PICKY EATING IN CHILDREN WITH AUTSIM AND HOW TO TREAT IT

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Goals

Understand the development of “Picky Eating” in normally developing children

- Examine how common characteristics of children with autism impact the development of selective food refusal in children on the autism spectrum

Understand the role of appetite motivation in the successful treatment of feeding disorders

- Independent of the type of treatment

Answer the question: Is selective eating in children with autism similar to picky eating in normally developing children but the characteristics of autism make it more likely to develop and harder to treat?

- Significance: If it is similar in development then methods proven successful with normally developing children can be used with children on the spectrum, with modifications.

What is Picky Eating and how common is it?

No set definition:

Limited variety independent of nutritional status

Refusal to eat a nutritionally adequate diet

Total refusal of certain foods or food groups

Failure to meet parents expectations for variety

How common?

Studies show concern by parents world wide with prevalence dependent on research definitions, higher in DD populations

50% of 18-24 month olds described as picky eaters by mothers (Carruth et al, 2004)

Does picky eating describe the nature of feeding/eating problems in children diagnosed with autism?

Studies have identified the following to be more common in ASD children:

Food cravings
Food refusal
Limited variety
Specificity in presentation
Grazing
Disruptive mealtime behaviors
Texture specificity

(Ahern,et al, 2000; Cornish, 1998; Raiten & Massaro, 1986; Schreck et al, 2004, Schreck & Williams, 2006; Whitley et al, 2000; Williams,et al , 2000)

Does picky eating describe the nature of feeding/eating problems in children diagnosed with autism?

BAMBI – Brief Autism Mealtime Behavior Inventory

Three factors accounting for 45% of variance

- Limited variety (23%)
- Food refusal (13%)
- Features of autism (9%)

Lukens, C. T., & Linscheid, T. R. (2008). Development and validation of an inventory to assess mealtime behavior Problems in children with autism, *Journal of Autism and Developmental Disabilities, 38, 342-352.*

Limited Variety Factor Items:

Is willing to try new foods (-)

Prefers the same foods at each meal (+)

Prefers crunchy foods (+)

Accepts or prefers a variety of foods (-)

Prefers to have food served in a particular way (+)

Prefers only sweet foods (+)

Prefers food prepared in a particular way (+)

A model to understand how “picky eating” may develop in normally developing children

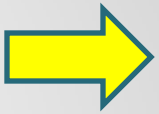
How do the typical features of autism impact this process?

How learning principles interact with normal development and parent behaviors and attitudes to produce feeding problems? Two Examples

Growth rate and social development changes → Picky Eating

Neophobia → Food Phobia

Growth rate changes
Social development



Picky Eating

Growth rate changes – 12 to 18 months

Calorie needs per kilogram decrease dramatically

Neophobia begins

Appetite and taste preferences are variable

Social development

Drive for mastery and independence begins

Interest in environment increases, competes with hunger

Parent presents food at mealtime but child is not hungry or more interested in playing

Child does not eat

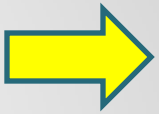
Parent offers a different food, more attention

Child still does not eat

Parent offers a different, better tasting food

Child accepts the food

Growth rate changes
Social development



Picky Eating

Result: Behavior analysis

Child learns that food refusal is reinforced (rewarded) by access to better tasting food and more attention

Parent learns that child will not eat unless a favorite food is offered, begins to offer only favorites, but worries

Autism, Growth rate and social changes

Need for sameness, routine makes transition to feeding more difficult

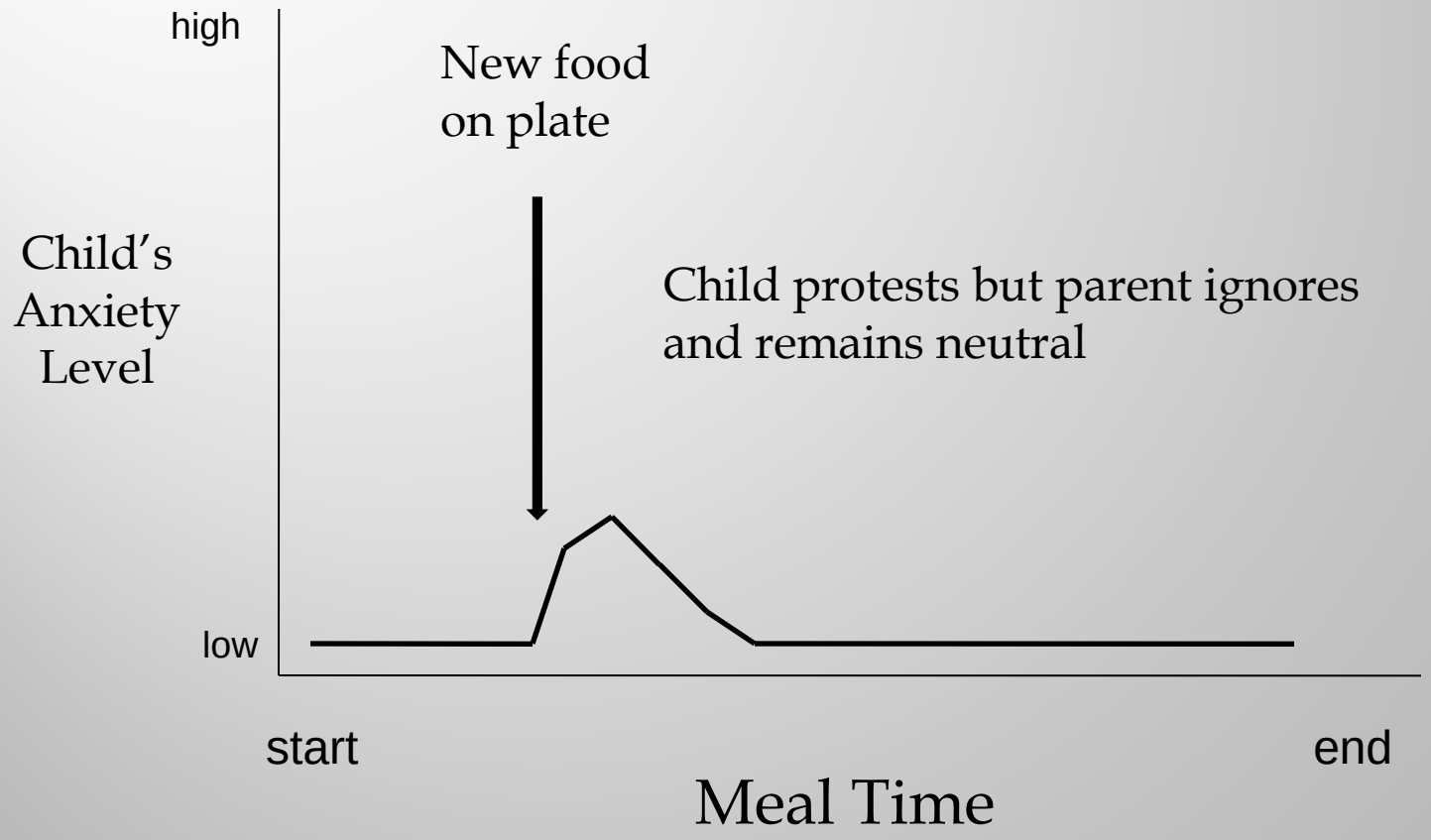
No impairment in learning consequences of behavior or appetite changes

Reduced responsiveness to social approval

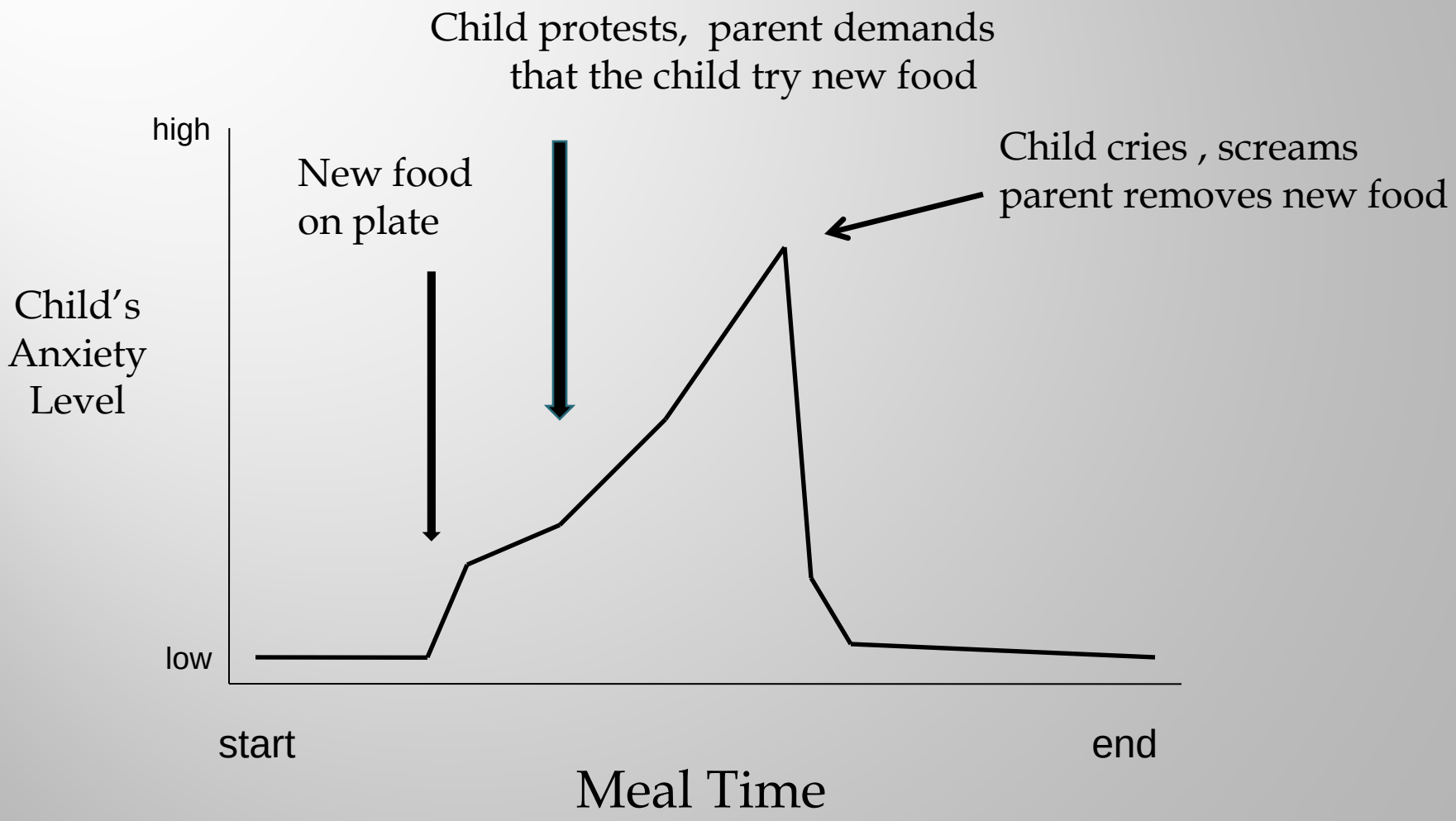
Intensity of refusal behaviors (rage, SIB)

Occurs with first concerns about child

Neophobia → Food Phobia



Neophobia → Food Phobia



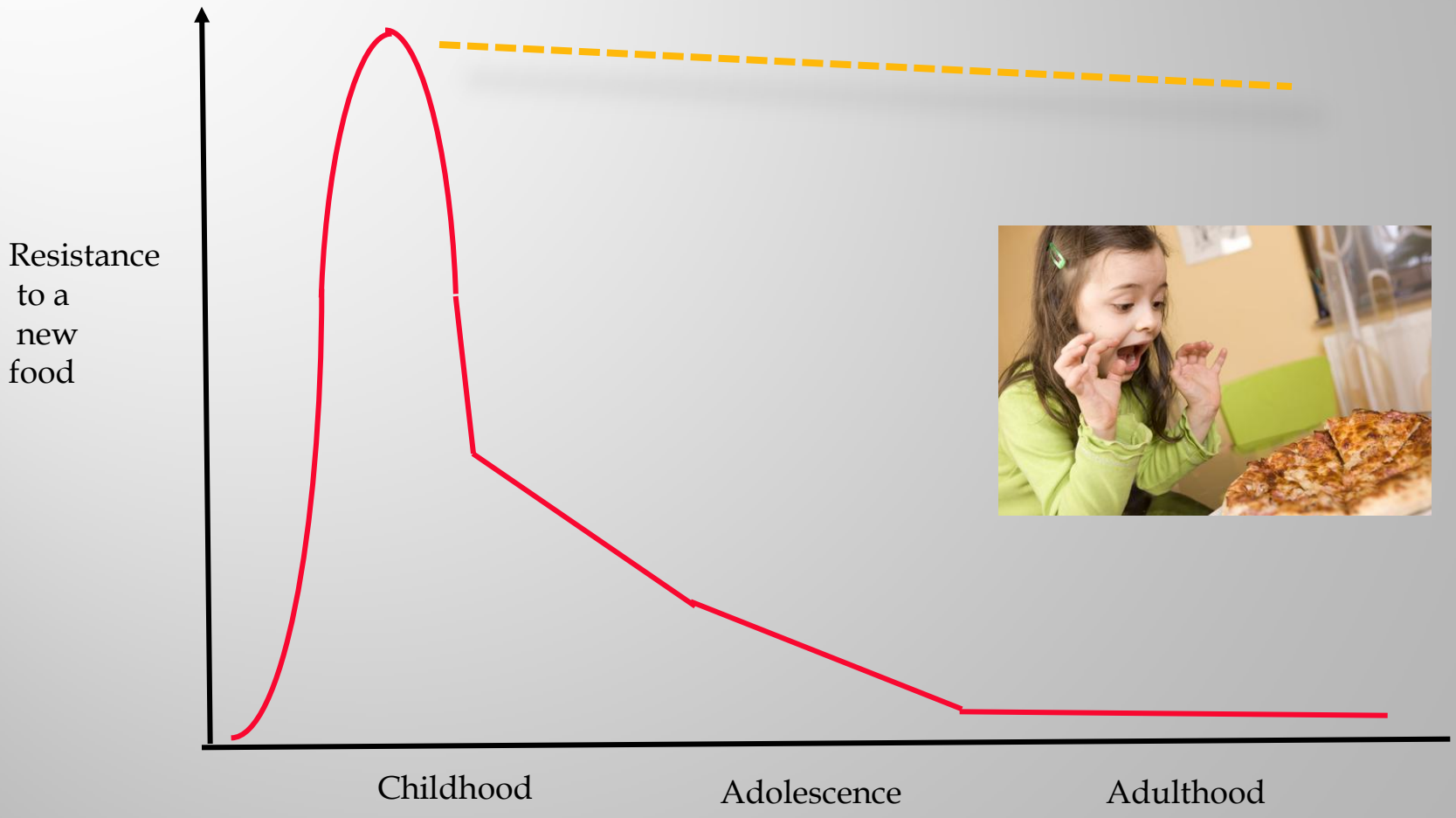
Result: Behavior analysis

Child has increased anxiety associated with the new food, becomes phobic of that food

Child is more likely to cry and scream when any new food is presented, because that behavior was rewarded by anxiety reduction.

Parent is less likely to offer new food because they do not want to see child distressed.

Levels of food neophobia



Dovey et al. Appetite 2008

Autism and Neophobia

Need for “sameness” - routine

Language difficulties
- Understanding
- Expression

Social impairment (modeling)

An illustration to show why food phobias are so hard to treat

Show of Hands

Who is a picky eater?

Who would like to try a delicacy from my backyard that is nutritious and flavorful?

How can I get you to eat worms and learn to like them?

Scenario 1

You are marooned on a small desert island

Fresh water available at all times

No “normal” food but worms are plentiful

No rescue for three months

Scenario 1

<u>You would most likely:</u>

Not eat the worms the first day

Feel very anxious when tasting your first worm

Over time, learn to like them and develop favorite worm species and recipes

Scenario 2

Same desert island as in Scenario 1 with plentiful worms

A magic food tree produces your favorite food once per day at 12:00 Noon

But, the amount it produces is only 50% of your daily calorie needs

Scenario 2

You would most likely:

Learn to ration the food during the day

Conserve energy

Lose weight slowly for three months

But never eat worms

And the moral of the story is:

If we have a fear of a food we will only eat it if:

We are extremely hungry

We are convinced that no other food is or will be available

Access to favorite foods, even though insufficient in total calories will negate willingness to try new foods

How to treat “picky eating” in children with Autism

Rule out or address medical issues

Food allergies, conditions associated with oral-motor difficulties, GI issues

Use behavioral procedures in combination with increased motivation to eat through systematic control of intake of preferred foods

Teach parents by demonstration and practice

The rational for a behavioral approach to feeding / eating problems

Eating is a set of behaviors; modifiable by consequences

Adults control the external consequences of eating

There are natural reinforcers for eating
(reduction in hunger, taste)

The strength of food reinforcement can be increased by manipulating hunger **“Appetite Manipulation”**

It is the only approach that is empirically supported
(Kerwin, 1999)

Common Behavioral Components

Set mealtimes and meal durations

Use of differential reinforcement
  Shaping and fading

Use of ignoring or brief time-outs during mealtimes

Increasing motivation to eat through Appetite Manipulation

Limit, to the greatest extent possible, access to currently preferred foods

Insure hydration by allowing access to water or other near zero calorie liquids

Treatment meals should be scheduled when child is the most hungry

Arrange for medical monitoring

Educate parents and caregivers as to the rationale and necessity for success

Survey of Day and Inpatient treatment programs in the US

Programs identified via web search

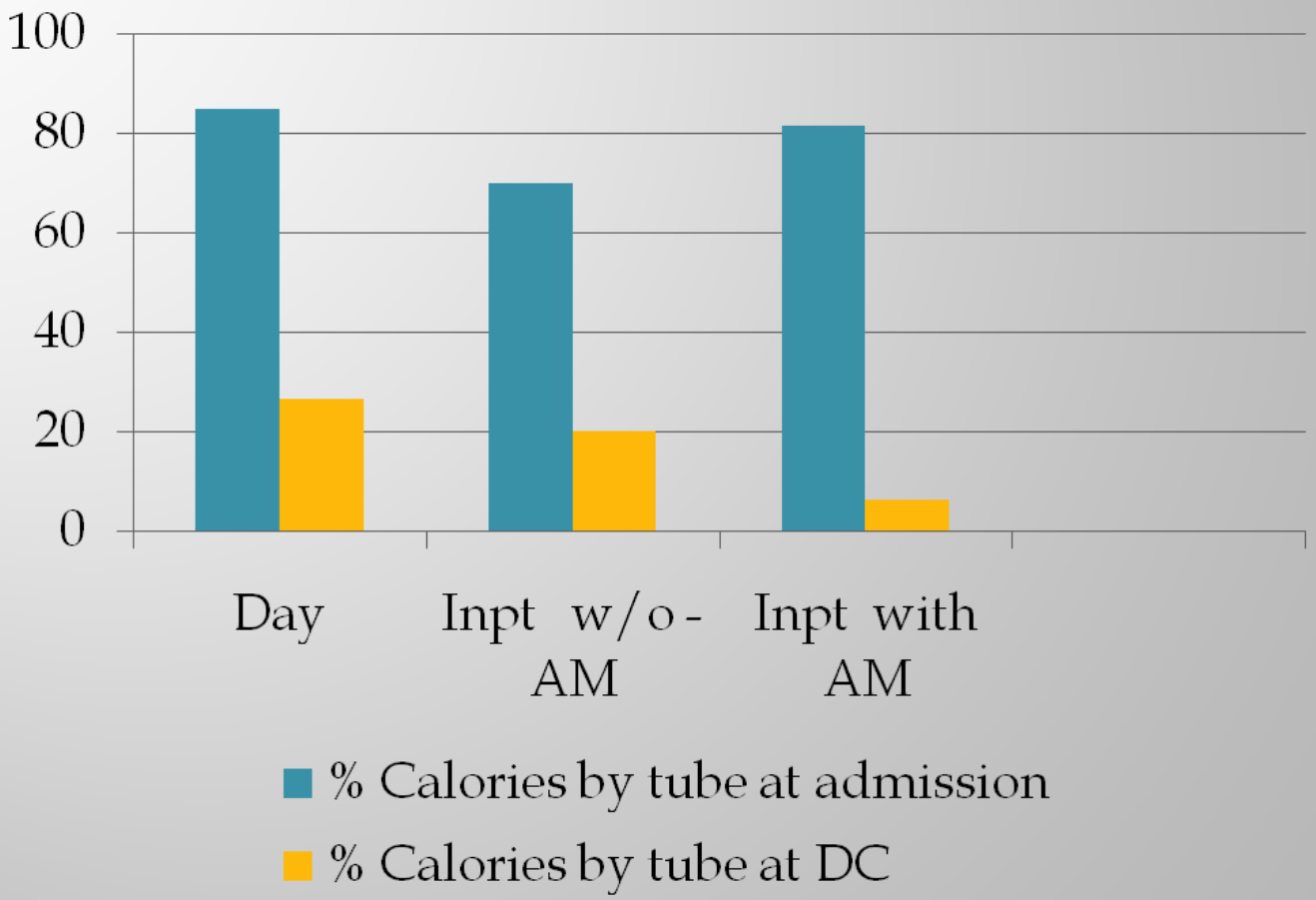
6 Day and 3 Inpatient programs participated

Of the 3 inpatient programs, all identified themselves as behavioral. Two used aggressive appetite manipulation (AM) as well.

Answered questionnaires about patients who were tube fed

Survey of Day and Inpatient treatment programs in the US

Outcome:



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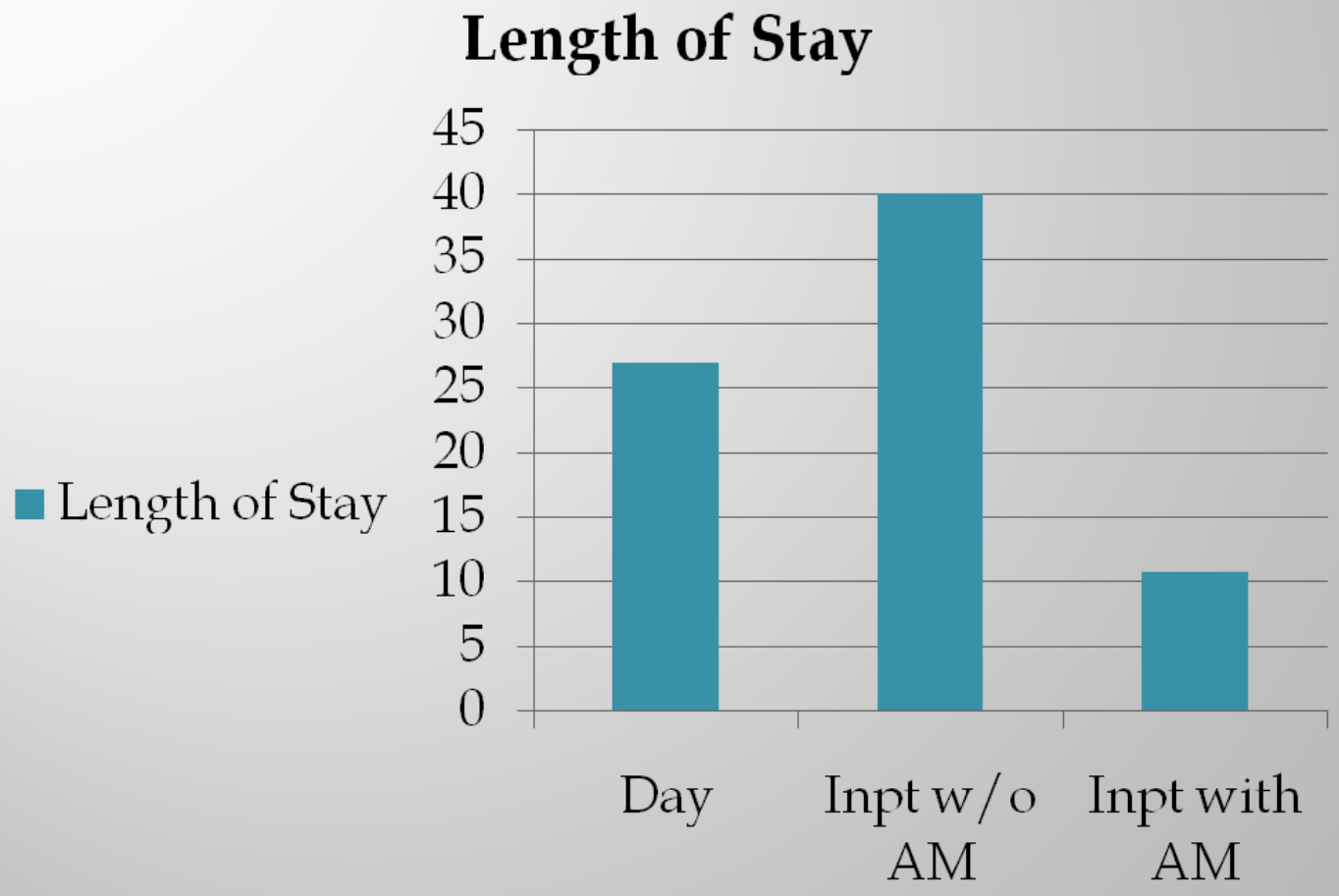

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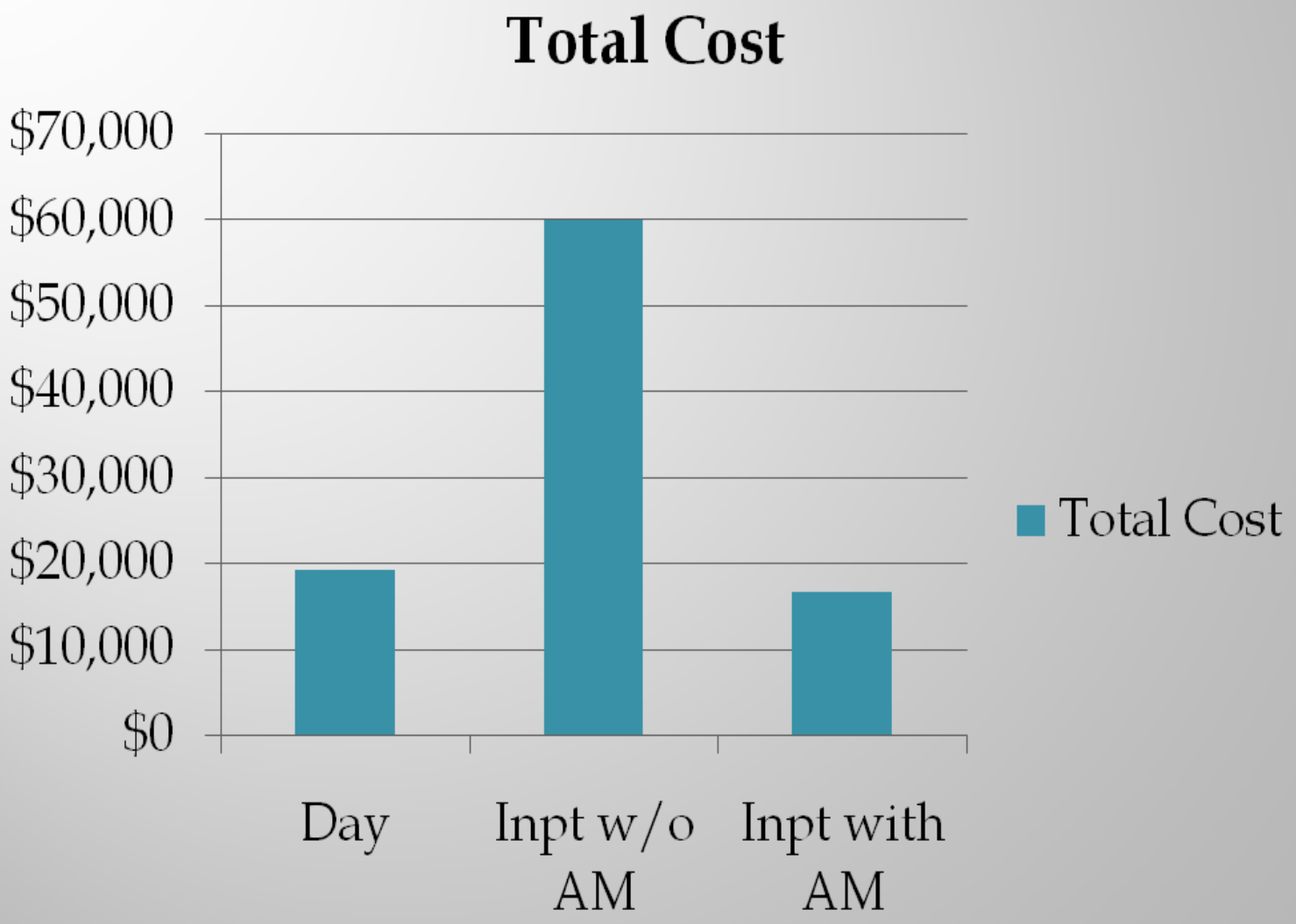

Conclusions from Survey

Inpatient programs using behavioral methods and appetite manipulation were:

- More effective in instituting oral feeding
- Had a shorter length of stay
- Cost less than outpatient alternatives

Limitation: Outcomes were for children who were tube fed, results may not hold for children with Autism

Question: Is appetite manipulation more important than the Treatment?

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The way forward

Health care reform is coming – with significant changes

Emphasis on evidence based medicine

Many feeding treatment methods with little or no empirical support

Need for comparative studies
Cost-effectiveness

My recommendation for feeding programs:
Question all that you currently do,
know the literature, evaluate yourself often.