



**Alberta Health
Services**

This material is intended for general information only and is provided on an “as is”, “where is” basis. Although reasonable efforts were made to confirm the accuracy of the information, Alberta Health Services does not make any representation or warranty, express, implied or statutory, as to the accuracy, reliability, completeness, applicability or fitness for a particular purpose of such information.

This material is not a substitute for the advice of a qualified health professional. Alberta Health Services expressly disclaims all liability for the use of these materials, and for any claims, actions, demands or suits arising from such use.



Alberta Health Services

Knowledge Bites Lunch 'n' Learn

May 8, 2019

Identifying “At Risk” Young Adults using Routine Outcome Monitoring during Acute Inpatient Hospitalization



**Graham Gaine,
Ph.D., R.Psych.**

**Psychology Professional
Practice Lead, AMH EZ**

Knowledge Bites – Lunch & Learn, May 8, 2019

Acknowledgements

- **Co-investigators:** Drs. Logan Nealis, Scot Purdon, and Adam Abba-Aji
 - **Contributors:**
 - YAETRS: Tola Balogun, Uliana Anisamova, Christine Velsink, Dustin Marcinkevics, Judith Salpeter, Loreen Paull, Daniel Richer, nursing staff
 - EEPIC/Neuropsychology: Natalie Purdon, Sylvia Romanowska, Carol Bolt, Nimeera Herrera
 - AMH Business Intelligence: Shireen Surood, Surya Poudel, Jeff Coulombe
 - BSRU: Kellie Henricks
 - UofA: Hansen Zhou
- Project supported by Janssen Pharmaceuticals Inc.

Presentation Overview

1. Routine outcome monitoring
2. Use of BASIS-24 in young adult unit
3. Inpatient recovery trajectories
4. Identifying “at risk” patients
5. Outcome monitoring in Connect Care

Routine Outcome Monitoring (ROM)

- Evidence-based treatments don't work for everyone
- Identify how client responding
 - Clinicians poor at detecting 5-10% who worsen in psychotherapy (Lambert, 2013)
- ROM helps individualize treatment
 - Implement stepped care
 - “Step up” when not responding

Guiding Clinical Decision-Making



Routine outcome monitoring (ROM)

Benefits of feedback to therapists & clients:

- Improved collaboration
 - Better outcomes for at-risk cases
 - Increased retention in therapy
 - Increased efficiency for on-track cases
- ❖ Outcomes better with decision-making tool

ROM in Psychiatric Inpatient Care

- Most research on outpatient psychotherapy
- Possible benefits in inpatient care:
 - Shorter stay
 - Reduce cost to system & client
 - “Step up” care for non-responding cases
 - Improve service satisfaction
 - Reduce ER visits and re-admission
 - Increase service engagement

Young Adults

- Mid-adolescence and young adulthood highest prevalence of mental disorders, with rates of 20% to 37% (Kessler et al., 1994; Kessler et al., 2005; GOC, 2006)
- Highest treatment disengagement among young adults
- **Lose critical opportunity for early intervention!**

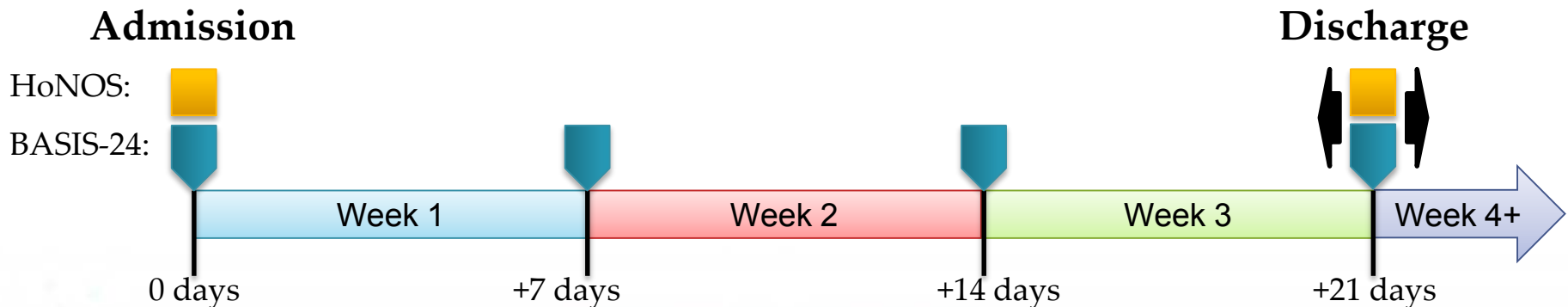


Young Adult Inpatient Unit

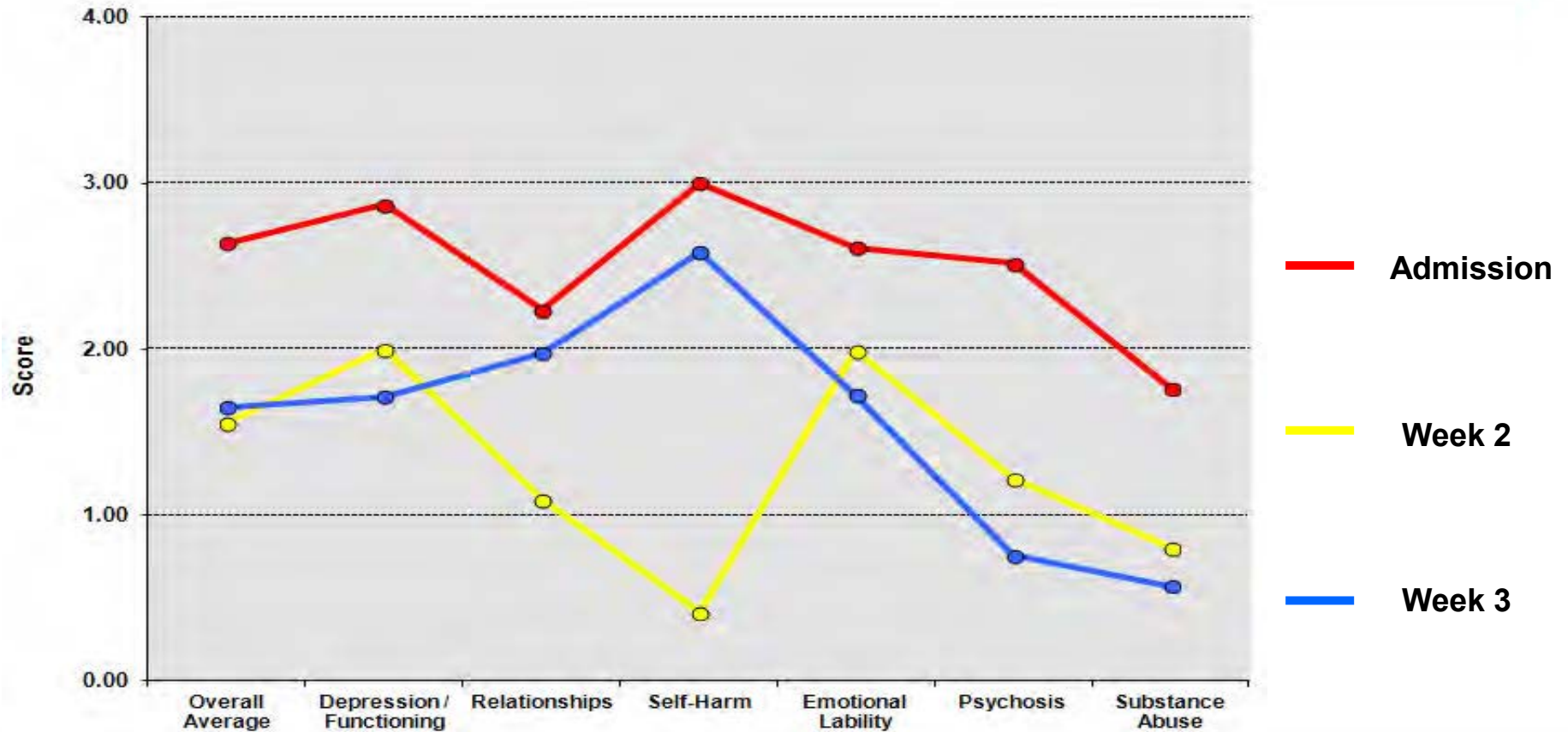
- Young Adult Evaluation, Assessment and Reintegration Services (YAETRS), Alberta Hospital Edmonton (AHE)
 - Ages 17-26
 - Complex mental health problems
 - Average 21-day stay
 - Multidisciplinary treatment
 - Community referrals

BASIS-24

- Behavior and Symptom Identification Scale (BASIS-24; Eisen et al., 2004)
 - Subscales: Overall, depression/functioning, relationships, self-harm, emotional lability, psychosis, and substance abuse
- Symptoms/functioning during past week
- Reliable, sensitive to change (Eisen et al., 2007)



Treatment planning with BASIS-24



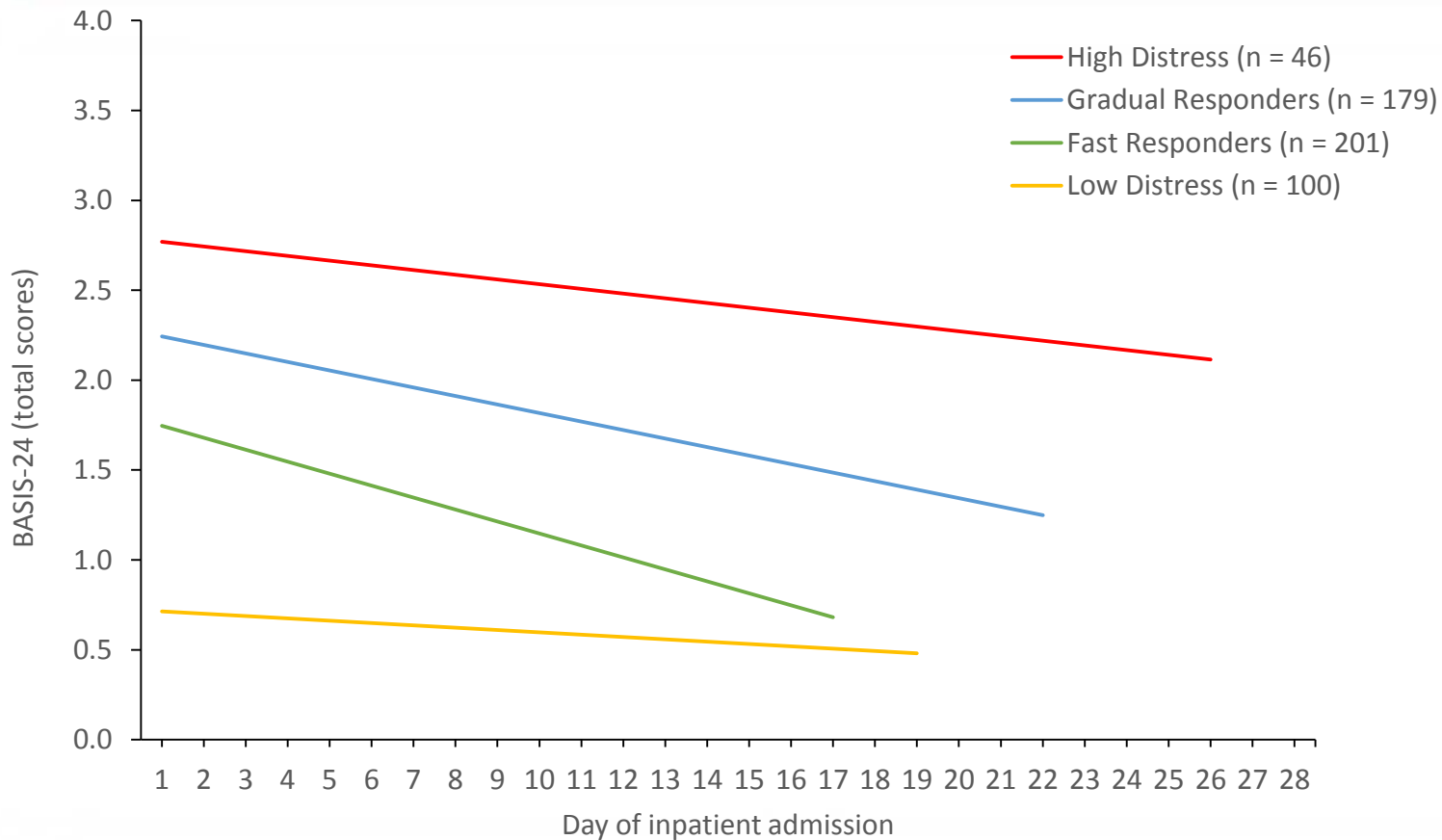
Inpatient Recovery Trajectories

- Expect overall improvement
- Do some patients respond better than others?
 - Expected 3 trajectories:
 - 1) Responders**
 - 2) High distress**
 - Chronic distress and/or help seekers
 - 3) Low distress**
 - Low insight, early stage of change and/or help rejecters

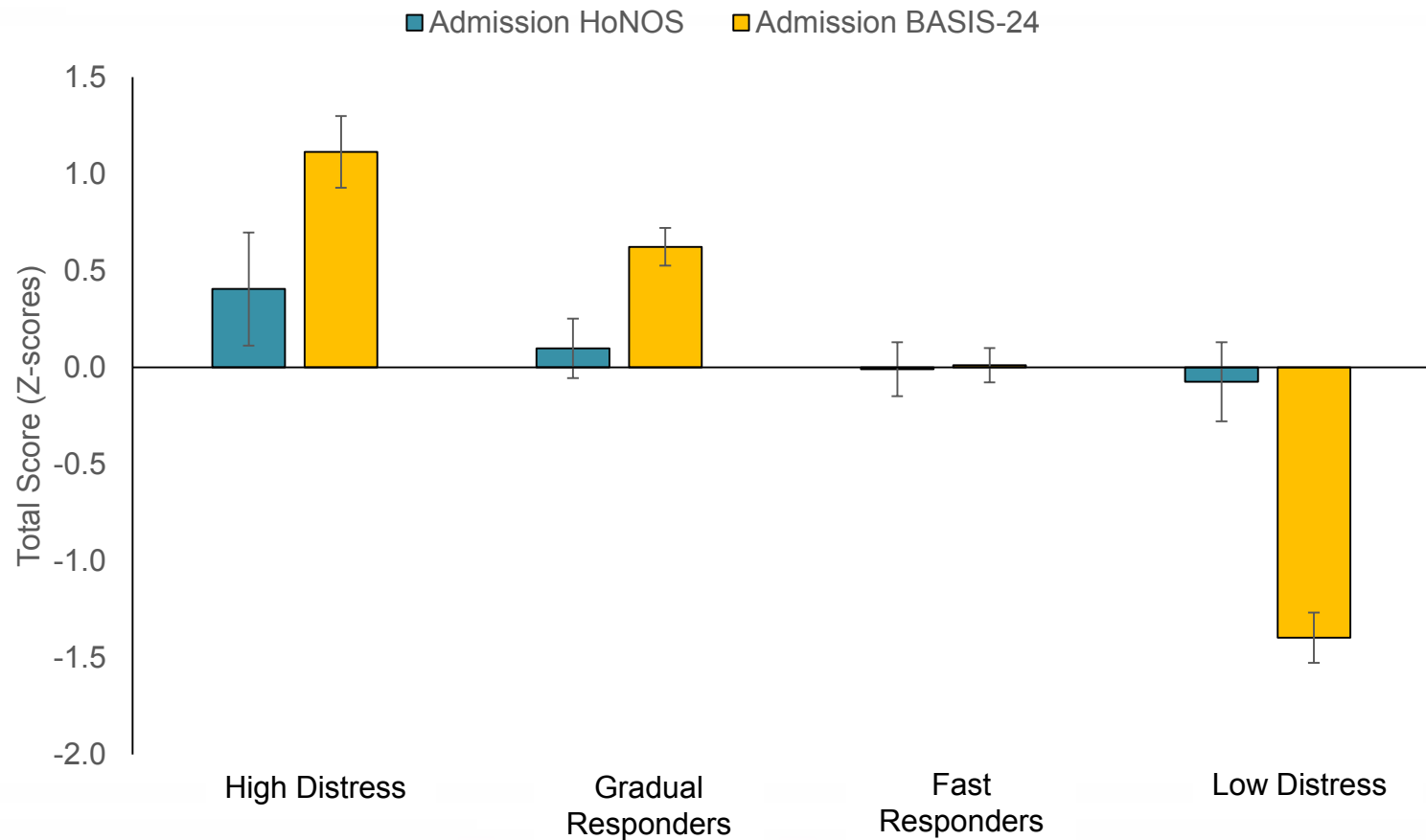
Study 1 – BASIS-24 Trajectories

- **Purpose:** Identify and characterize different BASIS-24 inpatient recovery trajectories
- **Method:**
 - Archival data from YAETRS database and electronic medical records
 - Sample: 526 inpatients
 - Analyses: Latent Class Growth Analysis (LCGA)
- **Hypotheses:**
 - Expected 3 trajectories
 - Expect higher distress will predict greater service utilization

Inpatient Recovery Trajectories

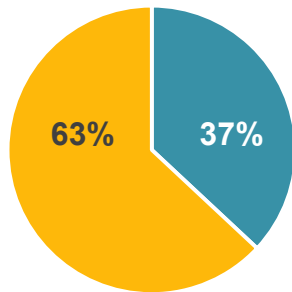


Discrepancies between Clinician & Client Report

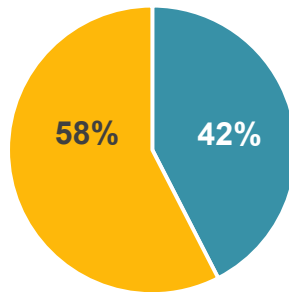


Gender

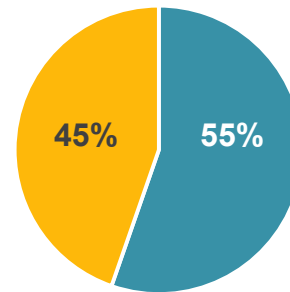
High Distress



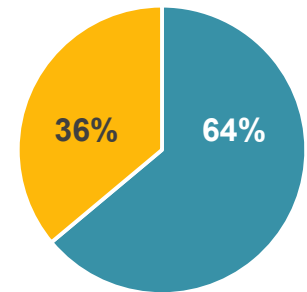
Gradual Responders



Fast Responders



Low Distress



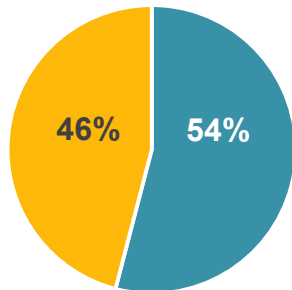
Female

Male

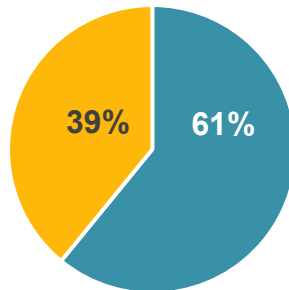
Test statistic = 16.63***

Mental Health Act Status

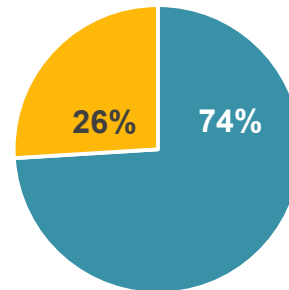
High Distress



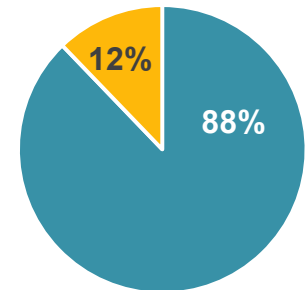
Gradual
Responders



Fast
Responders



Low Distress

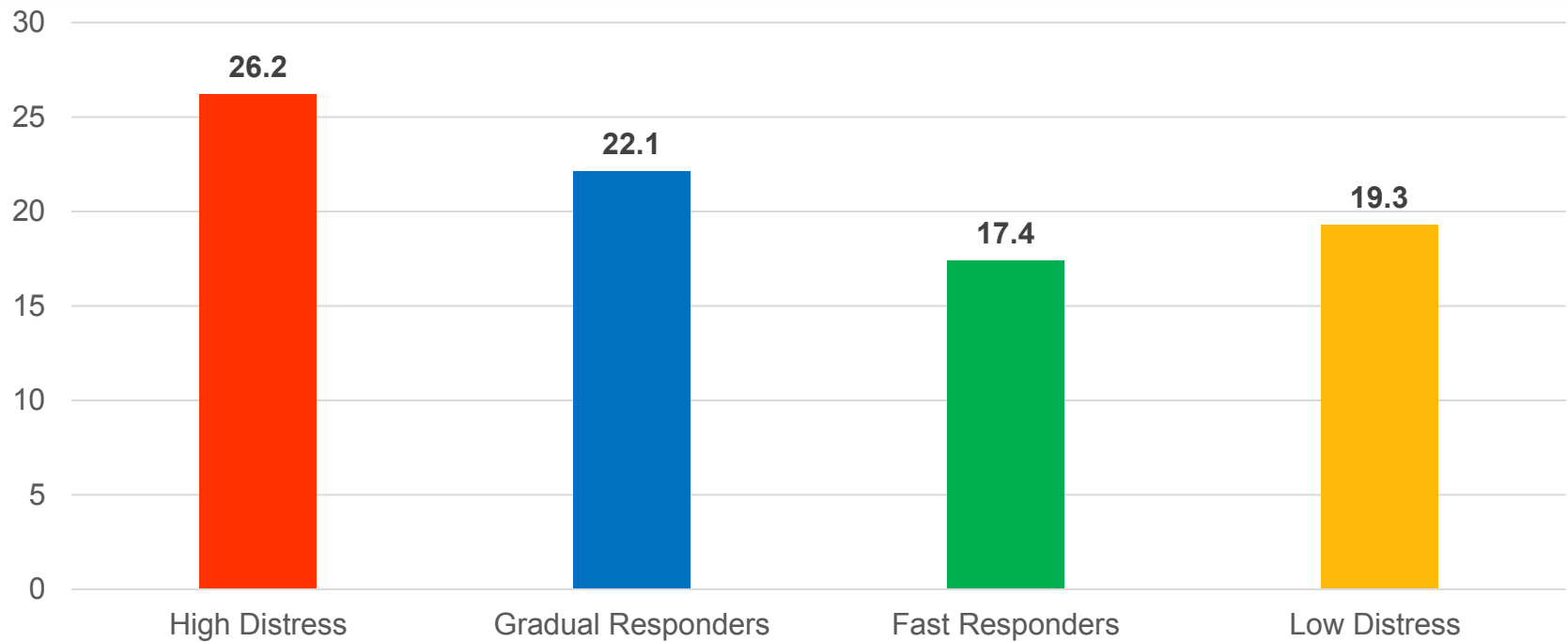


 Voluntary

 Involuntary

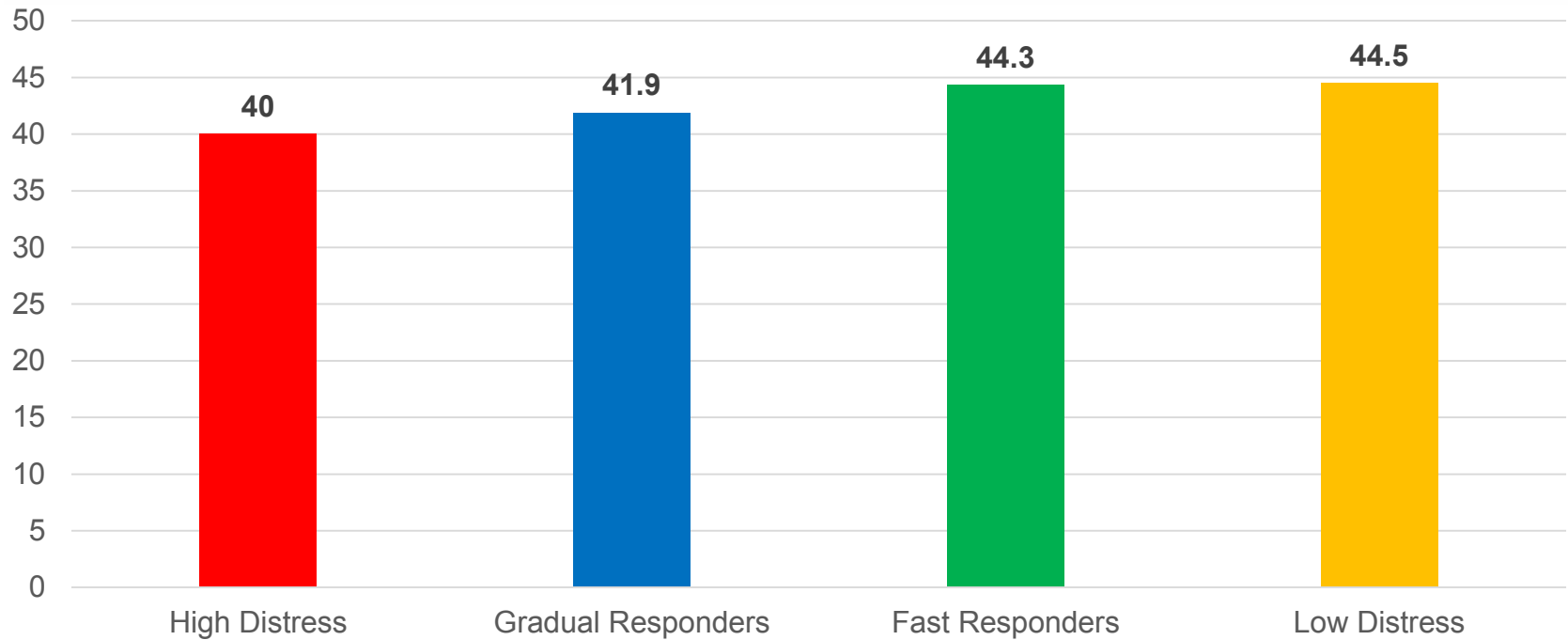
Test statistic = 25.51***

Length of Stay (Days)



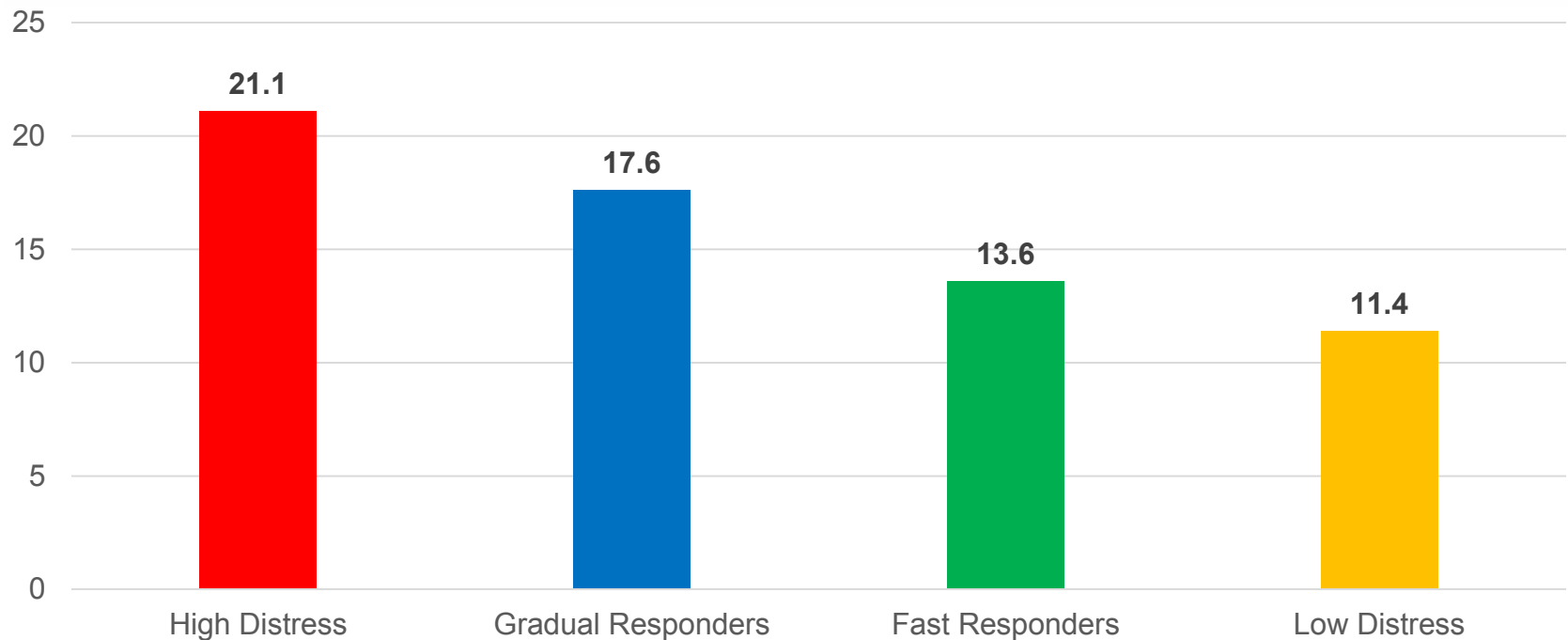
Test statistic = 13.3***

Service Satisfaction



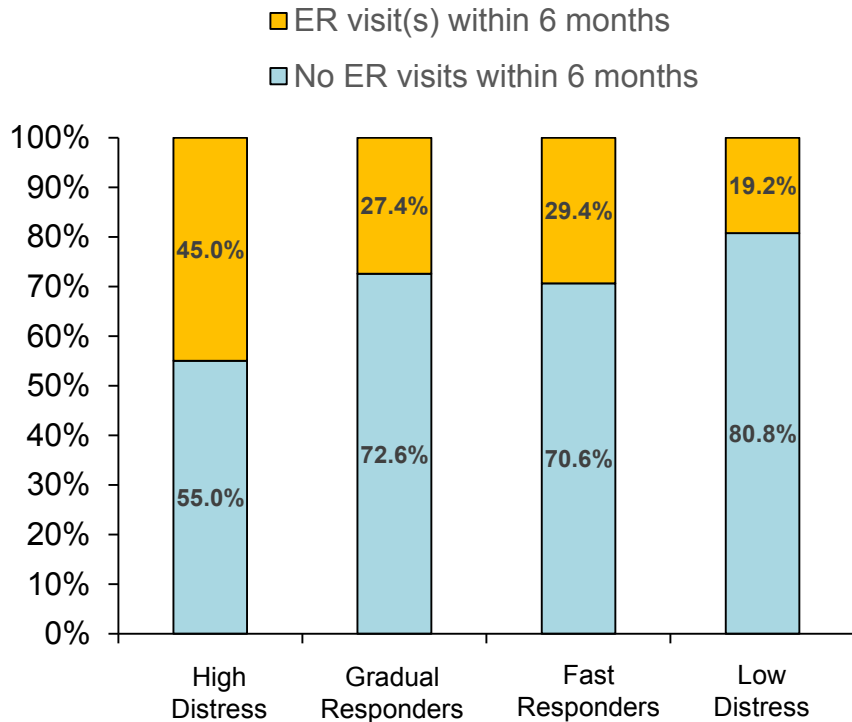
Test statistic = 6.62***

Outpatient Appointments 6 Months Post-Discharge

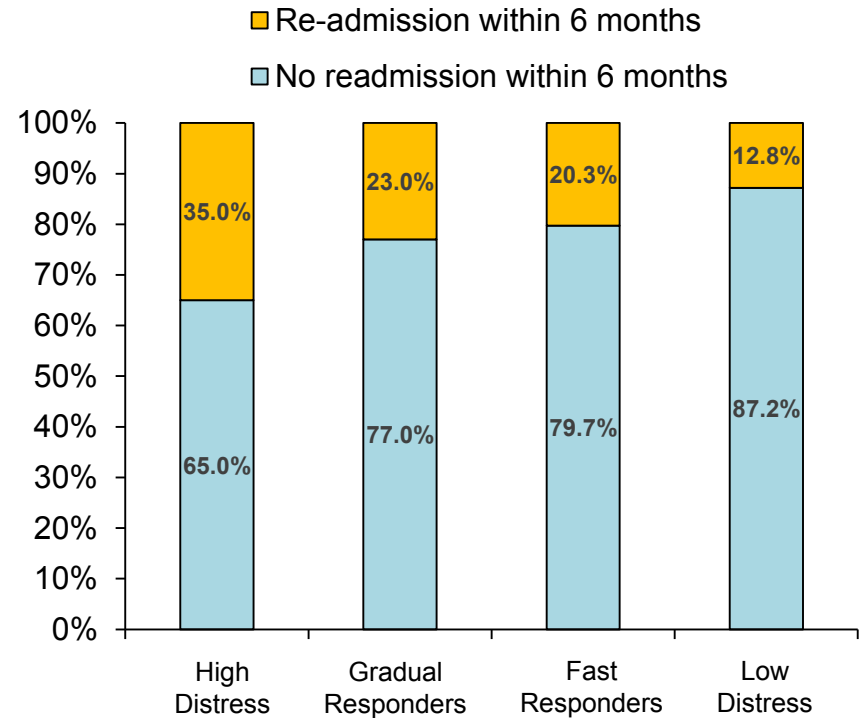


Test statistic = 4.63**

ER Visits & Hospital Re-Admission



Test statistic = 8.80*

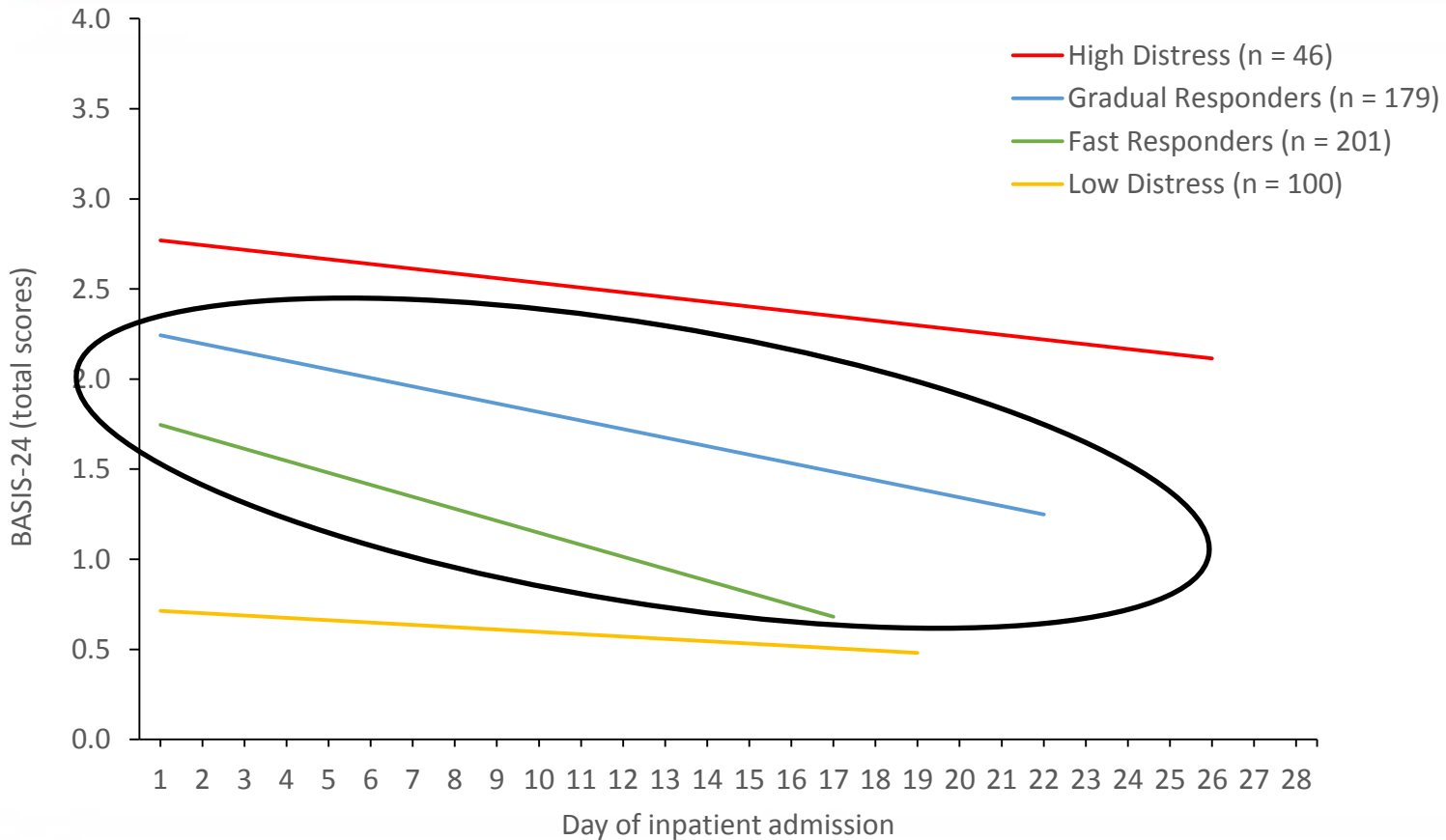


Test statistic = 8.16*

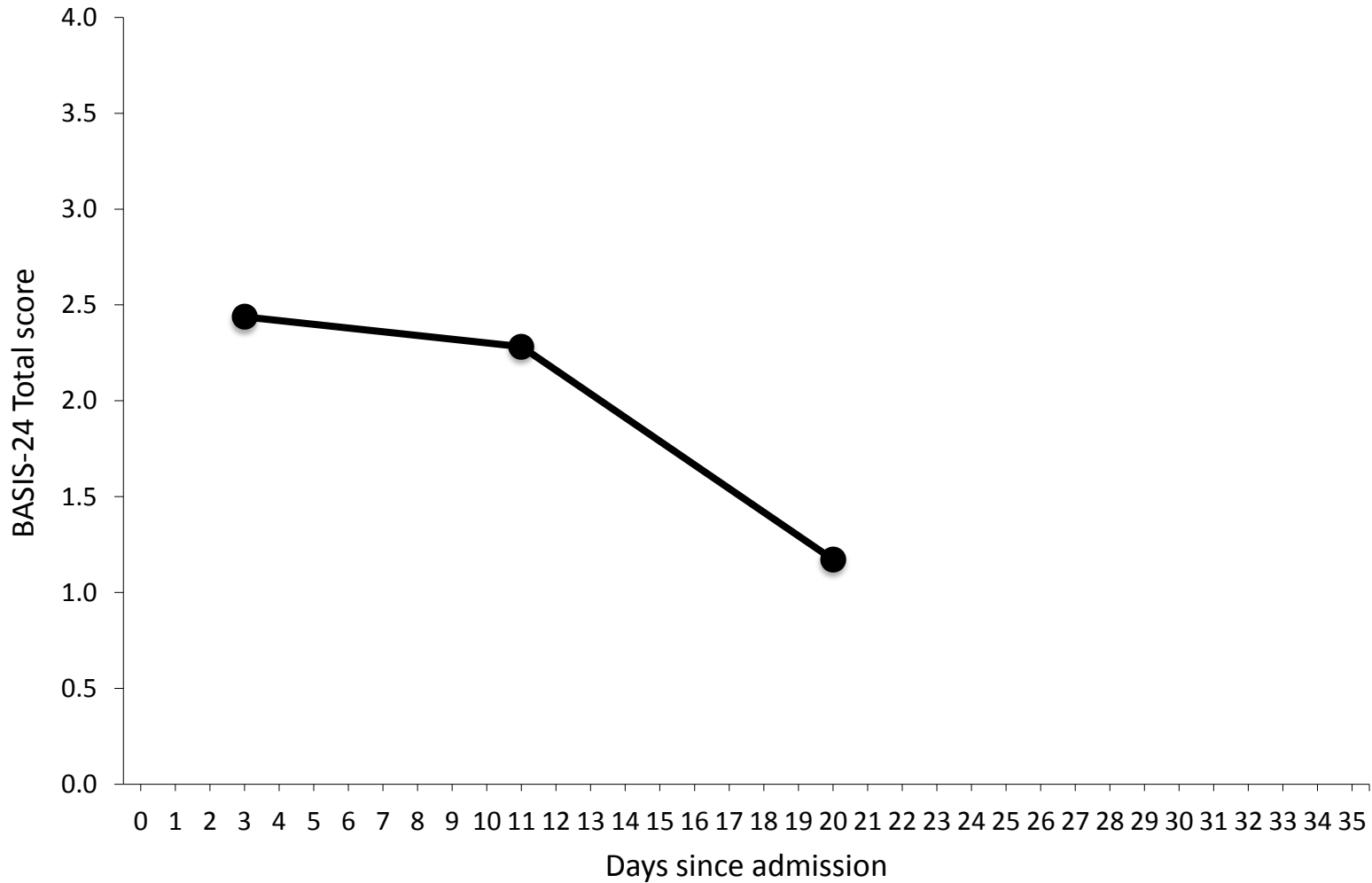
Study 2 – Decision-Making Tool

- **Purpose:** Develop and implement a BASIS-24 decision-making tool to identify “at risk” cases
- **Method:**
 - Combine responding groups to provide expected trajectory
 - Evaluate different confidence intervals for identifying “at risk” cases
 - Develop stepped care protocol for responding to “at risk” cases
 - Evaluate impact on treatment effectiveness, efficiency, satisfaction, and goal attainment

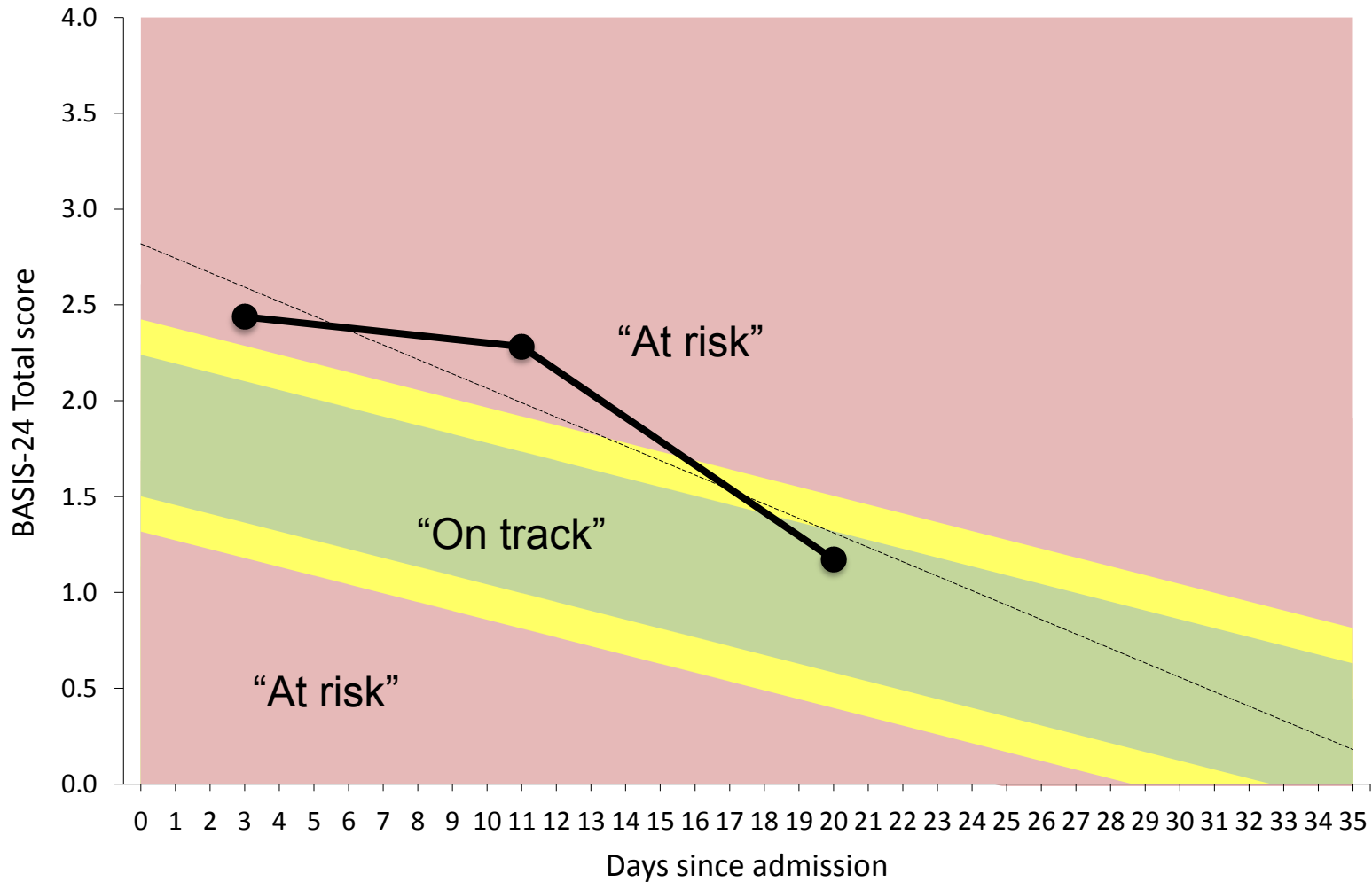
Inpatient Recovery Trajectories



BASIS-24 Scores Graphed over Time



Tool for Identifying “At Risk” Cases



Identification Accuracy

- **Sensitivity** = Proportion of “at risk” correctly identified
 - **Specificity** = Proportion of “on track” correctly identified
- ❖ Sensitivity most important

	Admission	Day 7	Week 14	Discharge
Sensitivity	92%	90%	88%	79%
Specificity	87%	87%	85%	79%

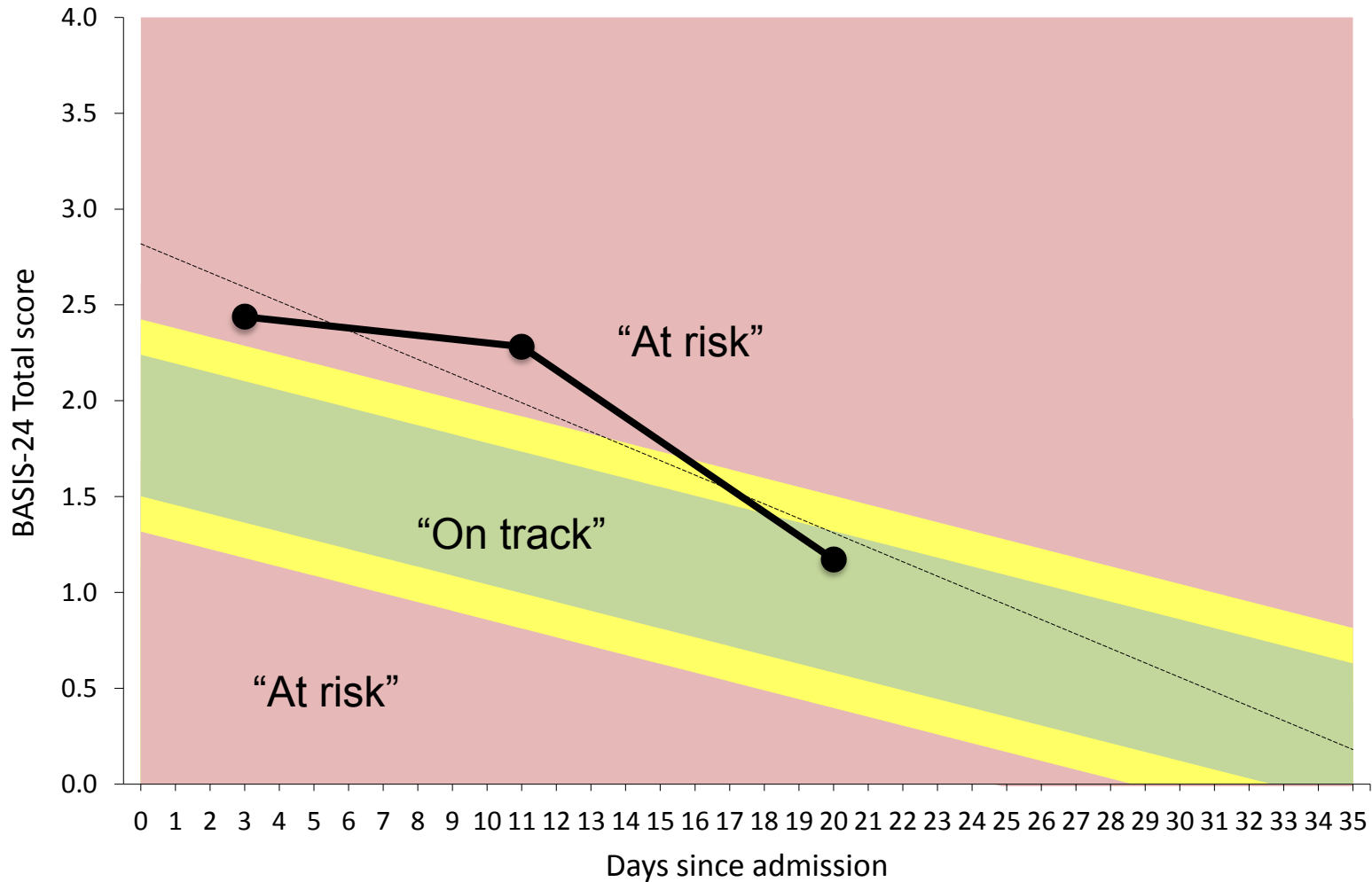
Inpatient Stepped Care Model

- **“On Track”**
 - Lowest intensity effective treatment (e.g., group programming)
 - Consider early discharge
- **High Distress “At Risk”**
 - Individual psychosocial services
 - Alternative medical treatments
 - Discharge planning
- **Low Distress “At Risk”**
 - Engagement techniques: goal-setting, motivational interviewing
 - Facilitate transition to community services

The Future of Outcome Monitoring in AHS

- Opportunities with Connect Care
 - Data capture
 - Scoring, tracking
 - Program & system data provide treatment expectations
- Clinical Outcomes in Routine Evaluation (CORE)
- Determine treatment expectations by setting type (e.g., LOCUS level)

LOCUS Level 5 & 6 – Residential/Inpatient



Practice Implications

- Importance of continuous monitoring
- Unusually high or low scores may indicate elevated risk
 - High scores may indicate poor treatment response
 - Low scores may indicate disengagement
- Outcome monitoring results provide warning only
 - Clinician must engage in clinical problem-solving process

Questions?



Contact info: graham.gaine@ahs.ca