

Helping children who won't, don't, or can't eat?

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Goals of this workshop

- Discuss why some children have difficulties with either feeding or eating
- Discuss how to assess these problems
- Review a range of interventions for some of the most common problems
- Provide practical ideas for the development of feeding interventions for school settings
- Provide ideas for working with caregivers

Unfortunately, we are in a growth industry

- Among children with special needs, incidence of feeding problems ranges from 10% to 50%
- Many children with chronic health issues have nutritional and/or feeding problems
- Multiple births, prematurity, and other birth complications increase the risk for feeding problems
- Schools are just about to encounter a wave of children with feeding problems

Why won't some children eat?

- Deficits in abilities/skills
 - Oral motor delays
 - Fine motor delays
- Deficits in motivation
 - Conditioned aversion
 - Lack of appetite
- Deficits in the environment
 - Behavioral mismanagement
 - Faulty caregiver knowledge

What is involved in a multidisciplinary evaluation?

- Medical History
- Physical Examination
- Medical Evaluation & Testing
- Feeding History
- Nutritional Assessment
- Feeding Observation & Evaluation
(Occupational Therapy, Speech Therapy, Behavioral Psychology, Nursing, possibly others)

Medical History

- Weight loss/lack of gain
- Vomiting/Regurgitation
- Irritability
- Abdominal pain
- Chest pain
- Constipation
- Drooling
- Coughing or gagging with meals
- Recurrent fevers
- Wheezing or wet quality to voice
- Recurrent pneumonias
- Eczema
- Diarrhea
- Blood in stools
- Past hx of disease
- Past hx of illness
- Past hx of hospitalization
- Past hx of procedures

Medical Evaluation

- Rehabilitation swallow study
- Upper GI series
- EGD
- pH probe
- Gastric emptying scan
- Allergy testing

Commonly asked questions during a feeding history

- When did the feeding problem begin?
- How is the child fed?
- What foods does the child eat?
- How much does the child eat?
- What is a typical meal like?
- How long is a typical meal?
- Does the child indicate hunger?
- What is the child's eating schedule?

Nutrition Assessment

- Diet history: 24-hour recall or 1-3 day record
- Food allergies/intolerances
- History of formula tolerance
- Age of introduction to solid foods
- Consistency of meal schedules
- Parents understanding of growth and nutritional needs
- Financial and material resources

Feeding Observation

- Observe the child eating in as natural a setting as possible.
- Examining the child in both home & school setting as the child's behavior could vary
- Observe age appropriateness of feeding
- While there is no standard for an observation, it is helpful to base your observation on the parents' goals, for example if the goal is to increase texture, watch the child attempt texture

Does every child need a multidisciplinary evaluation?

- Not necessarily.
- Some children have had their medical needs met or have none.
- Some children only need the services of one provider.
- The goal is to match the services to the child's needs.

Prior to starting treatment

- First, identify and/or treat conditions that could interfere with feeding such as GERD or food allergies
- Second, ensure the child is a safe oral feeder
- Third, identify what needs to be done and who needs to be involved

What do caregivers want you to fix?

- My child refuses to eat anything.
- My child does not eat enough.
- My child can't or won't swallow solids.
- My child eats only certain foods.
- My child eats only certain textures.
- My child doesn't self-feed.
- Mealtime behavioral issues.

Treating issues sequentially

- Get food in the mouth -increase accepts
- Keep food in the mouth- decrease expels
- Swallow the food - increase mouth clean
- Increase volume - increase bites, grams
- Increase variety - number of foods eaten
- Increase texture - texture eaten, gagging
- self-feeding - level of prompting

A behavioral approach to oral motor problems

Always define behavior widely, includes everything people do and say, thus changing oral motor functioning is changing behavior

The most common oral motor problems we see...

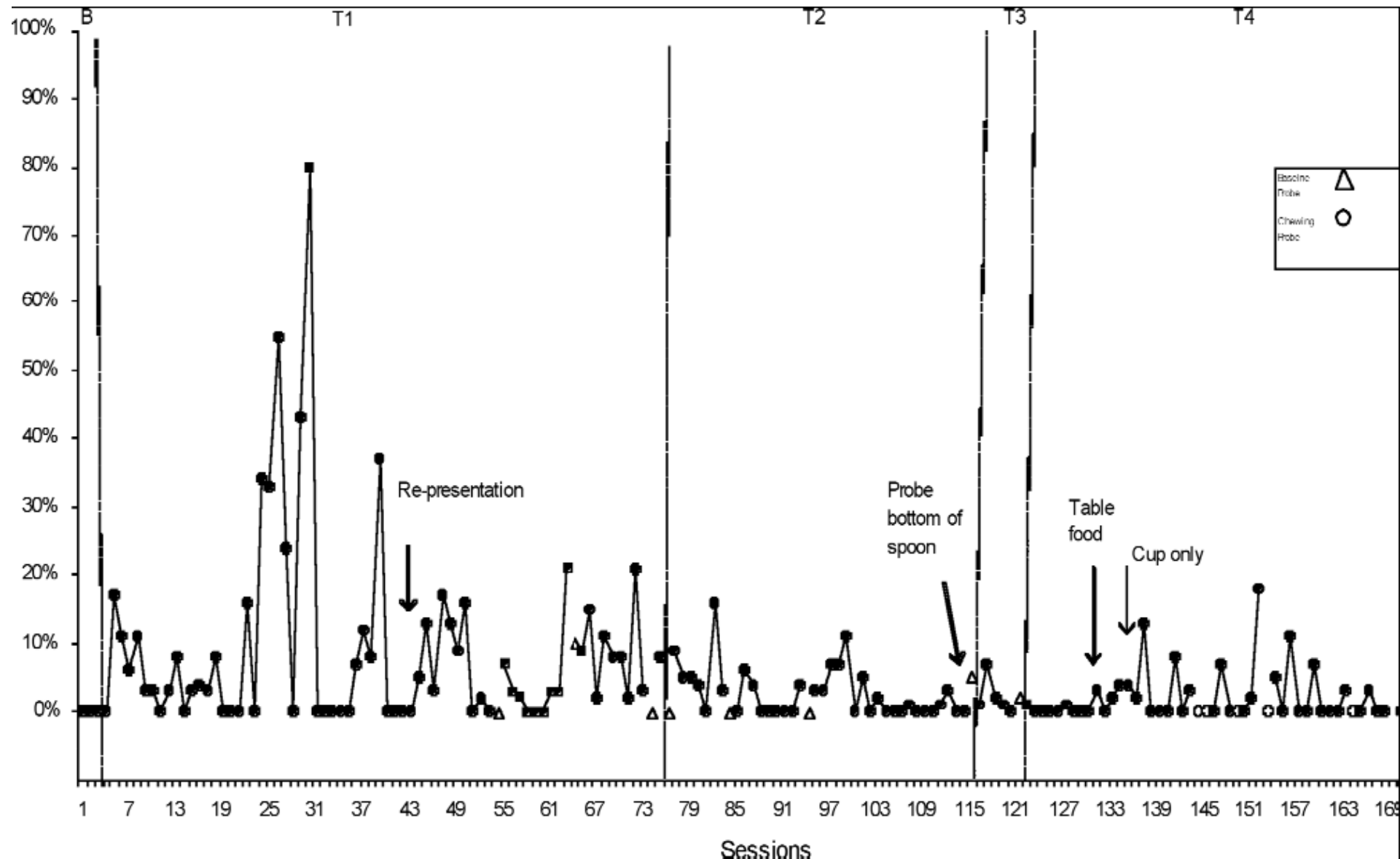
- Tongue thrust
- Swallowing dysfunction
 - Oral phase
 - Pharyngeal phase
- Reduced range of tongue motion
- Inability to chew

Addressing swallowing problems

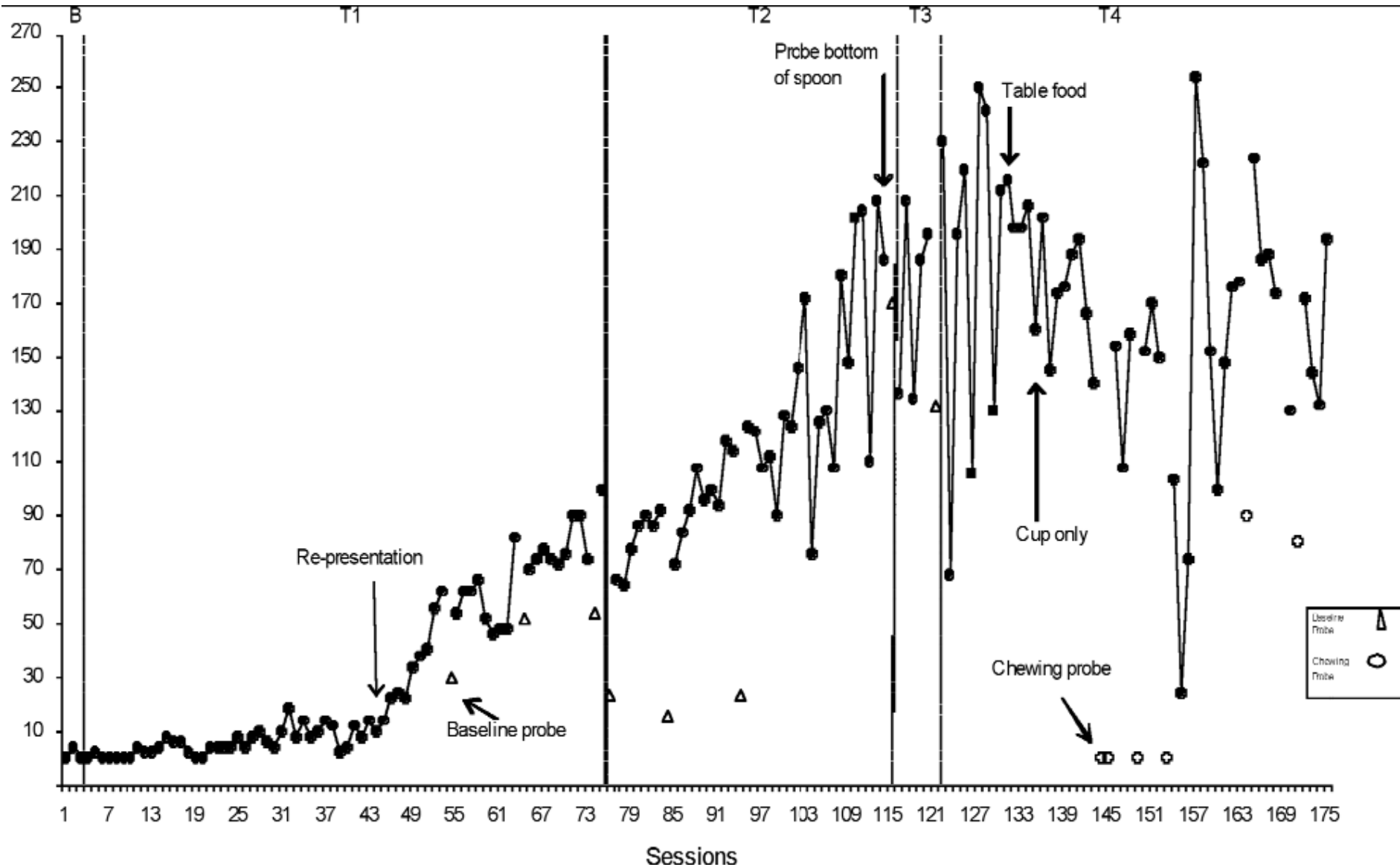
- Use of appropriate food texture & liquid consistencies
- Gradual introduction of food
- Fading texture and repeated practice to develop oral motor skills
- Tongue thrust
 - Contingent pushback
 - Training the tongue with a nuk brush
- Pharyngeal dysfunction
 - Vitastim?

Tina Lee's story:
Using operant conditioning to
treat oral motor and
motivational issues

Tina Lee's gagging



Tina Lee's intake



Why don't some children chew?

- Poor oral motor skills impairs skill development
- Poor oral motor skills makes learning difficult, so child avoids attempting chewing
- Physical abnormalities prevent chewing
- Children learn to chew non-food objects, or even some foods, but fail to generalize to a wide range of foods or does not chew consistently

What to consider prior to addressing chewing

- Is the child already compliant with a lower texture diet? (it will be hard to address chewing if the child is refusing everything)
- Is the child drinking enough?
- Is the child able to follow directions?
- Can the child imitate?
- Have all physical reasons for not chewing been ruled out?

How we have been teaching
chewing skills:

Noah goes to chewing school:

How did we develop our intervention?

- Reviewed all the literature, including oral motor and behavioral approaches
- Only one article that directly taught chewing (Butterfield & Parson, 1973)
- Some articles discussed more indirect treatment as part of tx package (work by Gisel, 1994)

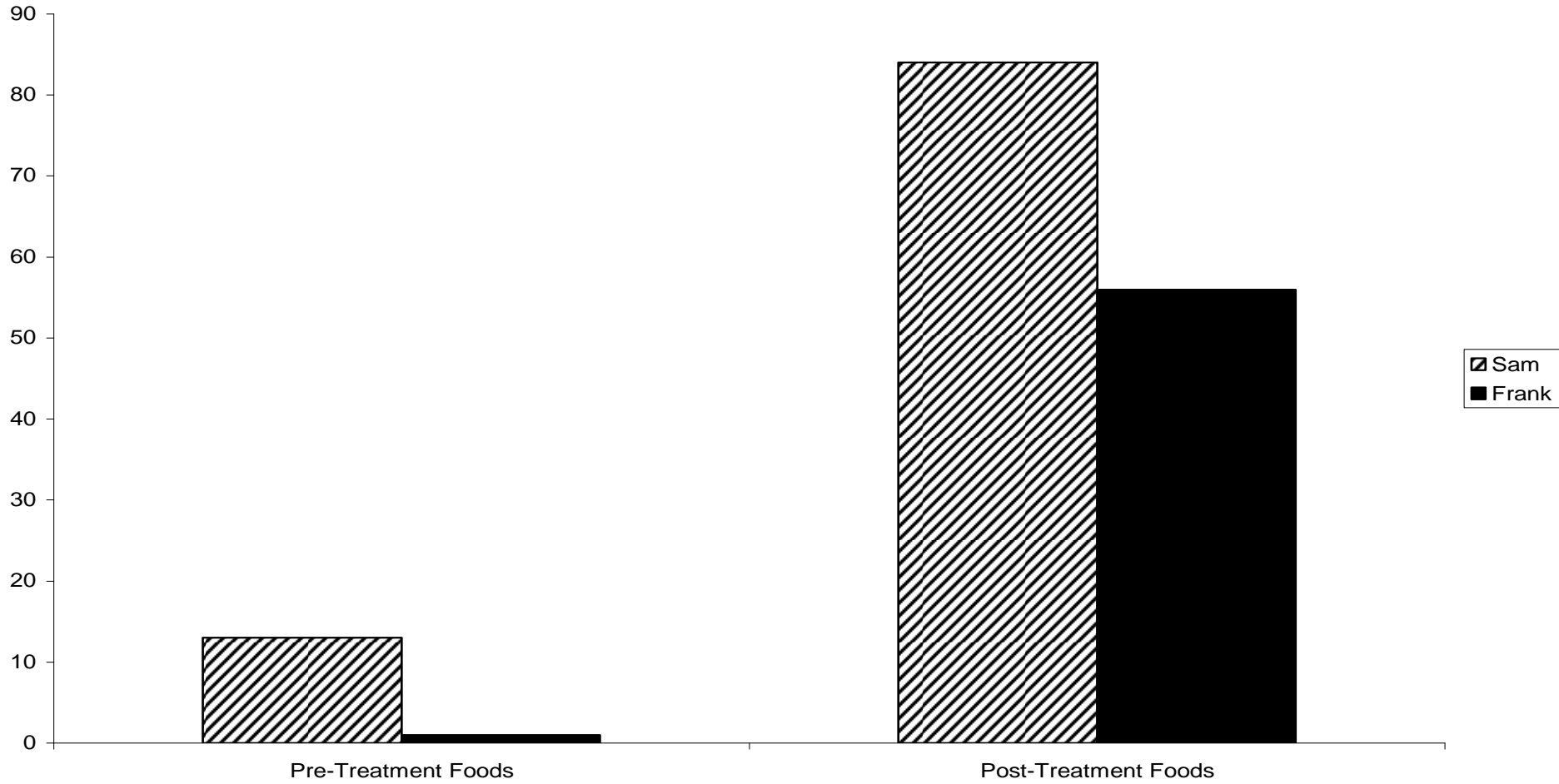
The 4 step plan for chewing

1. Teach drinking from an open cup
2. Shape chewing by reinforcing a single bite
3. Systematically fade up the texture
4. Shape tongue lateralization as needed
 - You can use modeling for each step, but it is not necessary
 - It can be used instead of meal or at separate sessions

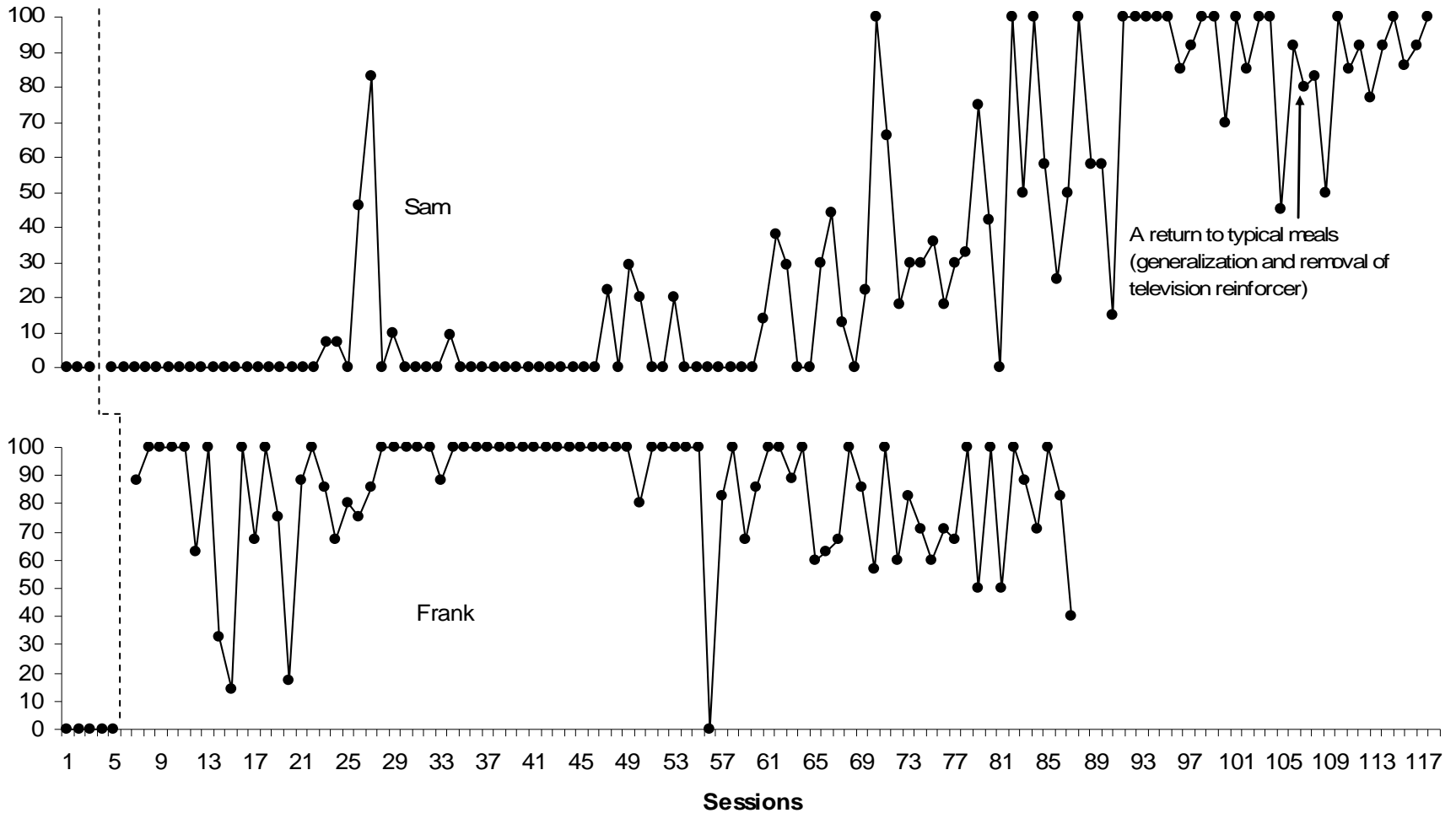
A structured approach to chewing

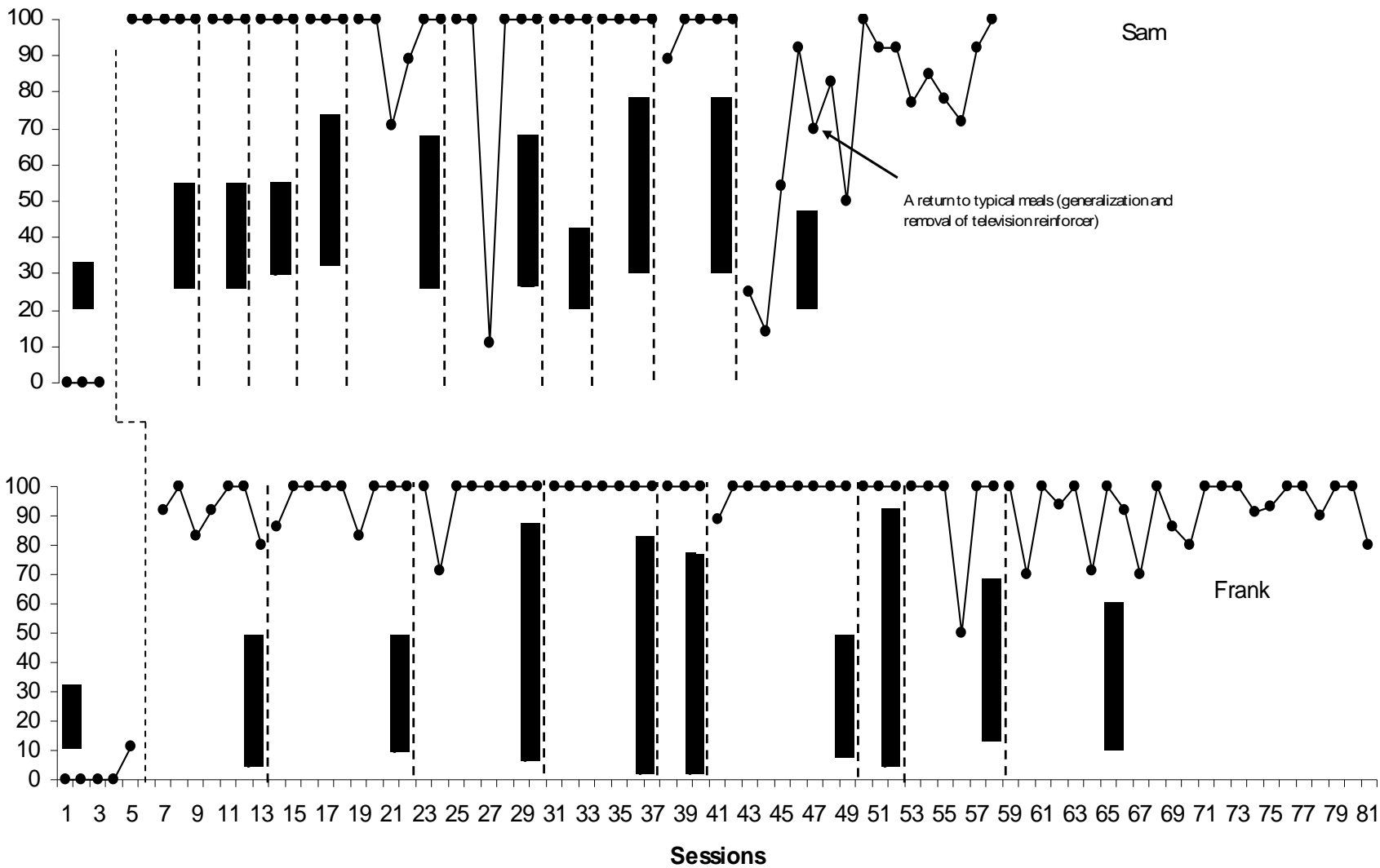
- ABA Master's project
- 2 patients:
 - 8yo boy with Down Syndrome
 - 5yo boy s/p stroke, kidney transplant
- Used same tx plan to teach chewing to older children, used Multiple BL design to demonstrate functional control

Table Foods Eaten



Percent correct chewing





The nutritive approach to developing oral motor skills

- We don't work on oral motor skills directly, but rather indirectly as feeding skills are taught.
- Unless the child is an unsafe oral feeder, we use food in all aspects of treatment
- We avoid working on chewing, etc. using chewy tubes or other non-food items to avoid problems with generalization

What is food refusal?

- Child refuses to eat enough to sustain growth
- Often accompanied by refusing to eat, turning away from the food, crying, and various other inappropriate mealtime behavior
- Most children w/ food refusal have at least one medical condition, most often GERD
- Often children dependent upon tube feedings or oral supplements
- Problems with appetite are common.

How do we treat food refusal?

1. Hunger induction
2. Escape extinction for refusal
3. A structured meal and snack schedule
4. Positive reinforcement for acceptance
5. Gradually increasing response effort
6. Extinction of inappropriate behavior

Every published tx of true food refusal involves #1, most involve #2

What is hunger induction?

- Many children dependent upon tube feeds or who drink large amounts of supplement may not have a large appetite.
- Children who are underweight or malnourished may not understand hunger.
- We reduce or eliminate tube feeds/supplements to increase hunger.
- This is not accomplished in 1-2 days, but more typically in 1-2 weeks.

What is escape extinction?

- Some children not motivated to eat or with conditioned aversions to eating are dependent upon tube feeds, supplements, or are failing to thrive.
- Escape extinction typically entails presenting a small bite of food and waiting for the child to accept the bite, thus teaching the child that avoiding eating by refusing, crying, turning away, or other inappropriate behaviors is not possible.

Is escape extinction necessary?

- If you look at the literature, most successful treatments of food refusal involve some form of escape extinction.
- Typically, most studies have been conducted in inpatient or day treatment settings, rarely in school or home settings.
- You can probably develop interventions without escape extinction, but they will take time and consistency

Why do we use structured meal and snack routines?

- You want the eating to become a habit for the child, a schedule can help do this.
- A schedule helps develop a hunger-satiety cycle, which is not present in many children
- Many children with GERD or motility problems do better with 5-6 oral feeds per day rather than 3 meals
- Grazing across the day can just take the edge off the child's hunger and not allow the child to learn to accept a larger volume

Using positive reinforcement with feeding

- Why?: because food is not a primary reinforcer for many of our children
- It is a consequence, not a distraction
- Schedules of reinforcement
- Don't forget the matching law
- Remember: the ultimate goal is to develop natural reinforcers, e.g. food
- The reinforcer is nothing but a tool

Reinforcement vs. bribery

- Bribery = getting someone to do something that is illegal, immoral, or unethical.
- Again, reinforcement is just a tool to use when eating is not rewarding in and of itself.
- Does rewarding eating a particular food decrease the preference for that food? (overjustification effect)
- No, our research and that of many others has failed to find evidence of the overjustification effect...we, in fact, found that repeated exposure to a food increases the probability that the food will be eaten

Increasing response effort

- Special educators are familiar with gradually increasing response effort...
- Gradually increasing response effort by gradually increasing texture, volume, or variety
- This often decreases the intensity and frequency of inappropriate behaviors.
- There are multiple examples of gradually increasing response effort that we will discuss

“Faith”

- 15 month old female
- Hx of GERD
- Wt < 3rd %ile Ht = 3rd %ile
- Ate only smooth foods and milk/formula mix w/ powdered milk from a bottle
- Rec'd PT, OT, nutrition, behavior therapy
- Feeding therapy focused on self-feeding cheerios
- PT did not want to work on mobility due to low wt
- Meal & snack schedule – 3 meals, 2 snacks, 10” each
- 3 foods: one smooth, two w/ texture (texture fading)
- Cup drinking during meal, bottle feed for 5” after meal
- Rotate through foods/drink
- Contingent attention for eating, ignore refusal/crying
- Increase caloric intake: pudding, yogurt, high calorie baby food
- Move to pediatric formula

“Ella”

- 25 month old female
- GERD, controlled w/ Prevacid
- Nurses multiple times/day
- Eats popsicles & candy
- Takes sips of milk, juice, H₂O
- No developmental delays
- Wt < 3rd %ile Ht = 60th %ile
- Mom tx'ed for PP depression
- Dad works 12 shifts
- Little social support
- Referred for food refusal, poor wt gain
- Meal & snack schedule: 3 meals, 3 snacks, 15" w/timer
- 4 foods and milk or juice
- If she self-feeds bite, 10 seconds of video
- If she refuses, present a bite and at least touch to lips then reward with video
- Ignore crying or tantrums
- Preferred videos only for meals
- Terminate nursing

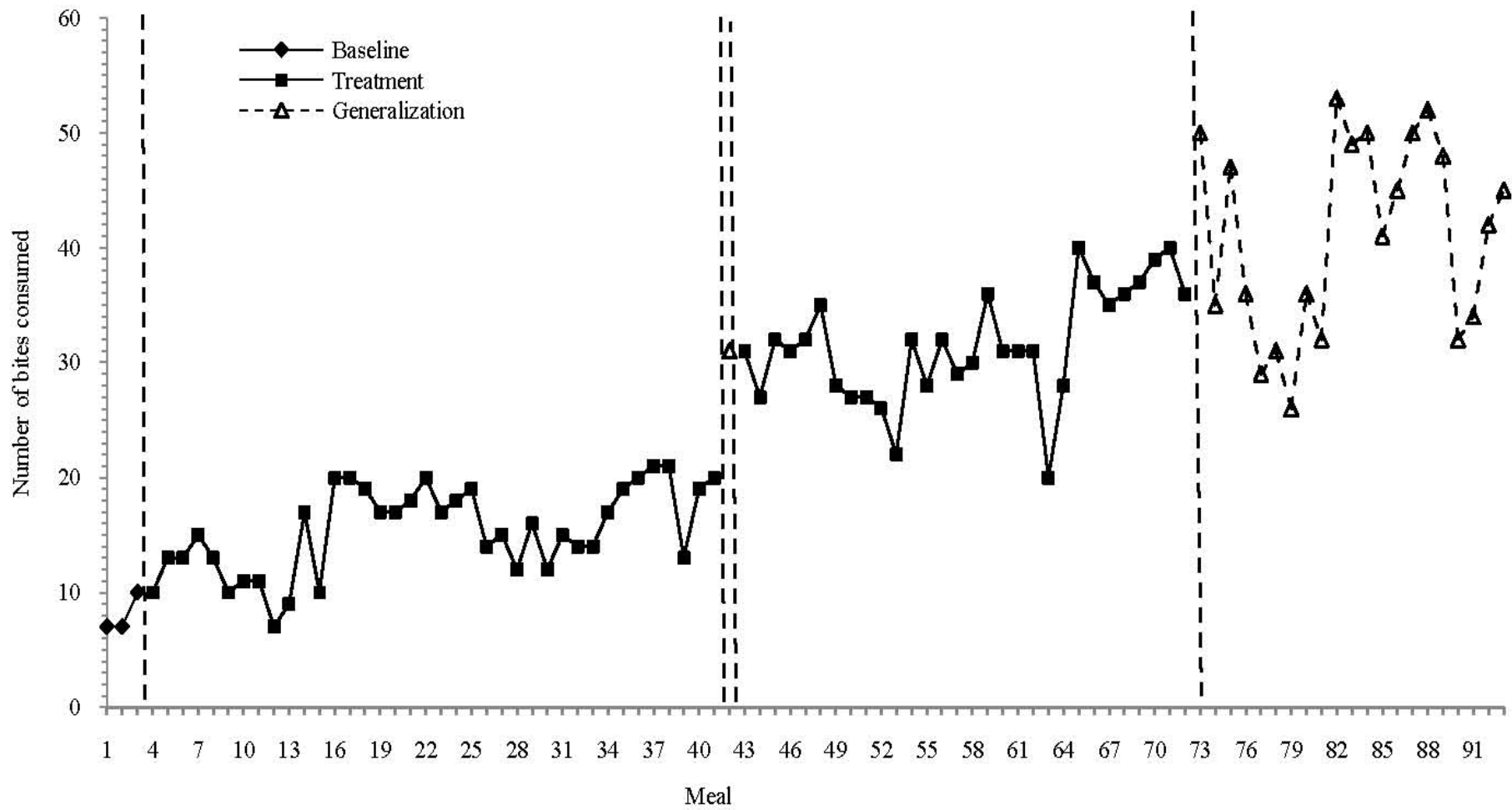
Is it possible to treat food refusal in school settings?

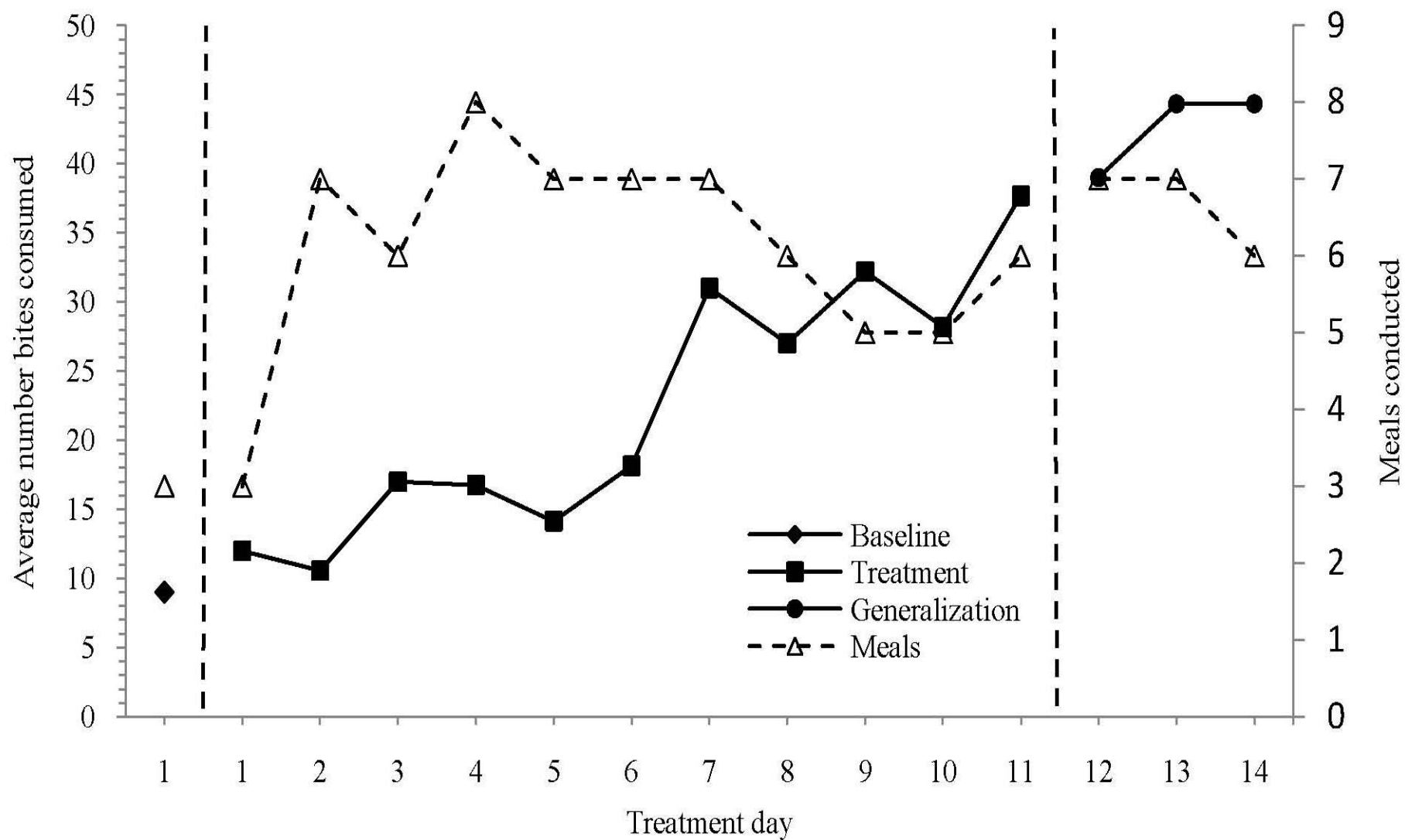
- Little success will probably occur in only school setting.
 - Child may learn just to avoid eating
 - Child may eat at school, but not generalize
- Best success with a home-school partnership.
- Child must learn that intervention is consistent across settings.
- Hunger induction must occur across settings

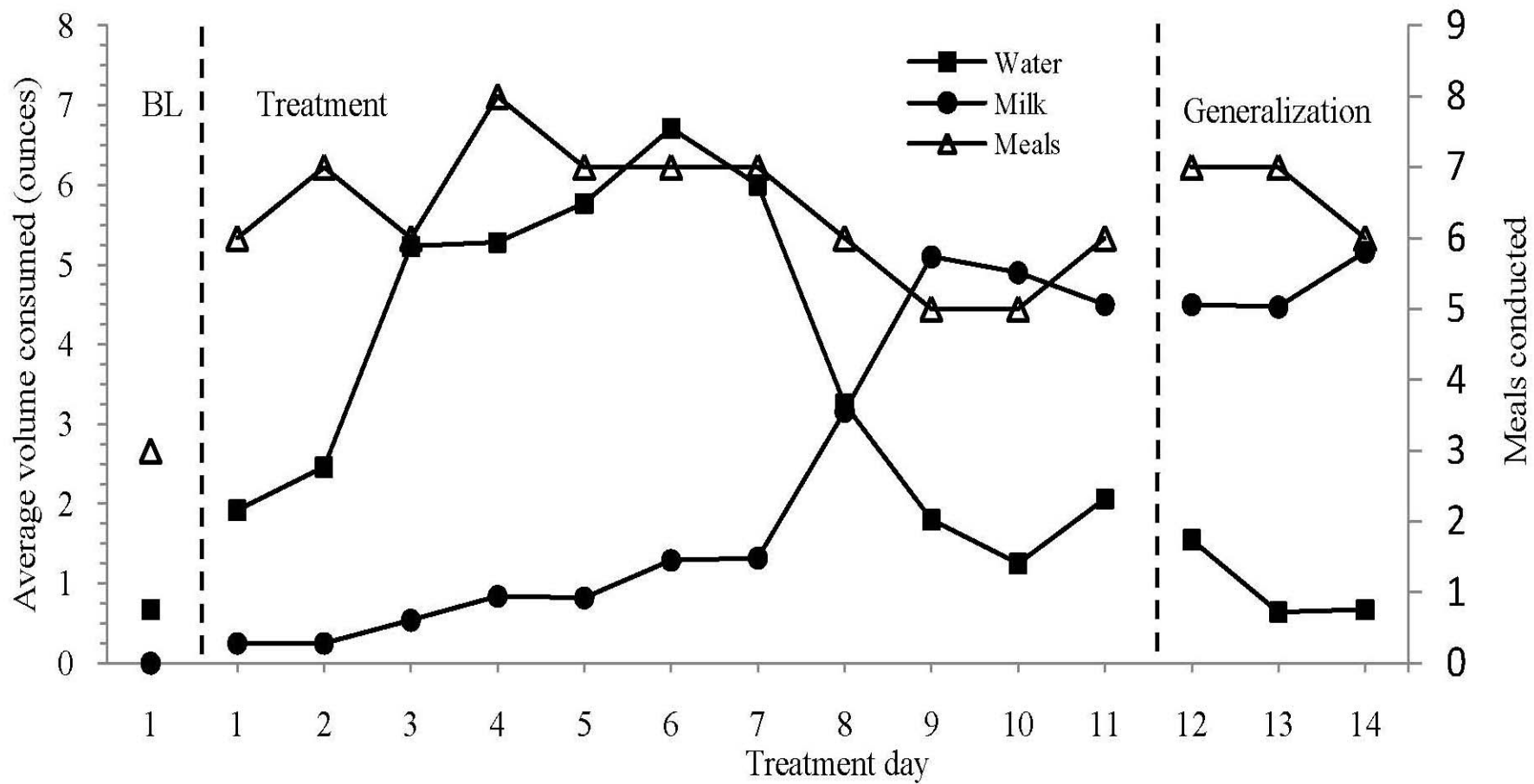
- Participant was a 16-year-old male dx'ed with Asperger's disorder.
- 9 yr. history of G-tube feedings, rec'd 2000 kcal/day
- Prior to tx, ht of 10 yr old, wt of 9 yr old
- Drank only water, ate 3 foods
- Selective by type, texture, color, brand. Also used only specific dishes & utensils.
- Failed community based therapy

- Stimulus fading for both solids & liquids
 - Bites started at pea-sized, drinks started at ¼ oz.
 - Bite size & drink size increased based on progress
- Complete elimination of tube feeds on 1st day of tx
- Token economy for solids
 - Participant rated foods; easy, somewhat difficult, difficult
 - Tokens earned for eating bites of food, more tokens for eating foods rated more difficult
 - Tokens exchanged for access to preferred activities
 - The length of time between meals depended upon child's intake, e.g. more bites = longer break
- Exit criterion for liquids
 - Participant had to finish the drinks presented (except water)
 - Volume of drink systematically increased

- Child remained off G-tube, gained over 1 lb during tx
- Tx lasted 14 days
- Child's milk consumption increased from 0 to 31 oz/day
- Child eating 78 new foods and 13 new drinks
- At 1-month f/u, added 27 more foods and 2 new drinks
- Inappropriate behaviors were minimal, first day only 8 behaviors for entire day, no other day more than 2 behaviors
- Token economy eliminated prior to end of tx, not needed at home
- Tx generalized to home, school, and public settings.







Extinction has nothing to do with dinosaurs

- Extinction of attention-maintained behavior often called “planned ignoring”
- Extinction of escape-maintained behavior often called “escape prevention”
- Don’t use the term, “extinction” with parents. I typically say, “just waiting until he or she cooperates”

Hannah teaches us about
extinction

Using representation to eliminate expulsion

- In some cases, children expel food due to oral motor problems, in other cases it is an avoidance behavior.
- Representation involves either representing food that was expelled or giving another bite of the same food that was expelled.
- Child learns that expulsion does not lead to escape.
- This procedure is very successful, but gets worse before it gets better

Other methods of eliminating expulsion

- In some cases, differential reinforcement can be used by reinforcing the child only after bites that are swallowed and not expelled.
- In some cases, expulsion can be reduced or eliminated by reducing the bite size and/or texture and then gradually increasing them.

Some uses of fading

- Used commonly in medical settings, it is what physical therapists do to teach walking (assistance fading)
- spoon to cup
- splint fading for self-feeding
- demand fading
- texture fading

Stevie

- Admitted at 30 mo w/ FTT, adipisia, constipation
- Hx included GER, severe MR
- 100% NG tube fed due to dehydration
- 28 tx days, 138 tx sessions
- Used spoon to cup fading to increase liquid intake
- 100% p.o. at D/C

Adipsia: Working with kids who don't drink

- Is the child refusing to drink...or refusing to drink from a cup?
- Assessment components
 - cup versus spoon
 - thickened liquid versus thin liquid
- Possible Treatment approaches
 - Fading
 - Positive reinforcement
 - Behavioral momentum

“Mary”

- 9 mo old female, twin brother
- Dx: prematurity, GERD, tracheomalasia
- 95% G-tube fed at evaluation
- 50% G-tube fed at first f/u visit, all food
- Refused to nurse, sham drank from bottle, refused cup
- Used pink cup-out cup with 3-4 cc of fluid; bite bite, bite, drink, SR+, bite...
- About 2-3 ounces per meal in one week

“Will”

- 4 yr old boy w/ CP, shunt, GERD
- Ate solid foods, even bean burritos, but required tube feeds due to lack of drinking
- Placed him in high chair & presented him with 5 cc, he was allowed to get down as soon as he finished the drink
- He was given a drink approximately every 30”, when he took 3 consecutive drinks in less than 30 seconds, the volume was increased by 5 cc. Over time the volume was increased & the frequency of the drinks decreased.

Ryan

- 35 mo at AD
- 100% G-tube fed
- G-E reflux
- vomiting
- esophageal dysmotility
- Microgastria
- 30 tx days
- 213 tx sessions
- Tx components
 - Positive reinforcement
 - Escape prevention
 - Meal pacing
 - Reduction of tube feeds
- 100% po at D/C
- drinking from cup
- Follow-up

What to do about vomiting?

- Determine possible causes
 - Gastroesophageal reflux
 - Delayed gastric emptying
 - Hypersensitivity to texture/taste
 - Oral motor deficits
- Manipulate the environment
 - Meal spacing and/or meal size
 - Reduce texture and/or bite size
 - Reduce pace of meal
 - Reduce the caloric density of formula/food
 - Ignore
- Medication

Problems with texture...

- ***Extremely*** common in young children especially children with oral motor delays and/or reflux.
- We use texture fading to address this, fading both texture and bite size
- Hypersensitivity to texture probably learned in most children (e.g. conditioned aversion)
- Could be congenital in some child (e.g. autism spectrum disorders)

Do children with autism have more feeding problems?

- Study included 472 children aged 7-9.5 yrs
- 298 without autism; 138 with autism
- Children with autism dx'ed both by a professional and cutoff score on GARS
- No significant differences in wt, ht, or age
- More medical problems among children with autism (seizure disorders, GERD, lactose intolerance, OCD, anxiety problems, constipation, & diarrhea)

A look at diet variety

Food reported eaten by caregivers on the
Food Preference Inventory

<u>Foods eaten</u>	<u>w/autism</u>	<u>w/o autism</u>
Fruits	8.09	15.75
Dairy	4.32	8.07
Vegetables	4.00	8.23
Proteins	7.82	14.24
Starches	15.82	24.08

What did the caregivers report?

Caregivers of children with autism reported significantly more...

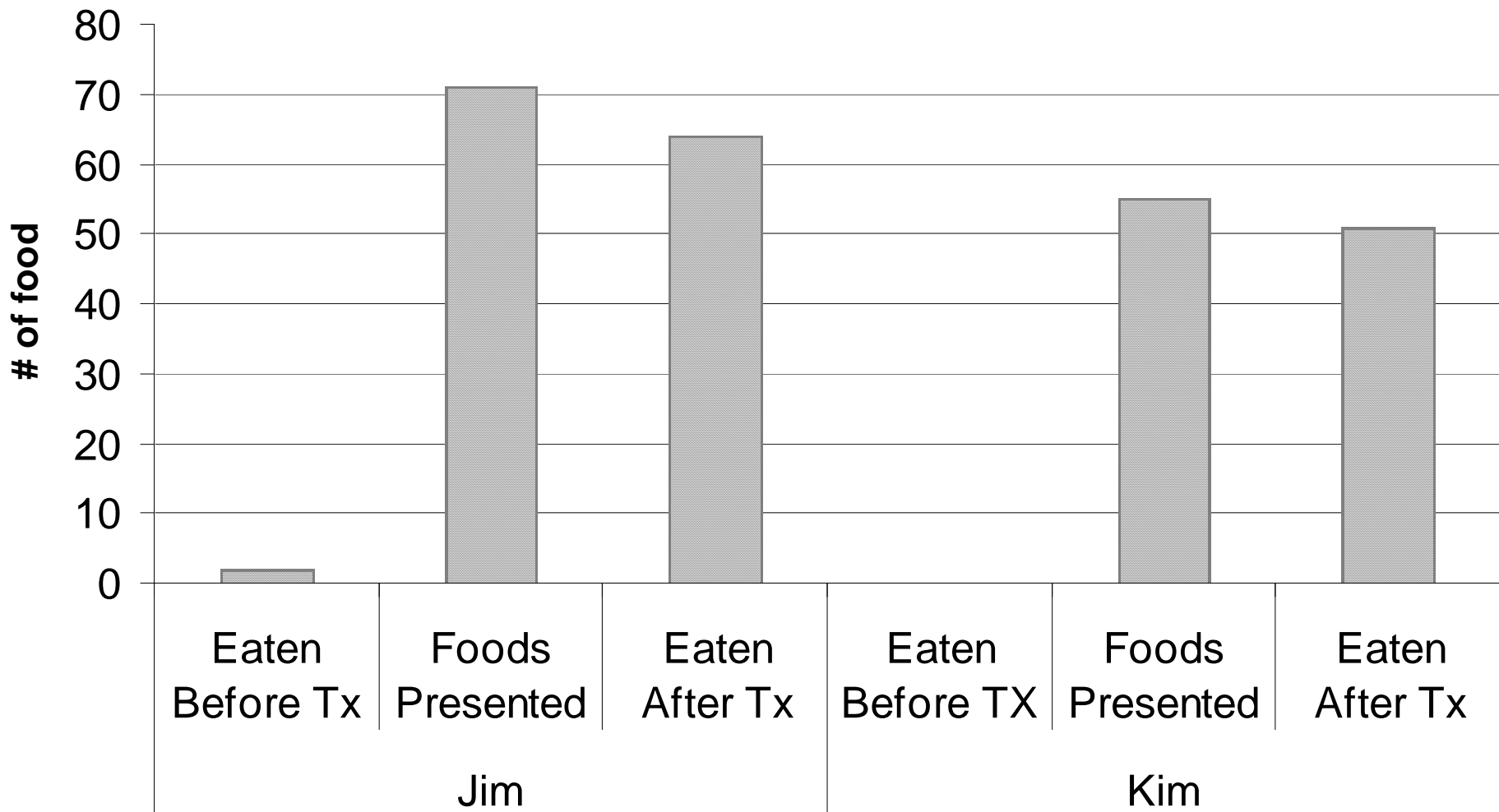
- refusal to eat
- need for specific utensils or dishes
- need for food to be prepared a certain way
- problems with limited variety
- problems with texture

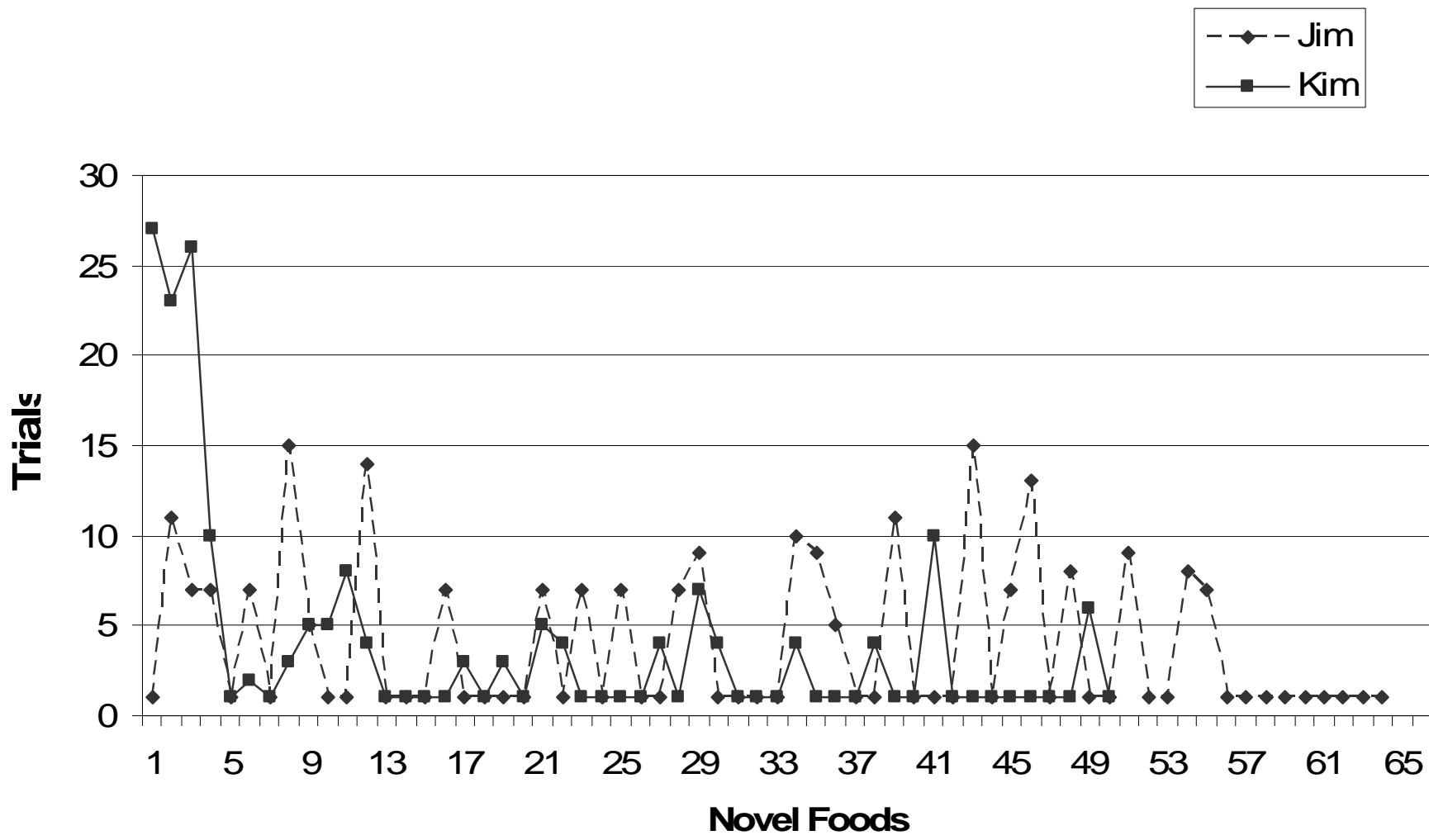
Moving Isaiah's diet beyond oatmeal

One of our initial attempts at exit
criterion and repeated exposure

Revisions to exit criterion: some new lessons

- Start with preferred foods, build momentum
- If possible have wraparound providers use treatment, then fade to caregivers
- Possible outpatient applications





General approaches to addressing selectivity by type

All have been used with
outpatients

Structuring meals & snacks

- Children, including those with autism, do better under structured conditions
- Children's appetites often improve if they become used to eating on a schedule
- Accomplished by:
 - eliminating between meal grazing
 - serving meals/snacks in kitchen/dining room
 - limit intake of fluids if indicated
 - limiting the length of meals and snacks

Altering response effort to increase variety

- Try first introducing foods similar in taste, color, & texture to foods in the current diet
- Start small, even if it is just a few molecules
- If applicable, use foods previously eaten
- Move to new brands of familiar foods

An antecedent approach to introducing new foods

- Mix new foods into preferred foods in tiny amounts, slowly changing the ratio of new to preferred food
 - For example, add ground fruit to baby food, yogurt, or applesauce
- Place new and preferred food on the same food with some preferred food in front of the old food
 - For example, add tiny specks of food on top of a corn chip
- Often accompanied by less inappropriate behavior

Fluid fading

- Like water into wine...how we introduced prune juice into a young boy's diet
- James Luiselli mixed milk with Pediasure, fading out the Pediasure slowly over time to establish milk consumption in a child with autism in a school setting

Flavor-flavor conditioning: Applications

- What is it?
 - Use of a familiar flavor to introduce a novel flavor
- Bill Ahearn covered vegetables in catsup in a boy with autism to increase consumption
- We have used condiments several times, we have even used butter and sugar mixed into baby food

Plate A – Plate B

- Present 6 10” meals/day, use a timer.
- Offer one plate containing pea-sized bites of novel food, one plate containing large bites or pieces of preferred foods, and a drink
- The child gets a bite of preferred food and a drink only after eating a bite of new food
- Give water between meals
- Systematically increase bite size

Should you consider taste sessions?

- Taste sessions can be done away from family meals
- Present a tiny taste of a new food using an edible or tangible reward, such as toys or videos
- Often shaping is used, just touching the food to the child's lips may be done first
- Taste sessions are often conducted instead of snacks for a specific time period
- Taste session may be part of discrete trial program

What we have found about children with selectivity

- Most children with selectivity are normal wt and have no growth problems
- They typically ate a wide variety when younger
- They refused foods without tasting them, thus the appearance of food is most important to them
- Despite their ability to grow normally, their caregivers are often concerned about growth
- Caregivers often express concerns about their children not eating, to the point of worrying their children are “starving” or nutritionally deficient

Preventing food selectivity -1

- Offer a range of foods at meals and snacks
 - Research shows this does not happen
- Offer a small amount of each food, allow the child to request seconds
 - Children are often provided adult-sized portions
- Limit fluid intake to reasonable amounts
 - We commonly see children who drink 100 oz/day
- Do not use food or the bottle to manage behavior
- Offer a “no thank you” bite
 - Research shows that parents do not repeatedly offer foods to their children or have them try new foods

Preventing food selectivity - 2

- Give attention to eating and appropriate mealtime behavior rather than inappropriate behaviors
- Do not become a short-order cook
 - We have conducted several studies that showed the more the parents reported preparing special meals for their children, the fewer foods were reported in the children's diets
- Do not allow grazing, limit snacking
 - Many of the snacks eaten by children are high in caloric density so it does not take much to affect appetite

“Brandon”

- 4 yo male w/ limited diet, poor wt gain
- Ate mostly snack food, no fruits, vegetables, meats, and few dairy products, little milk
- Did not sit at table
- Plan 1
 - Plate A – Plate B
 - 3 meals/3 snacks
- Plan 1 increased variety to all food groups, including milk; increased overall intake
- Plan 2
 - Beat the clock
 - Finish 3 small portions, then more of whatever
 - Finish small amount of milk at meals

Prerequisites of self-feeding

- Does the child have the fine-motor and oral motor control needed for self-feeding?
- Have all or most other feeding skills been acquired?
- Will the child's nutritional status be compromised by a move to self-feeding?

Teaching self-feeding

General approaches

- Graduated guidance (most kids who have good fine motor skills and fair compliance)
- Backward Chaining (kids with significant developmental delays)
- 3-step guided compliance (kids with significant compliance issues)
- All have been empirically validated with multiple populations

Teaching Self-Feeding Modifications

- Self-feeding at the beginning of the meal; e.g. 1st 20 bites, 1st 10 minutes
- Self-feeding for highly preferred foods that children are highly motivated to eat
- Combining both self-feeding with parent feeding throughout meal to ensure adequate intake

Working with caregivers:

Developing interventions for the home,
school, and community

Practical ideas and suggestions

What have parents been told about feeding?

- It is the parent's responsibility to provide the food and the child's decision to eat it.
 - What if the child does not decide to eat?
- Bribes and coercion are counterproductive, they make children resistant or dislike foods to which they are indifferent.
 - Okay, but what should parents do?
- Mealtimes are for eating & socializing, not playing.
 - But is reinforcement playing?

Points I try to stress with caregivers

- Children are different, most will eat when they are hungry, some will not.
- Since children and families are different, interventions are different.
- Treatment is a process of achieving several, sometimes many, small goals to meet a larger goal.
- The initial treatment may be difficult and may even fail, but you need to start somewhere

My view on interactions

- The goal is to teach the child skills he will use for the rest of his life
- It's not about being tough, mean, or harsh...it's about being consistent
- Implementing the plan does not require yelling, threatening, begging, coaxing, or pleading
- Children are not being controlling, they are generally trying to avoid unpleasant activities (or ones they perceive to be unpleasant)
- I often describe feeding problems as being similar to phobias...this often makes it easier and more palatable for parents

Working in day care and preschools

- Why should the staff address feeding?
 - Buy in from staff is critical, you must make a case
- Does the child eat differently at school than home?
 - Often children learn new skills better at school since the school staff already has instructional control
- What is realistic in the school setting?
 - More intensive plans may not be feasible due to lack of time or staffing
- Who can work on feeding on a regular, on-going basis?
 - It may be more helpful to train paraprofessionals who work with a child more consistently

Home-School Partnership

- ❖ Parents & school should have the same goals
- ❖ Progress will be faster if the plan is implemented across settings
- ❖ There must be a method to communicate progress and ensure treatment integrity
- ❖ Goals for treatment must be measurable
- ❖ Again, try to make the goals sequential and focus your efforts on achieving a goal

Some hints for success

Things we have done that were successful:

Develop both long-term and short-term goals.

Yes, eating in the cafeteria is a goal, the first goal may be increase oral intake

Work on short-term goals that can be achieved.

Select some simple goals and work on them consistently

Have school staff most familiar to the child work on feeding.

The child may be more likely to cooperate with a familiar person

Consider more frequent, brief meals rather than longer meals.

Ideas for caregiver training

- Data collection & review
- Coaching - feedback
 - Have caregiver attend school or conduct home visit
 - Review videotapes/DVDs of meals
- Written treatment plan/cards
- Demonstration of intervention
- DVD of intervention
- Webcams/use of internet

Generalization

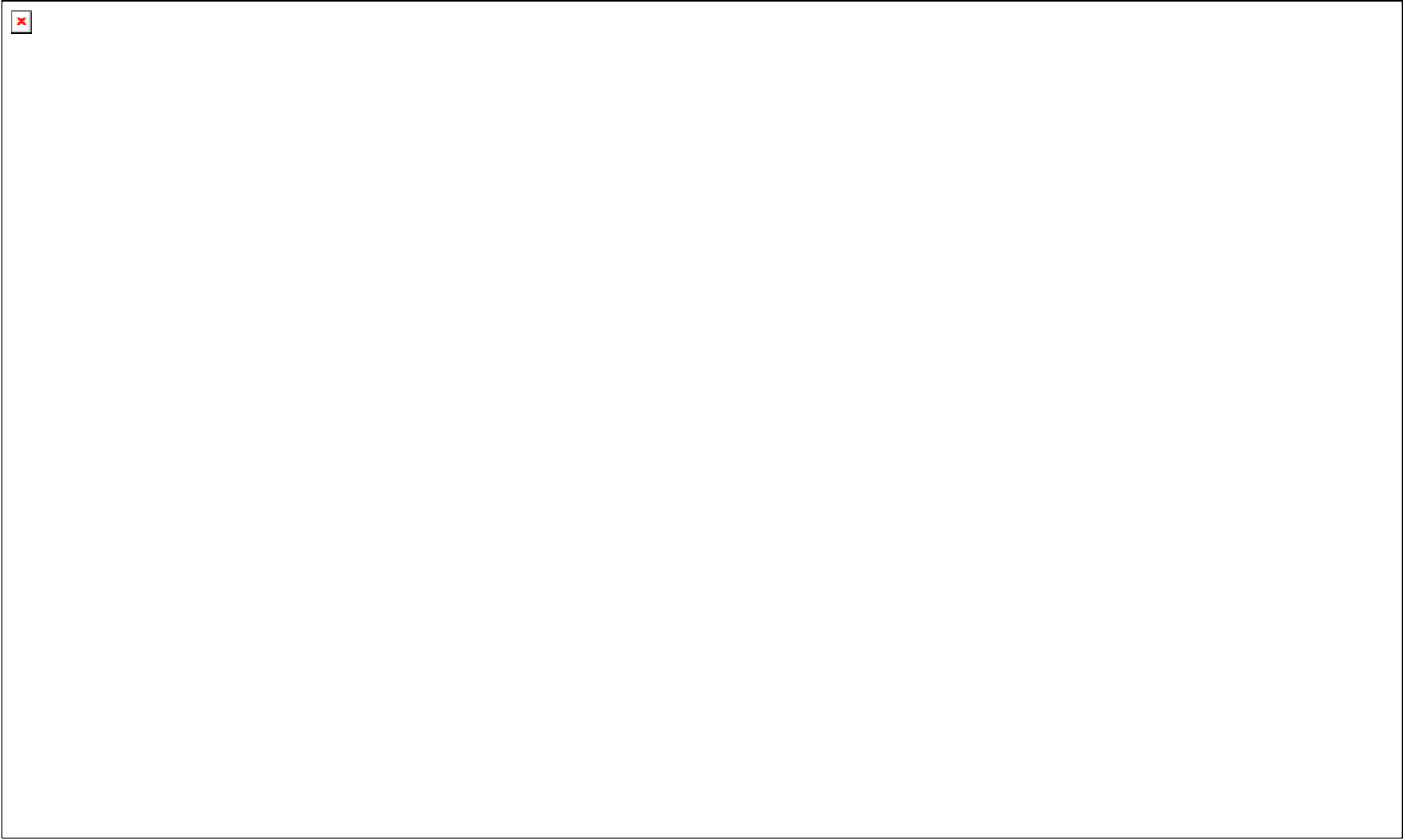
- Generalization is the key to long-term success
- Programming generalization
 - program implemented by multiple persons
 - generalization to multiple environments
- Establishing S^D s
 - timers, bibs, silverware, cups, plates
- Decision rules for program fading

Increasing variety to delay satiety

A possible alternative or adjunct to
supplementation

“Allison”

- 39 mo old female
- Hx of GERD & motility disorder
- Constipation
- S/P N-G dependent
- S/P day treatment
- Currently off tube feeds
- Rec’s 3 meals, 20” duration
- Rec’s 3 snacks, 10” duration
- Rewarded for eating, video at home, flash cards/praise at school
- Drinks limited to 4 oz
- Rec’s 1 ½ oz drinks between meals and snacks
- ***Rec’s 6 foods for meals & snacks to delay satiety***



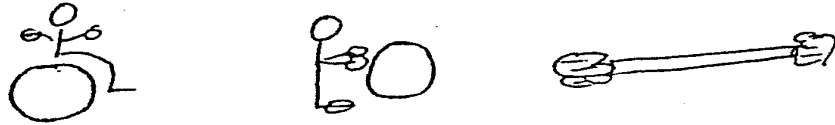


“Allison”- now

- In three years, weight increased from 21 lbs to 40 lbs
- All supplements have been eliminated
- Eats a wide variety of foods
- Eats two 10-minute snacks at school, must finish her 4 oz drink, solids are optional
- Eats lunch in the cafeteria
- Parents still providing a variety of foods across the day

EACH SESSION WE ...

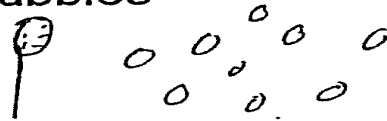
FIRST – Calm our bodies



SECOND – March into the Feeding Room



THIRD – Blow bubbles



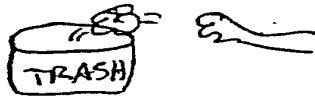
FOURTH – Wash hands



FIFTH – EAT



SIXTH – Clean up



SEVENTH – Wash up

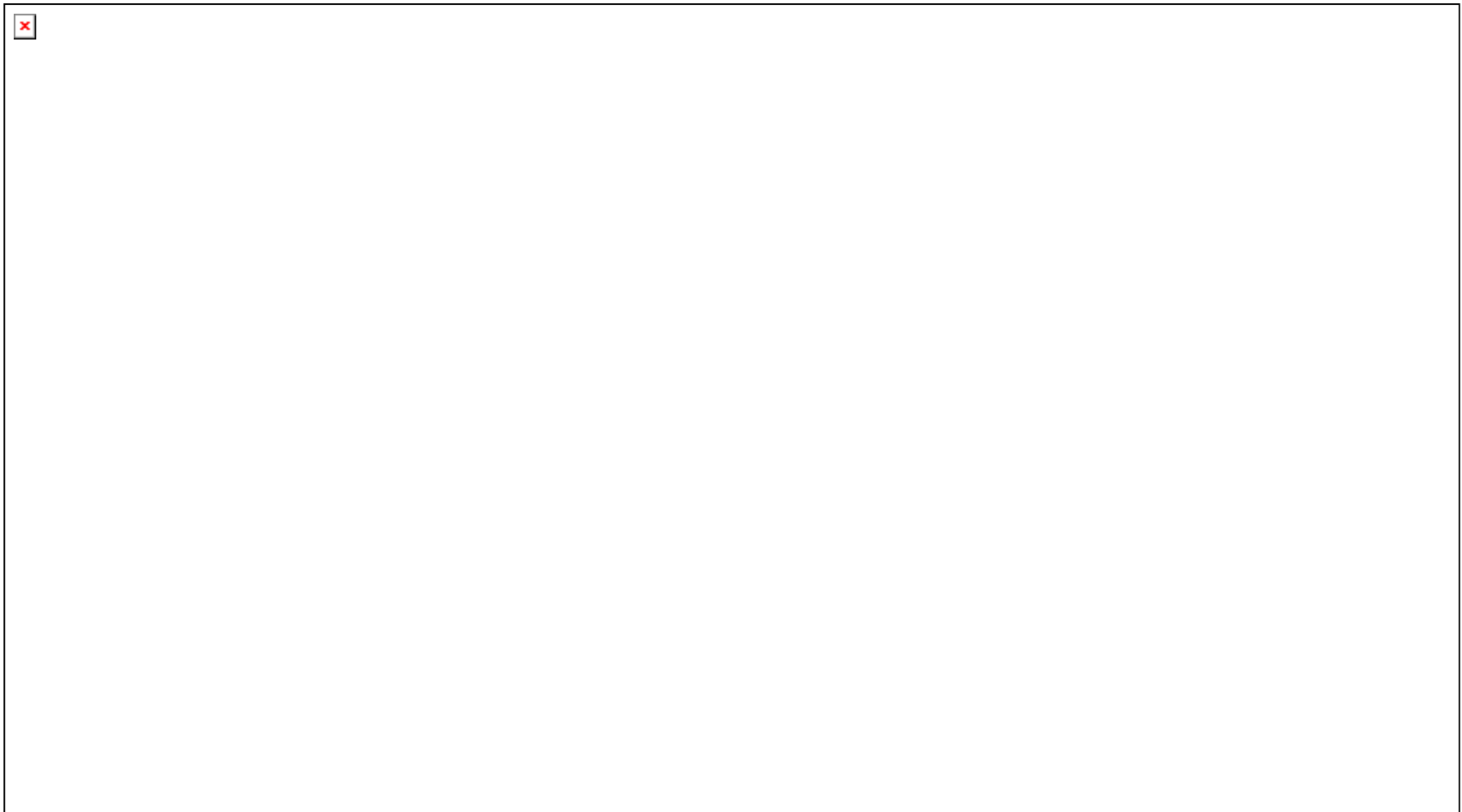


DONE!

Jake's story

- S/P 2 kidney transplants
- Nissen fundoplication
- Bilateral myringotomy placement
- GERD
- Pulmonary disease
- G-tube dependent – 8 cans of Pediasure/day
- Rec'd 20 minute meals
- Alternated between 3 & 6 foods/meal
- Praise only for eating
- Weaned from G-tube
- Eating 93 foods and taking all meds orally
- Able to meet fluid goal of 60 oz/day





Program Goals

INCREASE 3 WEIGHT MANAGEMENT BEHAVIORS:

FVFIRST -- eat fruit & vegetables first during meals

HDRINK -- choose low-fat, low-sugar healthy drinks

EXERCISE -- exercise many steps daily

INCREASE PREFERENCES FOR THESE BEHAVIORS

IMPROVE WEIGHT STATUS

Participants

382 1st – 4th grade children from small town in PA;

211 boys, 171 girls

120 (35%) at risk for overweight

2 GROUPS:

Intervention (LIONS) -- “Good Health Behaviors”

Control (TIGERS) -- “Good Citizenship Behaviors”

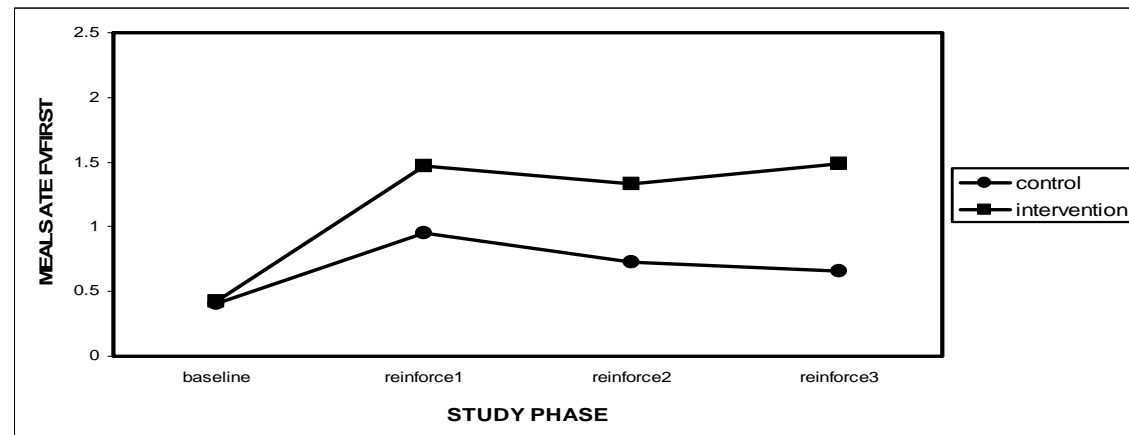
STUDY PHASES:

baseline (1 month)

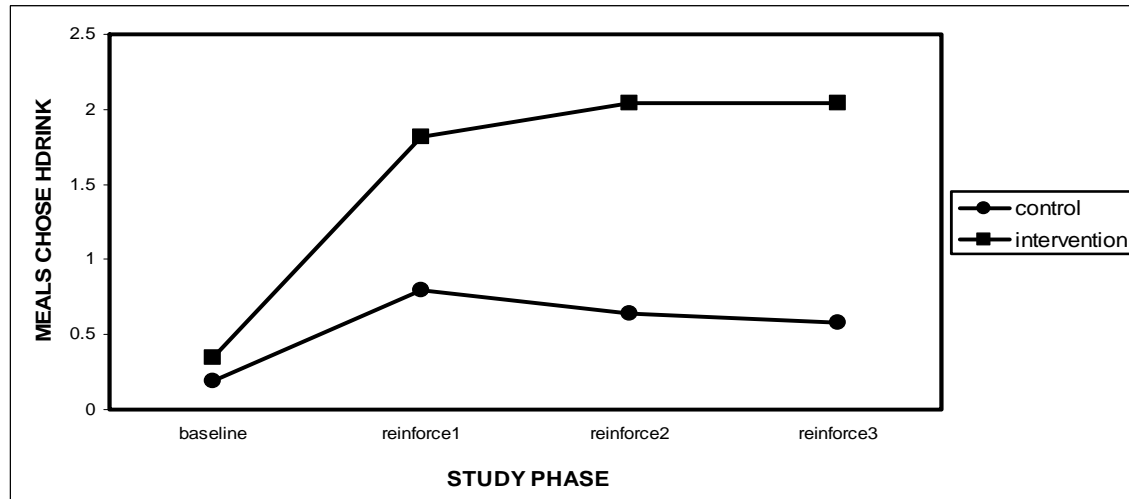
reinforcement (3 months)

follow-up (2 weeks) (6 months)

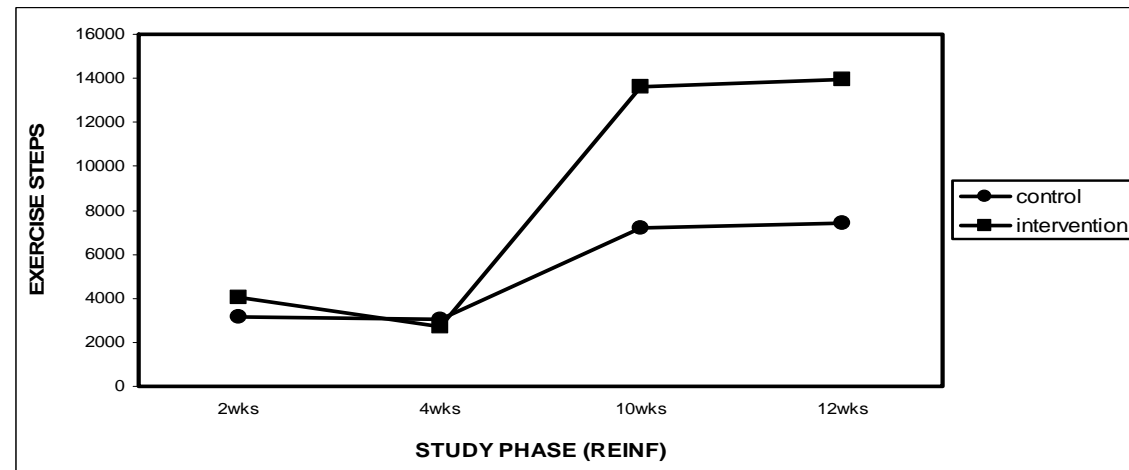
Fruit & Vegetable First



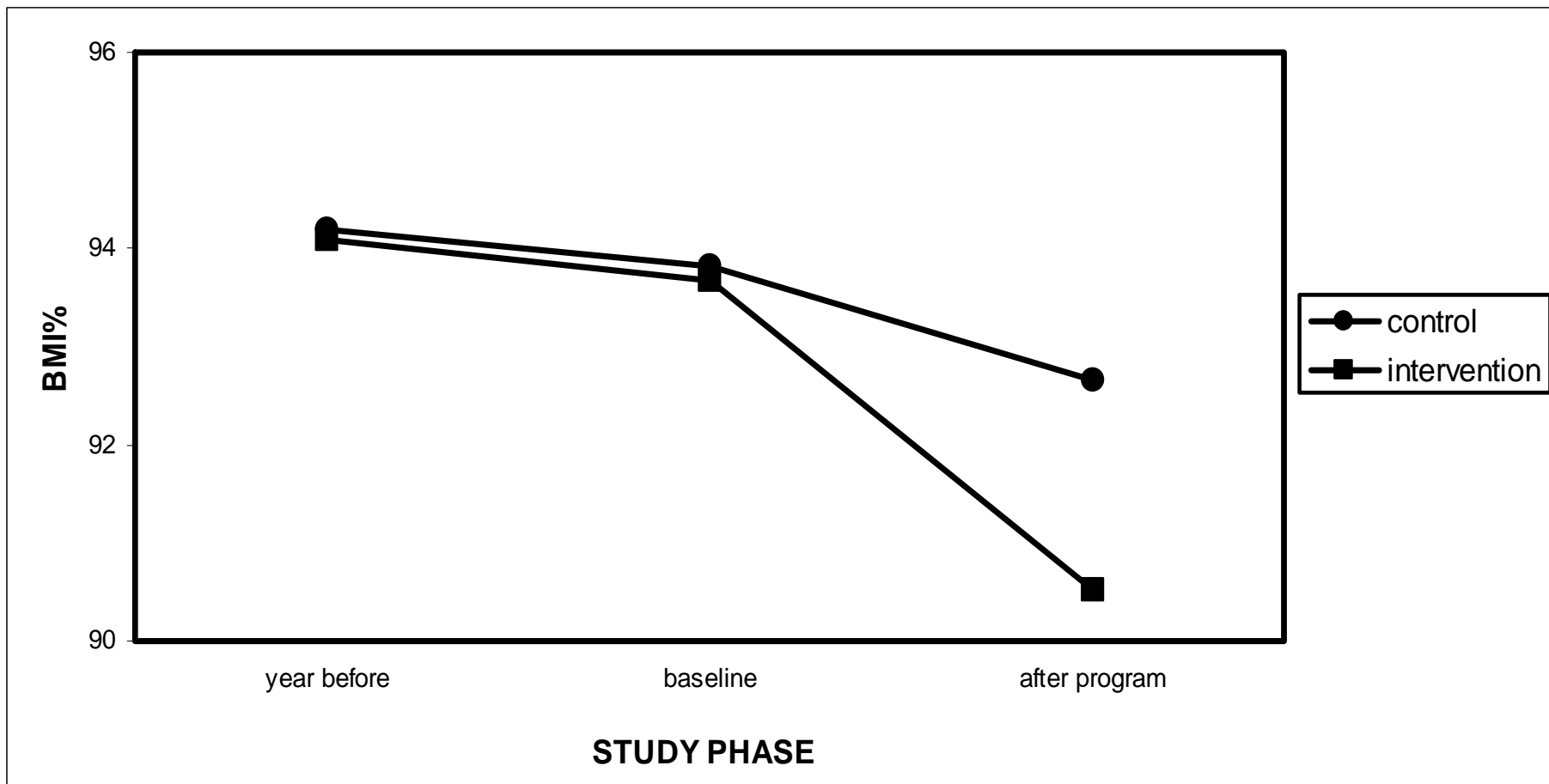
Healthy Drink



Exercise



WEIGHT STATUS (FOR OVERWEIGHT CHILDREN)



PROGRAM EFFECTIVENESS

Improved 3 weight management behaviors

Improved preferences (except 4th grade exercise)

Improved weight status for overweight children

PROGRAM COST

\$2 per child per month (for nametags, hole punchers, prizes)

+ **\$7** per child per month if use pedometers

Concluding Remarks

- Once again, feeding disorders are chronic problems
- Treatment often needs to involve more than one discipline
- Feeding is best taught through a structured process like all other skills
- Treatment should be data-based