Session # A4

Is Psychological Flexibility a Protective Factor in the Relationship Between Adverse Childhood Events and Salient Health Outcomes in Adolescents?

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Faculty Disclosure

The presenters of this session have NOT had any relevant financial relationships during the past 12 months.

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Conference Resources

Slides and handouts shared by our conference presenters are available on the CFHA website at https://www.cfha.net/page/Resources_2019 and on the conference mobile app.

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Learning Objectives

At the conclusion of this session, the participant will be able to:

- Identify common barriers to conducting research in integrated primary care, particularly for an early career provider.
- Describe how QI methods can be used to support implementation of screening for ACEs and Psychological Flexibility
- Describe the relationship between ACEs, psychological flexibility, and negative health outcomes

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Learning Assessment

- A learning assessment is required for CE credit.
- A question and answer period will be conducted at the end of this presentation.

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Acknowledgements

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Lit Overview: ACEs

Prevalence

- 2 out of 3 adolescents in urban primary care reported 1 or more ACEs, 12% experienced 4 or more. (Burke et al., 2011)

Link to Health problems

- Burke et al., 2011
  - 4 or more ACEs associated with increased risk of learning/behavior problems and obesity
- Kerker et al., 2015
  - In child-welfare association, almost all children (18-71months old) had at least one ACE
  - 32% increased in odds for problem score on CBC, 21% increased odds of having a chronic medical condition, and 77% odds of having lower socialization on vineland.
  - Suggests short term/immediate association
- Oh et al., 2018
  - Household dysfunction specifically related to weight during early childhood, ACEs linked with asthma, somatic complaints, sleep disturbance, differences in cortisol levels

Lit Overview: ACEs

Screening in Pediatric Primary Care

- Parents strongly support ACEs screening and see pediatricians as potential change-agents (Conn et al., 2017)
- AAP recommends addressing ACEs in primary care (2014)
- Pediatrician's generally believe that ACEs:
  - Disrupt brain development
  - Impair educational achievement
  - Result in difficulties coping with future stress and believe that this screening falls within scope of the medical home

Lit Overview: ACEs

Why not just ACEs?

- ACEs screening tracks events that have already occurred and thus not directly malleable
  - Screening in children may help prevent by increasing awareness, but no research on this yet
- Multifinality makes it difficult to know which children who experience ACEs will have negative outcomes.
- This limits intervention efforts to information providing and treatment of symptoms/outcomes.

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Lit Overview: Psych Flex

Psychological Flexibility

- Psychological flexibility is the ability to act effectively in the presence of distress.

- It has multiple components: (Kashdan & Rottenberg, 2010)
  - Ability to recognize and adapt to various situational demands
  - Shift mindsets or behavioral repertoires when these strategies compromise personal or social functioning
  - Maintain balance among important life domains
  - Be aware, open, and committed to behaviors that are congruent with values

Lit Overview: Rationale for Current Study

- Unlike ACEs, psychological flexibility is a process that can be improved with intervention (Hayes, Boyd, & Sewell, 2011)

- Psychological Flexibility moderates relationship between
  - **Stress** → **physical** (overall, utilization of physician visits, sick days, disability) outcomes
  - **Stress** → **Mental Health** (life satisfaction, depression, anxiety) outcomes
  - **IN ADULTS** (Gloster, Meyer, & Lieb, 2017)

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Research Questions

1. Can we successfully implement ACEs screening in our adolescent population within primary care?
2. How prevalent are ACEs in our clinics?
3. How are ACES related to salient health outcomes in our population (Depressive symptoms, Suicidality, Weight)?
4. How is psychological flexibility related to salient health outcomes in our population?
5. Does psychological flexibility moderate the relationship between ACEs and salient health outcomes?

Timeline/Process

- March 2018 - 60 Minutes segment on trauma informed care with Oprah and approached by Dr. Grant
  - Routinely screening for depression using PHQ9
  - Not doing ACEs universally
  - Identified goal to target malleable construct AND help us predict negative outcomes
- May 2018 - Applied for award
- Fall 2018 and winter 2019
  - Leadership Change in Primary Care and in Teen Clinic
- Spring 2019 – given “ok” to move forward
  - Implemented in 3 clinics
  - Only one clinic with an integrated primary care psychologist
- Ongoing data collection

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Methods - QI

- Clinic Flow/Process Map
  - Nursing staff
    - Gives patient screeners during hearing and vision (physicals only)
    - Scores screeners ands off to providers
    - Enters into EPIC smartphrase
  - Providers
    - Review screeners
      - If positive – consult with social worker, psychologists, or discusses directly with patient
      - Refer to psychologist directly if there are urgent or immediate needs for treatment
    - Also documenting PHQ9 note
  - Research Coordinator
    - Enters scores and extracted data from EPIC into RedCap database
    - Fellow did data quality check with >50% of data with >95% agreement

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Methods - QI

- Plan
  - Meetings with lead RN and lead provider in teen clinic
  - Measures all on one page (front and back)
  - MD lead took lead to discuss with teen clinic nursing staff
- Do
  - Implemented in 3 clinics with busy teen specialty clinics
  - Started earlier than we anticipated
- Study
  - Social workers were not properly informed due to early start by nursing staff
  - Clinics had different measures (2 Aces vs 1 Aces)
  - Not being entered into EPIC timely which delayed hand off to research coordinator
- Act
  - Met with clinic social workers and their supervisors
    - Education about study and measures
    - Apologized
  - Changed measures and RC to enter only 1st ACEs score
- Currently in 3rd cycle

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Methods - Measures

- **ACES**
  - 10 item – Center for Youth and Wellness ACEs Questionnaire
- **Psychology Flexibility**
  - Avoidance & Fusion Questionnaire-Youth (8 item version)
- **Depressive symptoms**
  - PHQ9a (Modified)
- **Suicidality**
  - Any of three suicidal items on PHQ9am noted
- **Overweight**
  - >= 85%ile (Burke et al. 2011) as extracted from EPIC

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Results

Demographics	Percent
Female	60.7%
Average Age	16.4 (12.3 – 22.3)
English Speaking	76.7% (Spanish 8.6)
African American	71%
Public Insurance	82% (Uninsured 8.6%)

n = 405; 24 with incomplete data

Results

- Feasibility
  - Missing data
    - ACES -= 38
    - PHQ9a-M = 9
    - AFQ = 7
  - Screening Rate = ????

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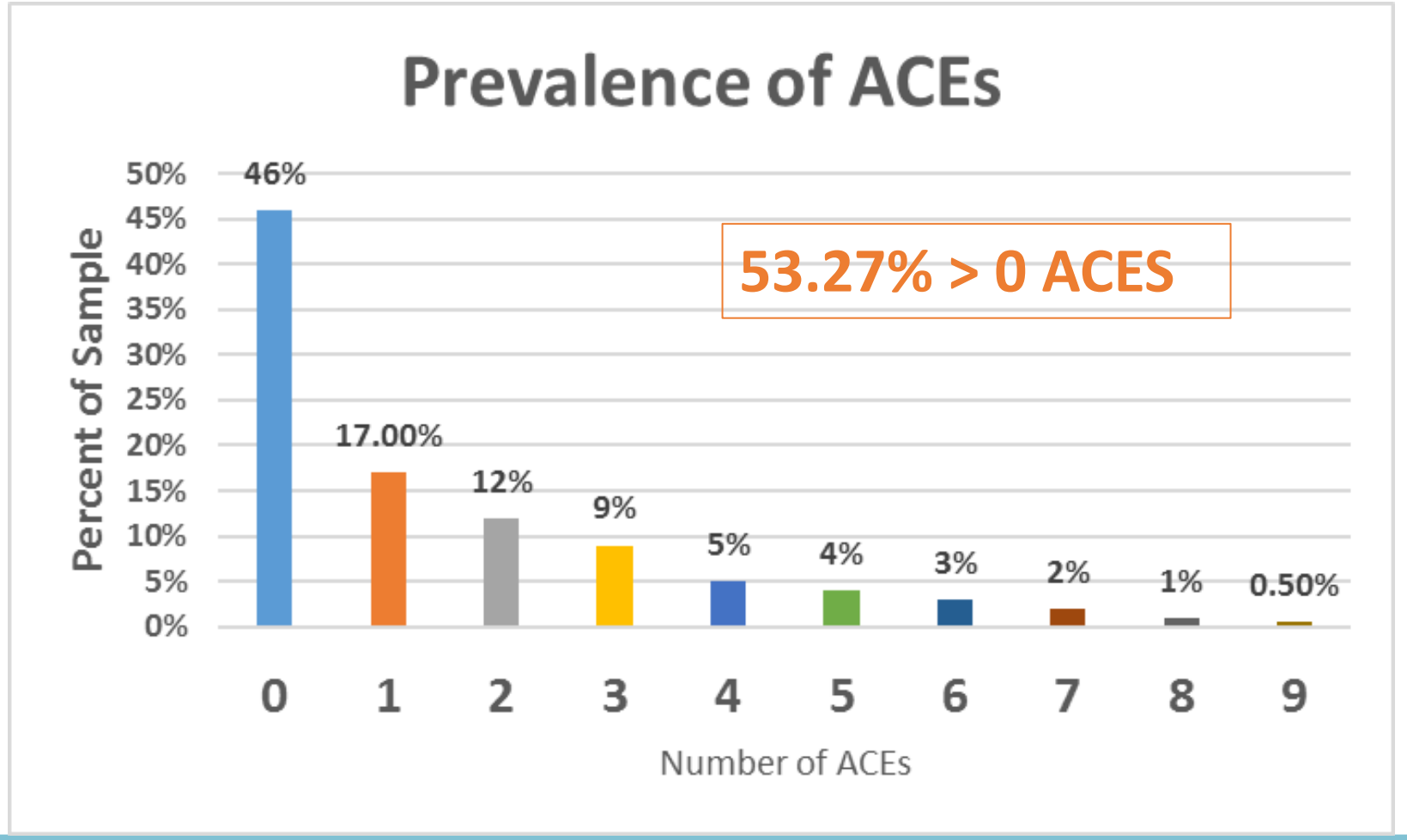
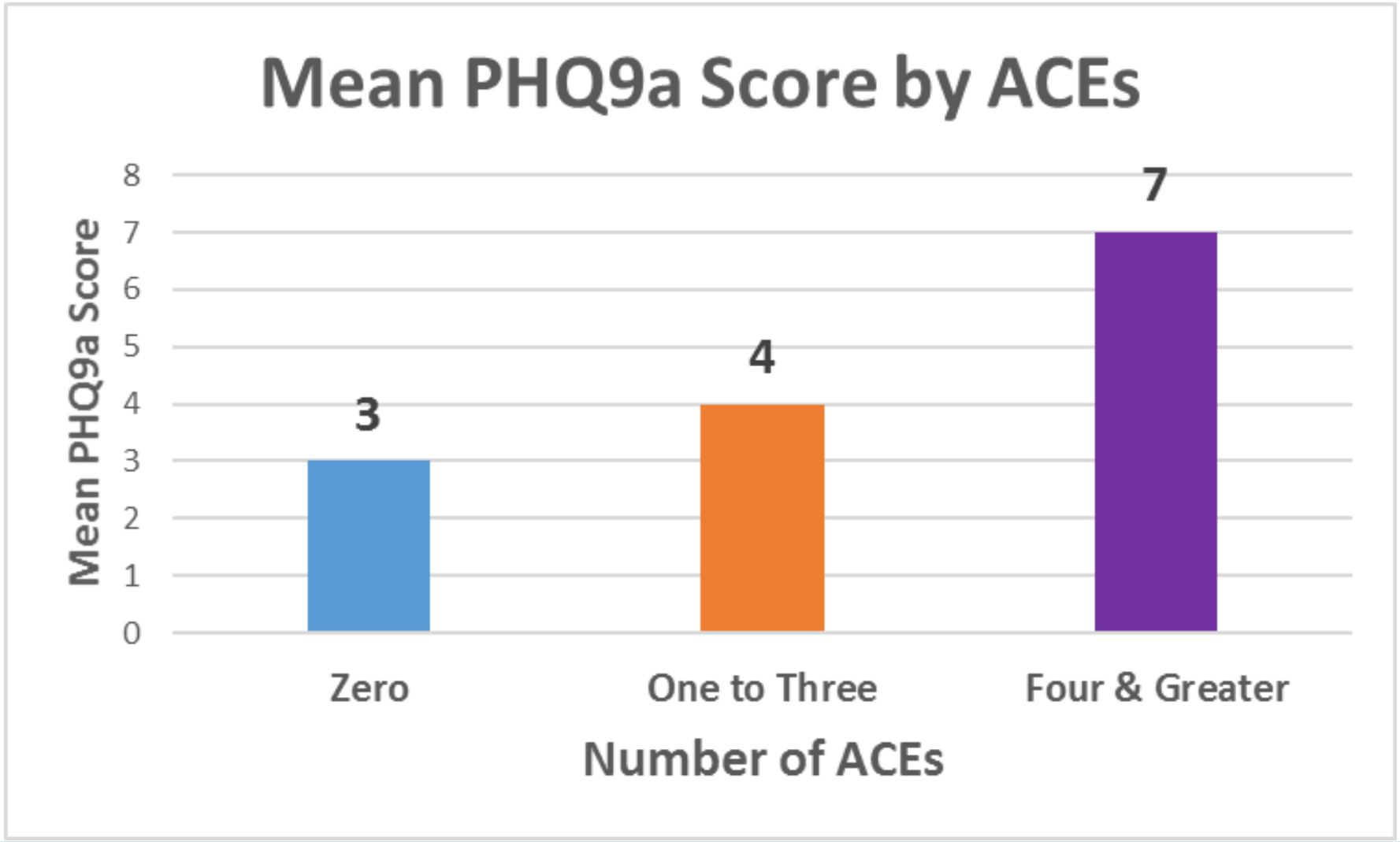
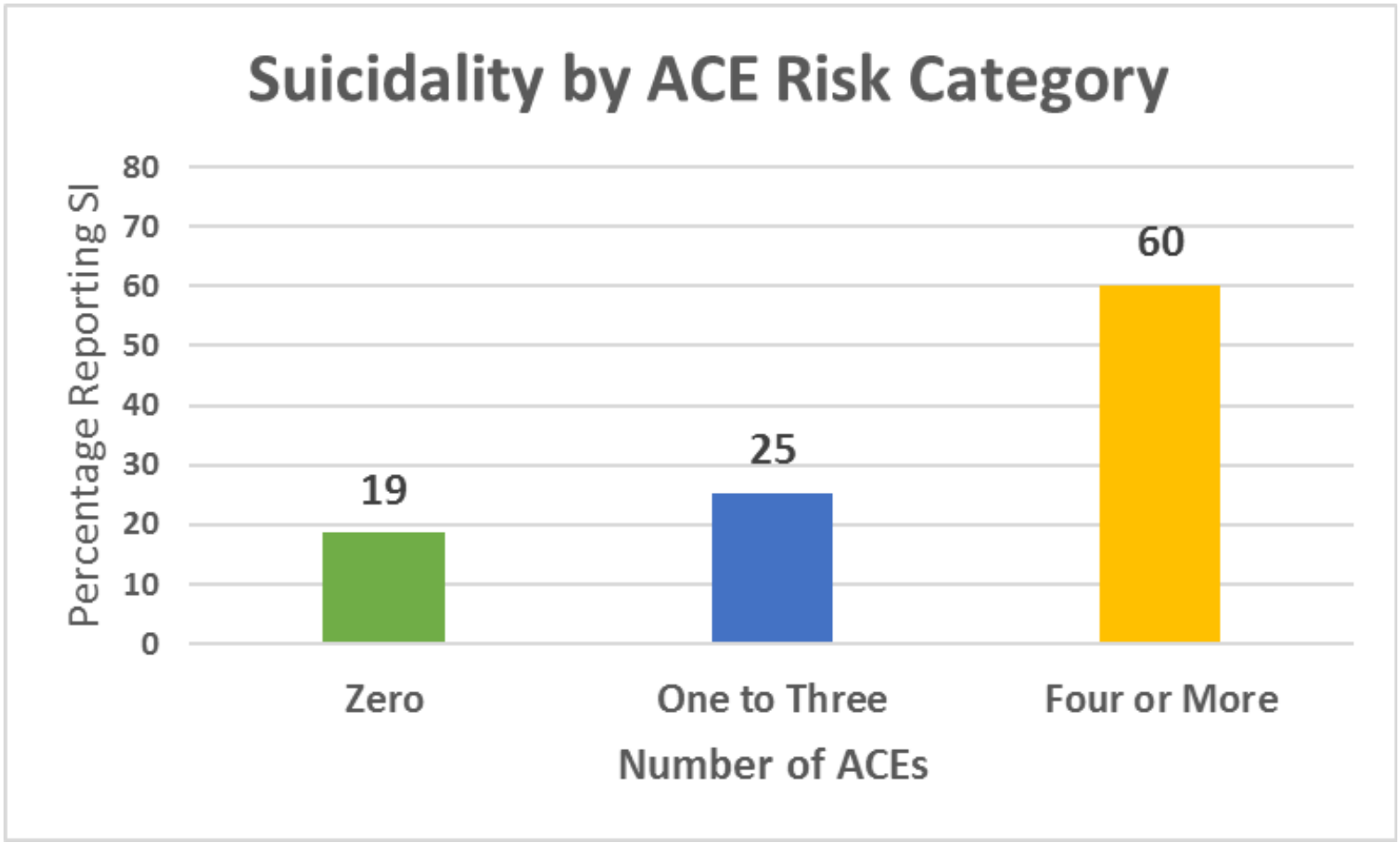
Results – Prevalence of ACEs



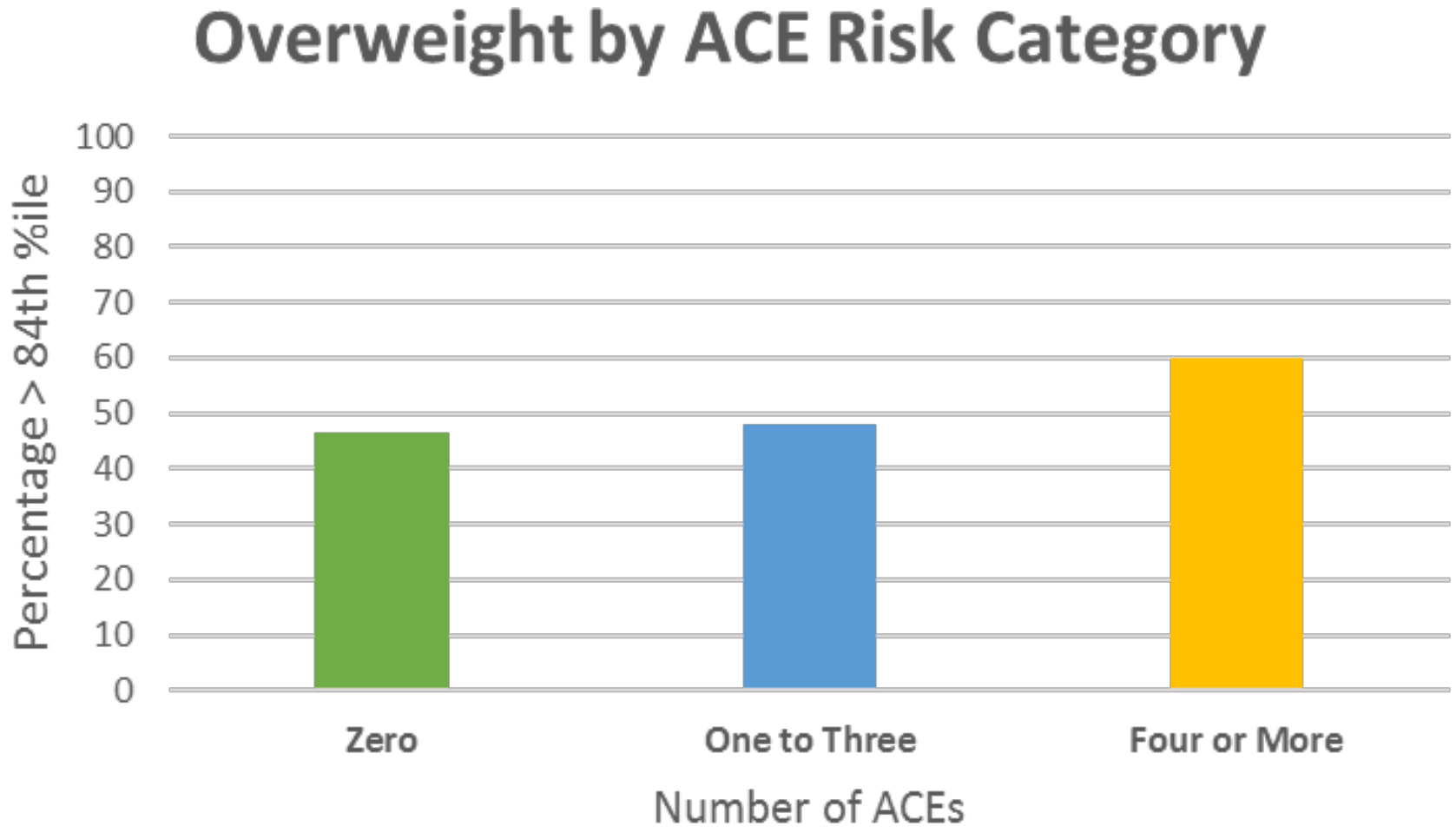
Results – ACES and Depressive Symptoms



Results – ACEs and Suicidality



Results – ACEs and Weight



Results – Depressive Symptoms

Variable	Coefficient	Significance
Sex	**-0.7332**	**0.04**
0 vs. 1-3 ACES	-0.1182	0.892
0 vs. 4+ ACES	**-7.652**	**< 0.001**
Psych Flexibility	**.135**	**< 0.001**
Psych Flex * ACEs	0.018 **0.244**	0.502 **< 0.001**

Results - Suicidality

Variable	Exp(B)	Significance
Sex	**0.43**	**0.003**
0 vs. 1-3 ACES	1.23	0.477
0 vs. 4+ ACES	**3.56**	**< 0.001**
Psych Flexibility	**1.08**	**< 0.001**
Pych Flex * ACEs	0.98 1.046	0.421 0.301

Results - Overweight

Variable	Exp(B)	Significance
Sex	**0.427**	**< 0.001**
0 vs. 1-3 ACES	1.035	0.877
0 vs. 4+ ACES	*1.726*	*< 0.083*
Psych Flexibility	.990	0.179
Pych Flex * ACEs	1.007 0.983	0.669 0.544

Limitations

- Screening rate not able to be obtained easily
  - Hope to retrospectively calculate (which is less helpful)
- Still mildly underpowered
  - Ongoing data collection
- Population
  - Largely African American sample
  - Majority female
  - Predominately Medicaid
- Incomplete measures
  - 20 did not complete ACEs unsure why, some wrote their name
  - On back, not reviewed real-time
- Discrete field text not an option
  - Benefit is that we caught errors in scoring, so be careful with using that!

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Future Directions

- Program Development
  - Overall feasible and acceptable
  - Importance of screeners for this population
  - Able to incorporate into clinic flow with minimal changes or challenges
  - Using EMR to aid in data collection
  - Develop intervention around increasing psychological flexibility

- Research
  - Expand to younger populations
  - Perhaps trial different measures of psych flex
  - Assess in different populations

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Thank you!

Questions?

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Session Survey

Use the CFHA mobile app to complete the survey/evaluation for this session.

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Join us next year in Philadelphia, Pennsylvania! Thank you!