed men.

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WHAT'S NEXT?

- These prediction models could be a powerful resource to support HMRF grantees, but more work needs to be done

  - Create prediction models for HM youth and RF re-entering fathers

  - Validate the current models with 2020 cohort data

  - Discuss equity and operational considerations for using predictive models in HMRF program design and improvement with key audiences

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QUESTIONS?

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IF YOU WOULD LIKE TO DISCUSS …

- How these findings could be useful for HMRF program design and improvement, **join Breakout Room A by remaining in this WebEx meeting**

- The analytic approach and methods used to develop the predictive models, **join Breakout Room B by clicking the link in the chat**

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BREAKOUT A: USING PREDICTIONS FOR PROGRAM DESIGN AND IMPROVEMENT

- How might you use participation predictions like the ones we discussed today in your own programs?

- What are some examples of program changes for which participation predictions would be helpful?

  - For example, are you thinking about expanding your program to include both in- and out-of-school youth?

- What challenges do you foresee to using participation predictions in your own programs?

- How can ACF and programs help ensure that predictions are used to improve equitable access to workshops?

- Are the formats of the workshop structure predictions useful? How could these results be more useful for you?

- What other questions do you have about today's presentation?

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BREAKOUT B: ANALYTIC APPROACH AND METHODS

- Let us know what questions you have about our analytic approach and methods
  - Data sources used for modeling
  - How the sample used for analysis was defined
  - Sensitivity analysis to assess differences between the analytic and full samples
  - Variables used in the analysis
  - Model development and validation
  - Model assessment
  - Model interpretation
  - Identifying optimal and suboptimal workshop structures for participant groups
  - Statistical software used

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