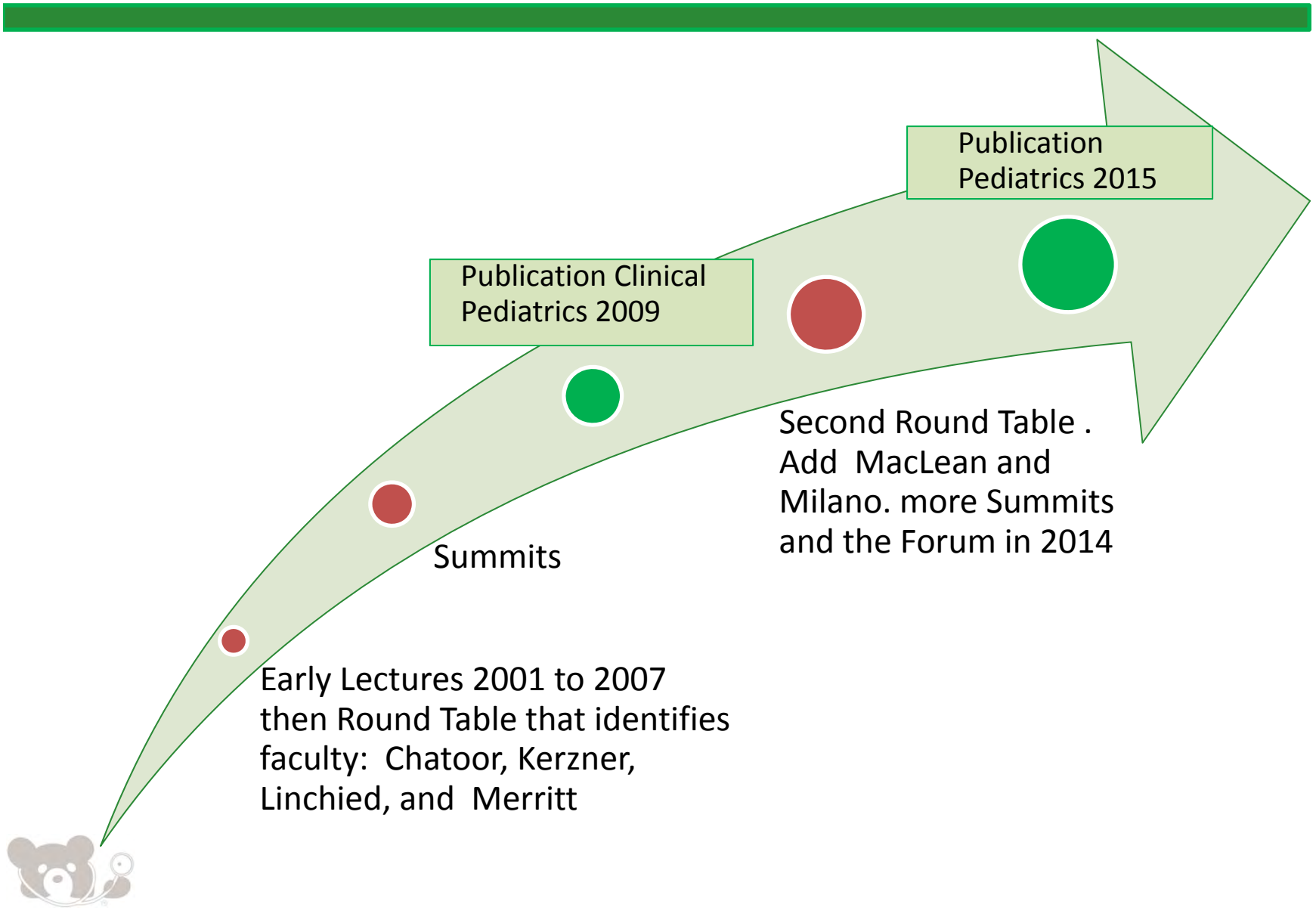
A practical approach to classifying and managing feeding difficulties

Presented by Benny Kerzner
Emeritus Chief
Dept of Pediatric Gastroenterology and Nutrition
Children's National Health System
Washington DC

Objectives for this lecture

1) Relate an approach that:
   - meets the needs of the pediatrician
2) Review an algorithm that progresses through:
   - identification
   - assessment
   - prevention
   - treatment or referral
3) Explain the rational for our approach

Disclosure of collaboration with Abbott



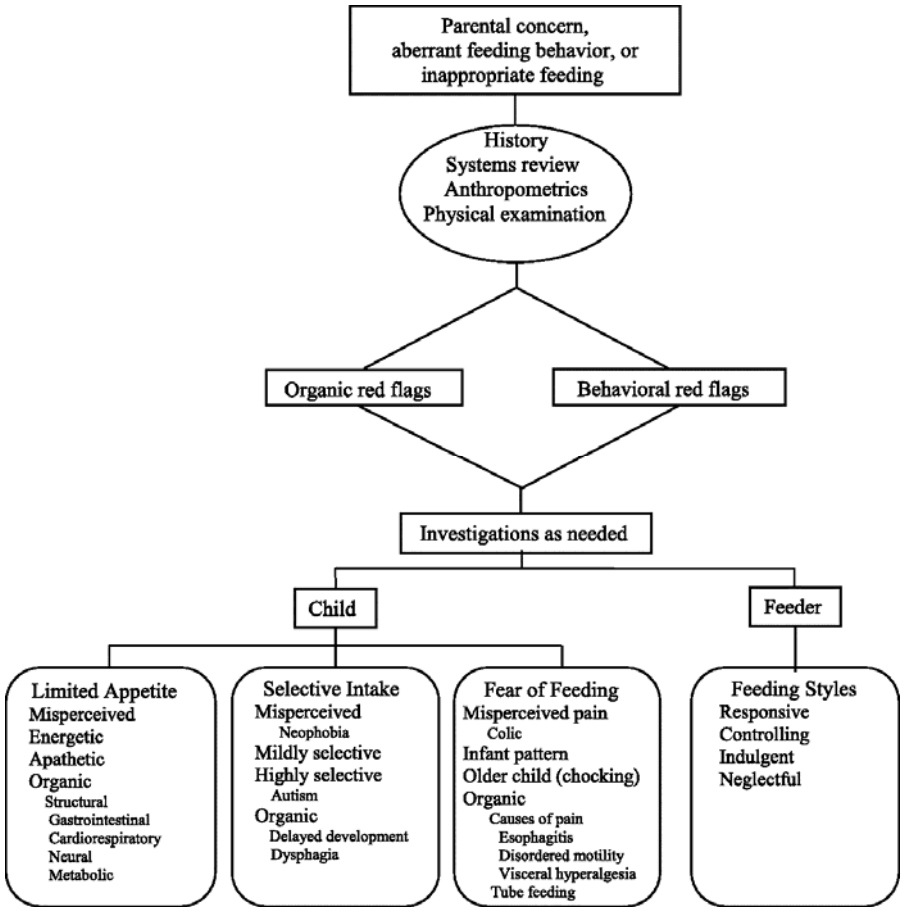
An approach to identifying and managing feeding difficulties

Background

Presentation

Evaluation

Classification and Management



Benny Kerzner et al. Pediatrics 2015;135:344-353

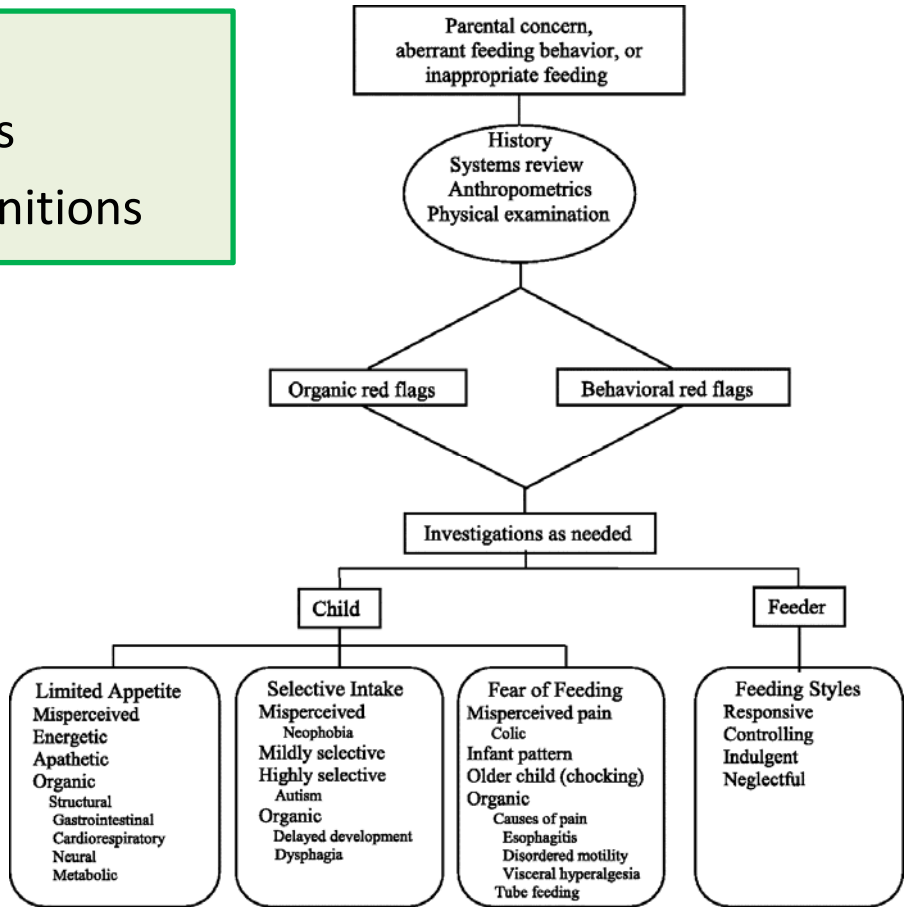
PEDIATRICS®

An approach to identifying and managing feeding difficulties

Background

- Who is involved
- Related concerns
- Operational definitions

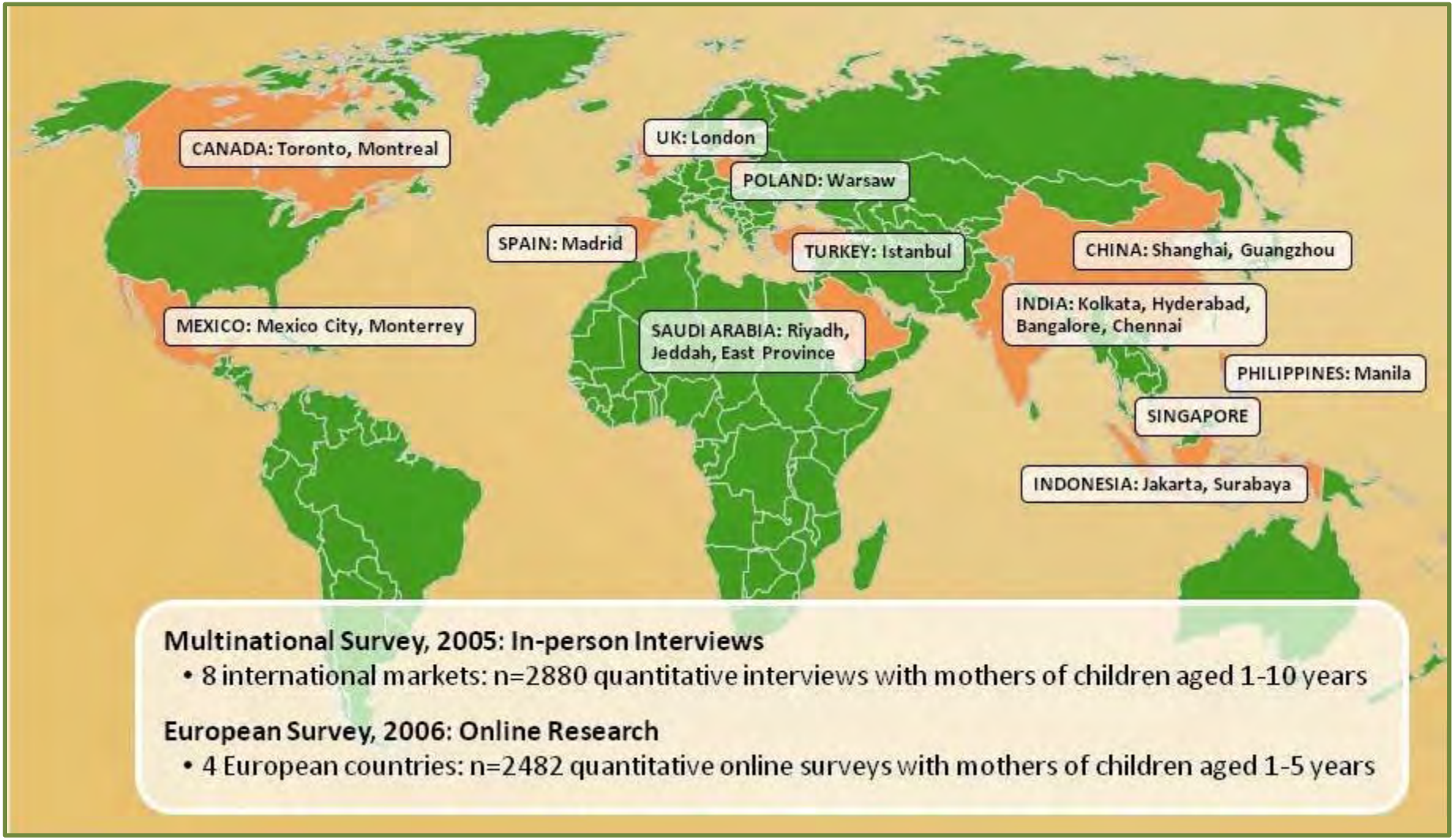
Classification and Management



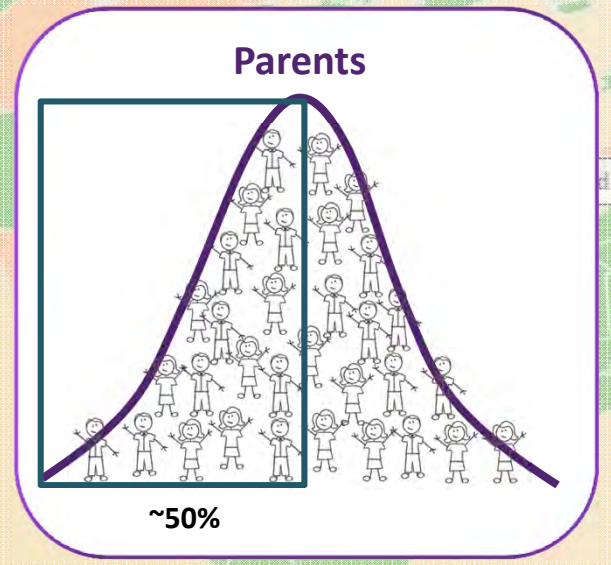
Benny Kerzner et al. Pediatrics 2015;135:344-353

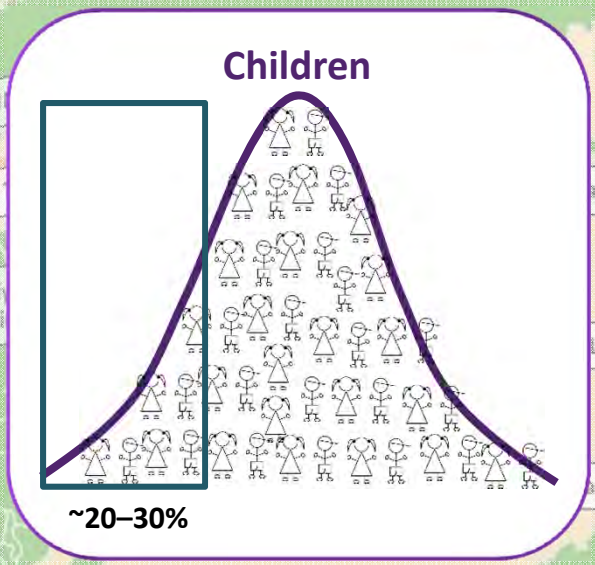
PEDIATRICS®

Feeding difficulties are a world wide issue



The children implicated by concerned parents





Multinational Survey, 2005: In-person Interviews

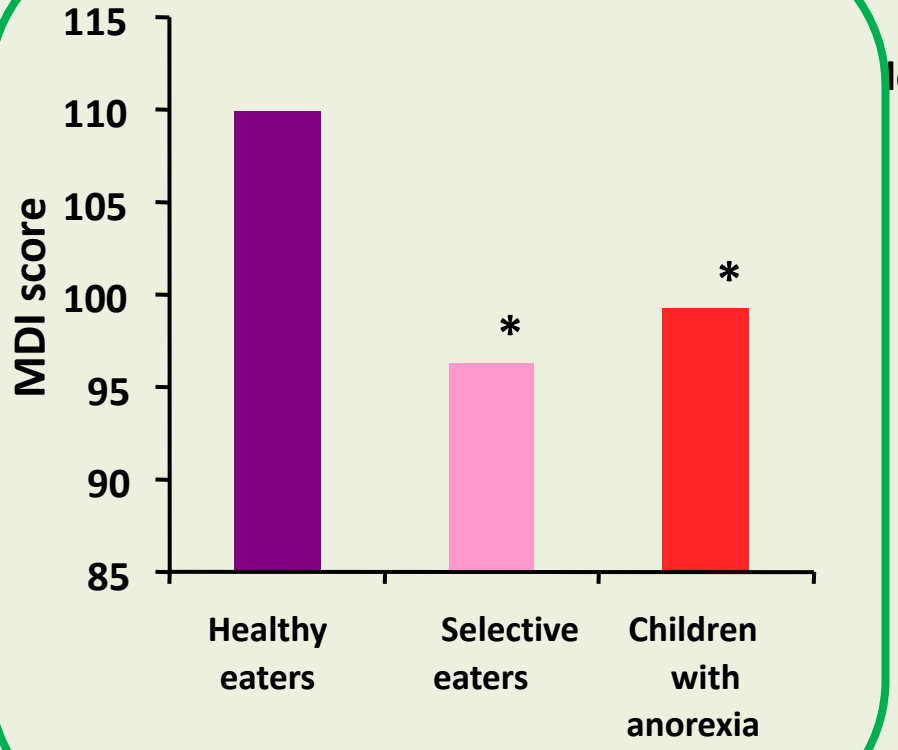
- 8 international markets: n=2880 quantitative interviews with mothers of children aged 1-10 years

European Survey, 2006: Online Research

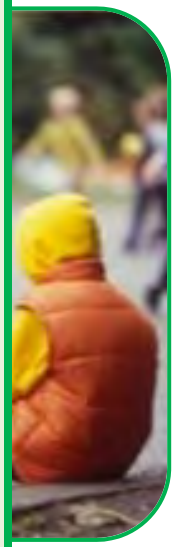
- 4 European countries: n=2482 quantitative online surveys with mothers of children aged 1-5 years

Serious medical, nutritional, social and emotional issues that require resolution

"Picky eaters" were :



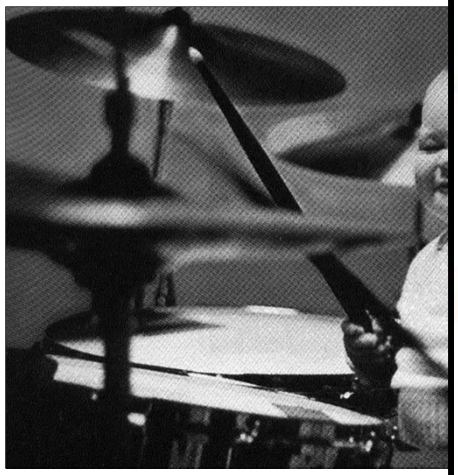
lers

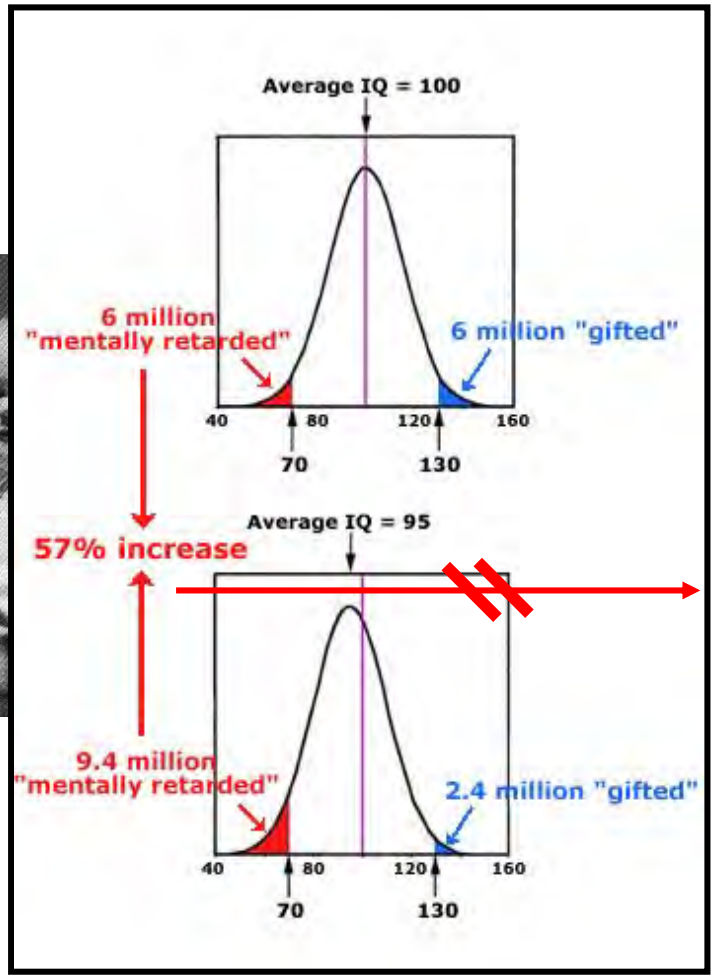


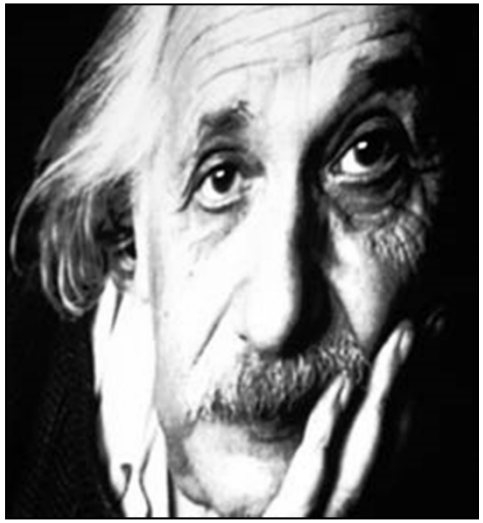
Affectionate Negative

Feldman R, et al. *J Am Acad Child Adolesc. Psychiatr.* 2004;43:1089-1097.

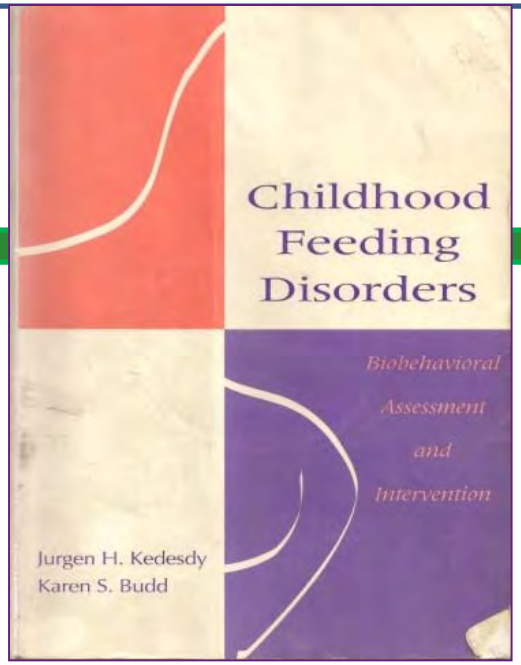
IQ – appropriate vs. destructive concern







Range of problems



Kedesdy and Budd
Published in 1998

Mild ⟷ **Severe**

- Type
  - picky eaters
  - finicky eaters
  - poor appetite
- Characteristic
  - an outcome of normal developmental issues

A picky eater self restricts type, texture or amount of food

- Characteristic
  - chronic aversion with socially stigmatizing meal behavior

Additional definitions of “picky eaters”

- Marqi and Cohen (1990)
  - Does not eat enough, often choosing, usually eat slowly, usually not interested
- Chatoor (1998)
  - Food refusal for more than one month, no growth problem, parents concerned
- Carruth (1998)
  - Rigorous standardized approach developed dietary variety and diversity scores with reference to the dietary pyramid
- Jacobi (2003)
  - Accepted the mother’s definition
- Alercon (2003)
  - Included children failing to thrive

“Picky eating”

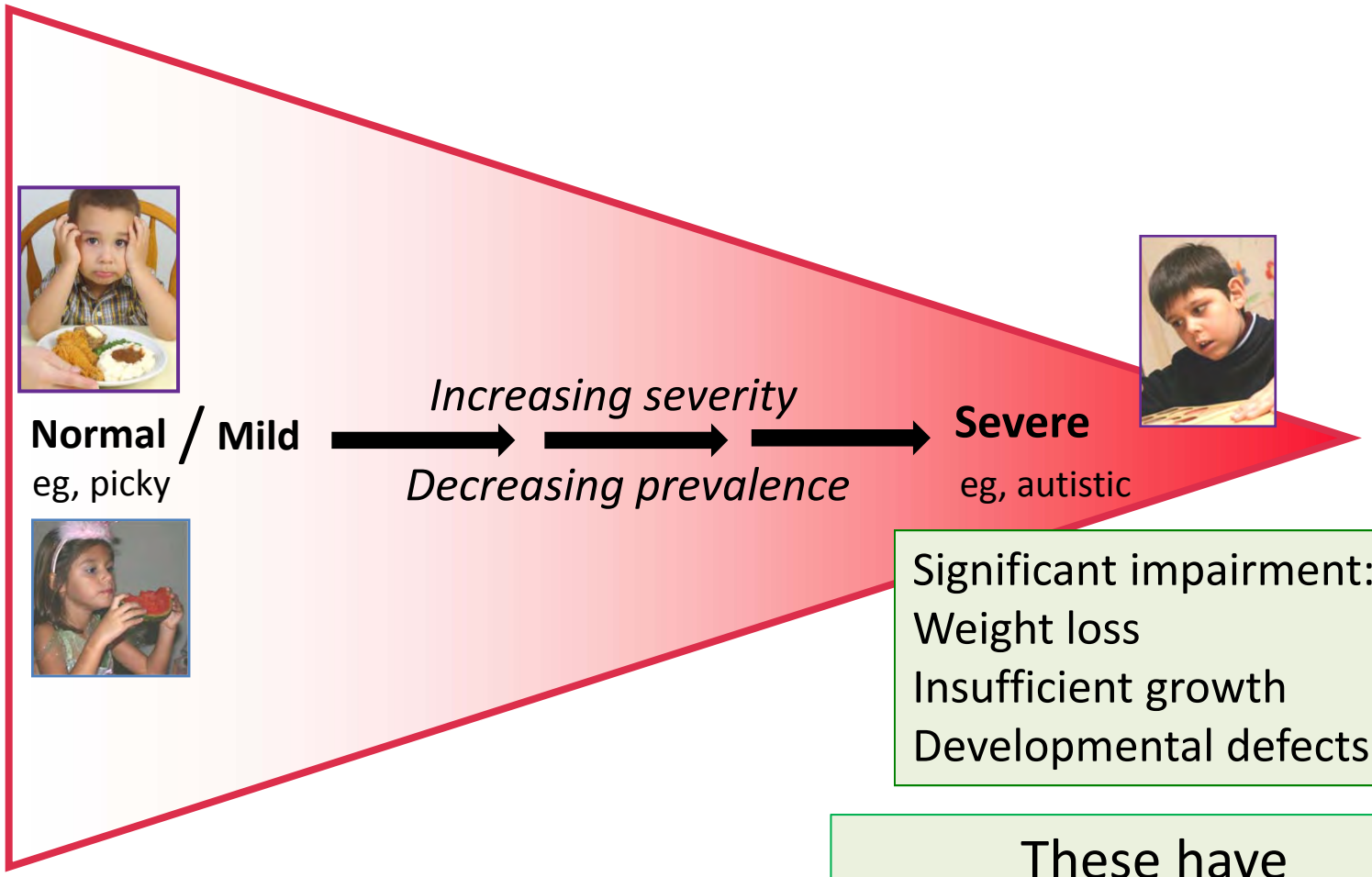
- Inconsistently defined
- Dif
- In s lude fus
- Otl nce
- In g ient pro
- Not a medical condition but wide use compels the attention of the primary care provider

“Picky eating” is comprised of a number of entities that need further definition and classification

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®

The full spectrum of feeding difficulties confront the pediatrician



Significant impairment:
Weight loss
Insufficient growth
Developmental defects

These have
"Feeding Disorders"

Nomenclature

- Feeding disorder
  - A term connoting a severe problem resulting in substantial organic, nutritional, weight or emotional consequences
  - It equates to an avoidance/restrictive food intake disorder diagnosis in the DSM 5 and the ICD 10
- Feeding difficulty
  - A useful umbrella term that simply suggest there is a feeding problem

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®

An approach to identifying and managing feeding difficulties

Background

Presentation

Parental concern, Inappropriate feeding or Aberrant feeding behaviour

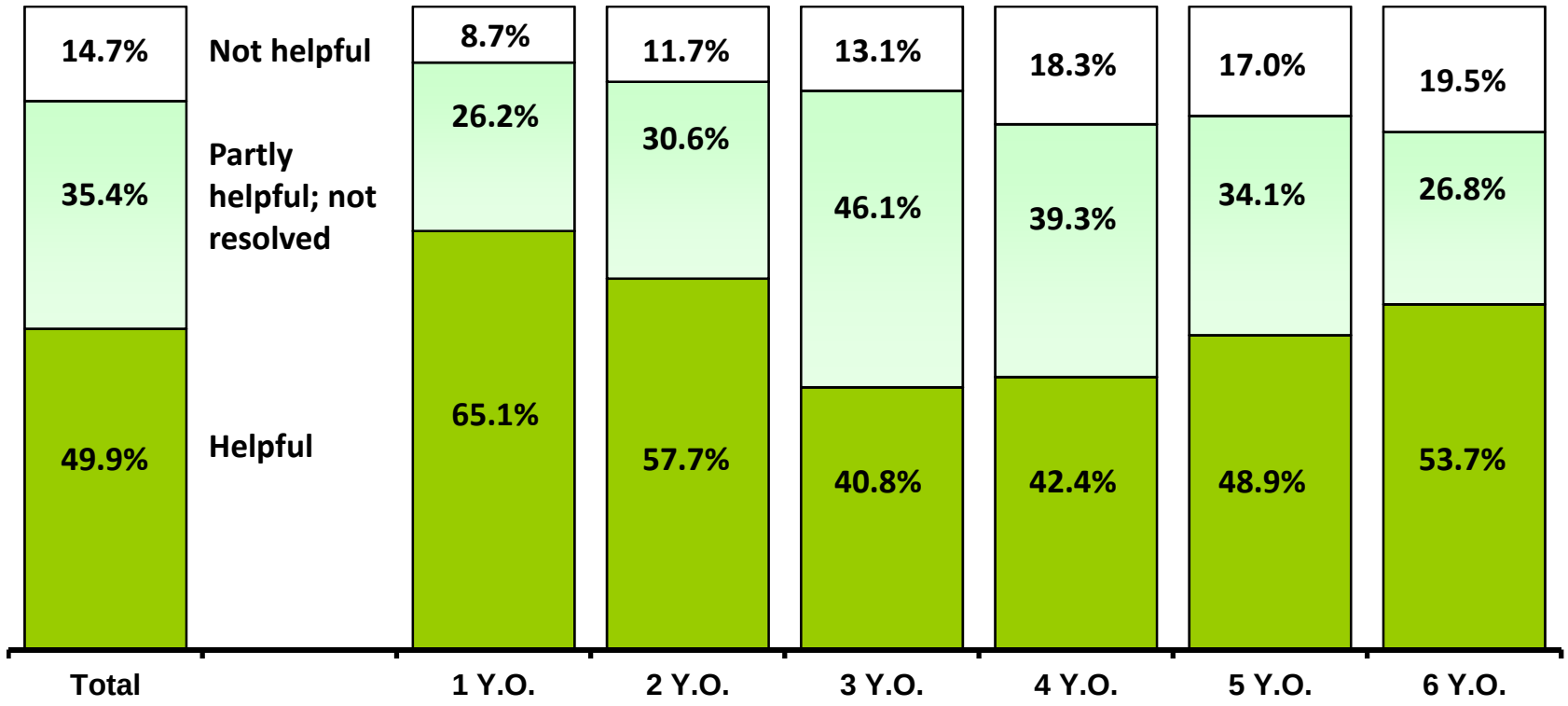
Classification

Management

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®

Only 50% of mothers think pediatricians' suggestions resolved poor feeding



Prof. Jin Xingming and Prof. Shi Rongc Shanghai 2008

Maternal strategies to counter picky eating

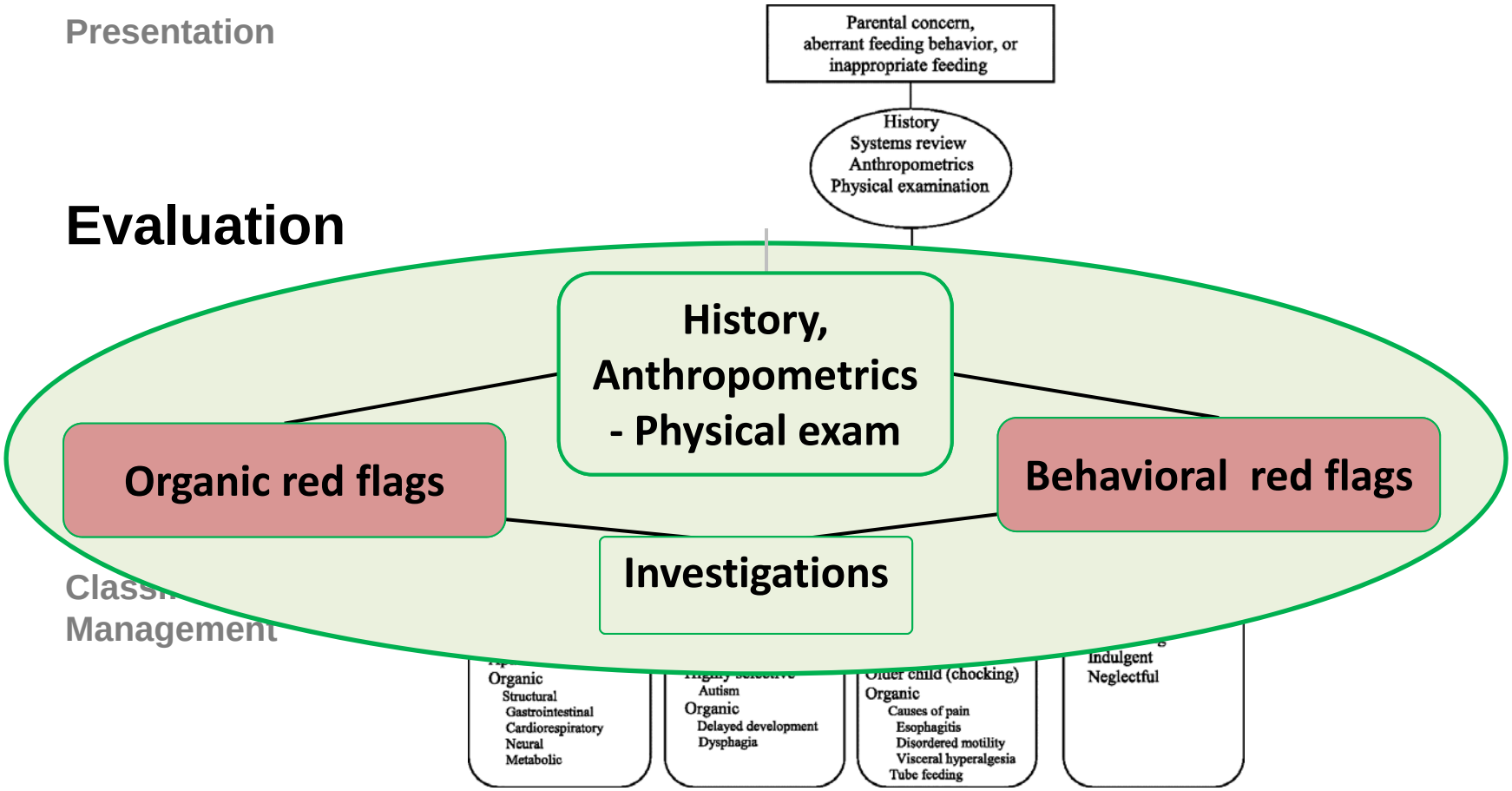
Prof. Jin Xingming and Prof. Shi Rongc Shanghai 2008

An approach to identifying and managing feeding difficulties

Background

Presentation

Evaluation



Class

Management

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

Identification of feeding difficulties - Presenting features or clues

- Food refusal lasting more than 1 month
- Failure to advance food items and textures
  - (Prolonged breast or bottle feeding)
- Aberrant mealtimes
  - Too long
  - Disruptive and stressful
  - Distraction to increase intake
  - Nocturnal eating in a toddler
  - Lack of appropriate independent feeding

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®

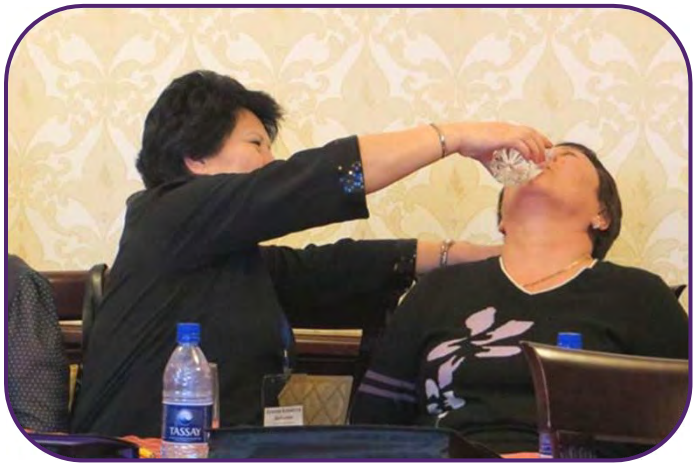
Observing feeding – Video recordings may be very helpful

Slide 20

1 Imbed video
Kim Milano, 2/13/2014

Positioning ‘the hips affect the lips’

Awful



Excellent

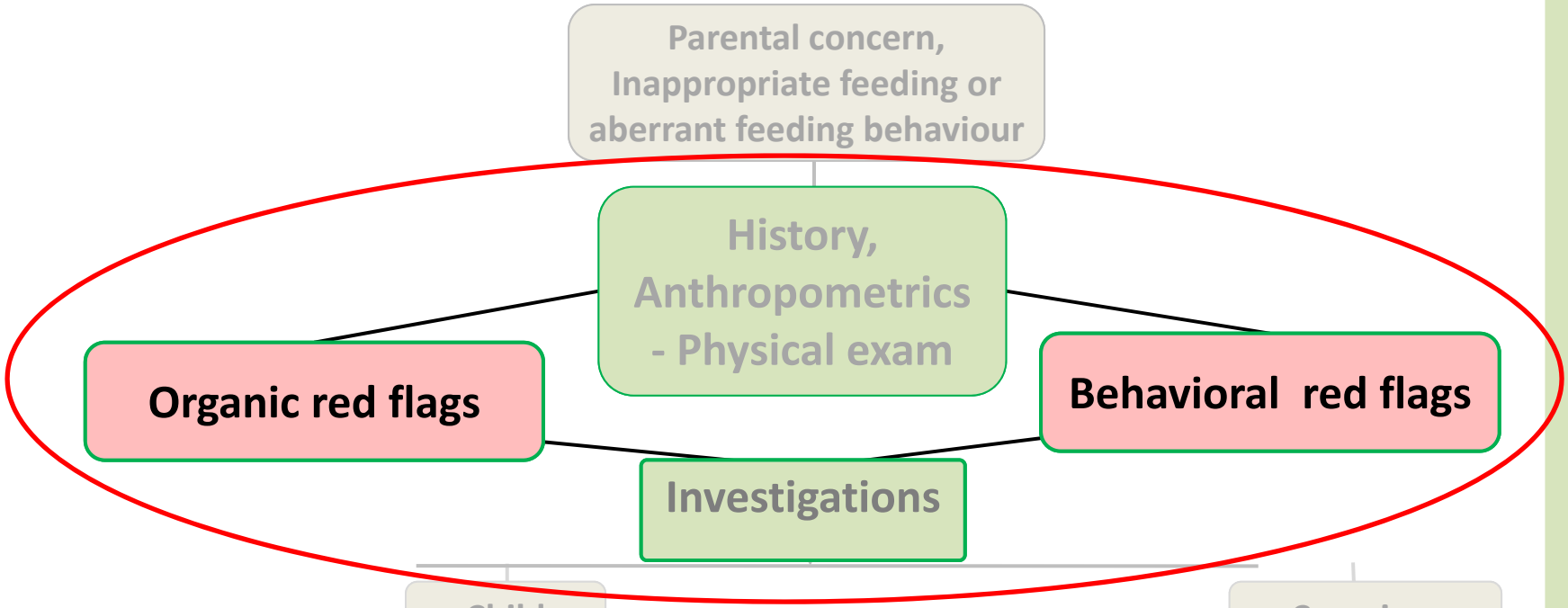
Growth Assessment: Anthropometry

ACCURATE ANTHROPOMETRIC MEASUREMENTS
are necessary
to prevent misdiagnosis

And this is not the way to do it

Rifas-Shiman SL, et al. *Med Gen Med*. 2005;7(4):56.

Identification and investigation



Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

Identification of feeding difficulties

Red flags

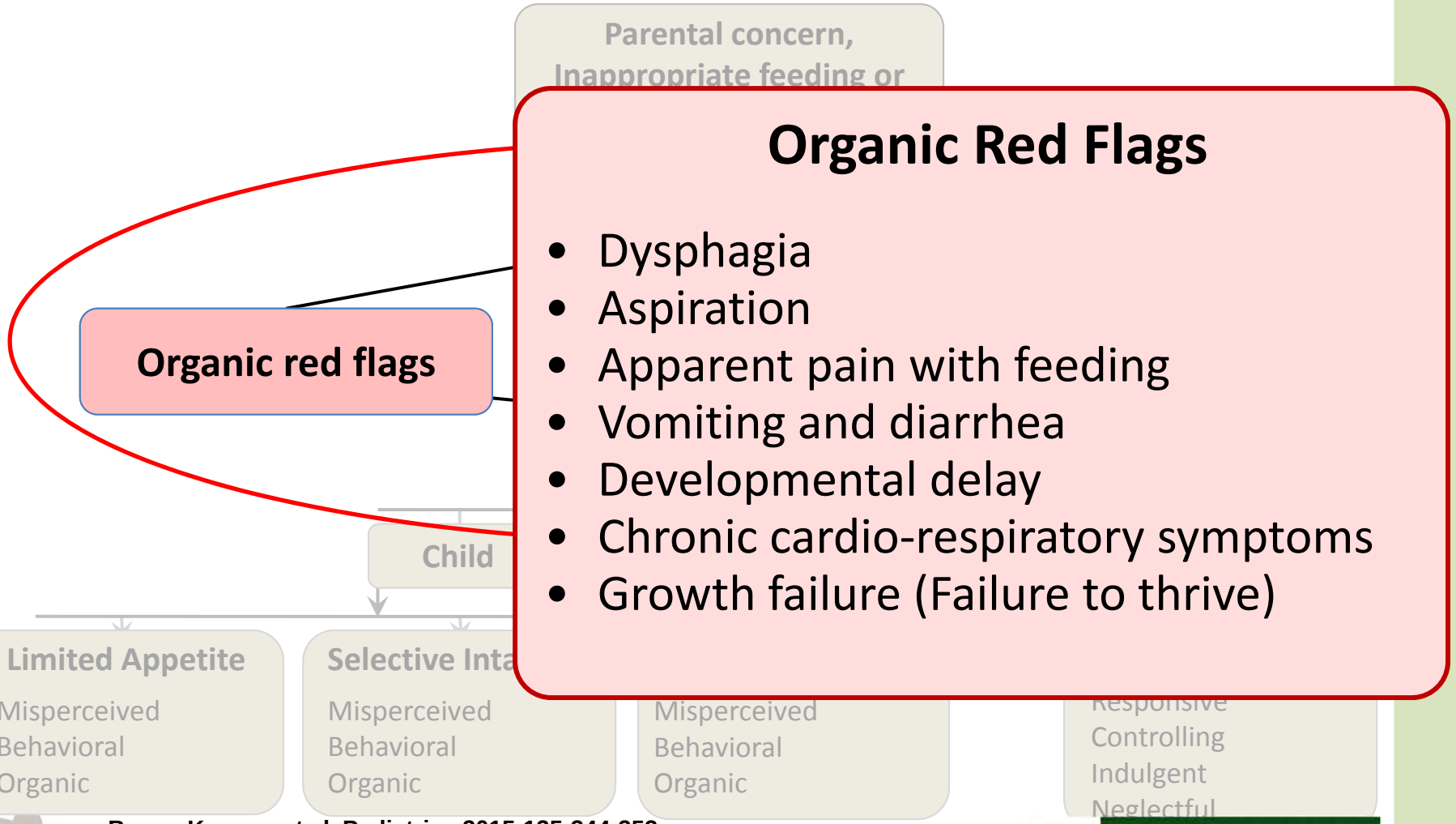
Medical and Behavioral symptoms and signs that require:

- prompt attention
- possible referral for intense investigation/specialized Rx

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®

Identification and investigation



Organic Red Flags

- Dysphagia
- Aspiration
- Apparent pain with feeding
- Vomiting and diarrhea
- Developmental delay
- Chronic cardio-respiratory symptoms
- Growth failure (Failure to thrive)

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

Meeting criteria for failing to thrive

BMJ British Medical Journal

Preceded by: British Medical Journal (ISSN: 0007-1447)

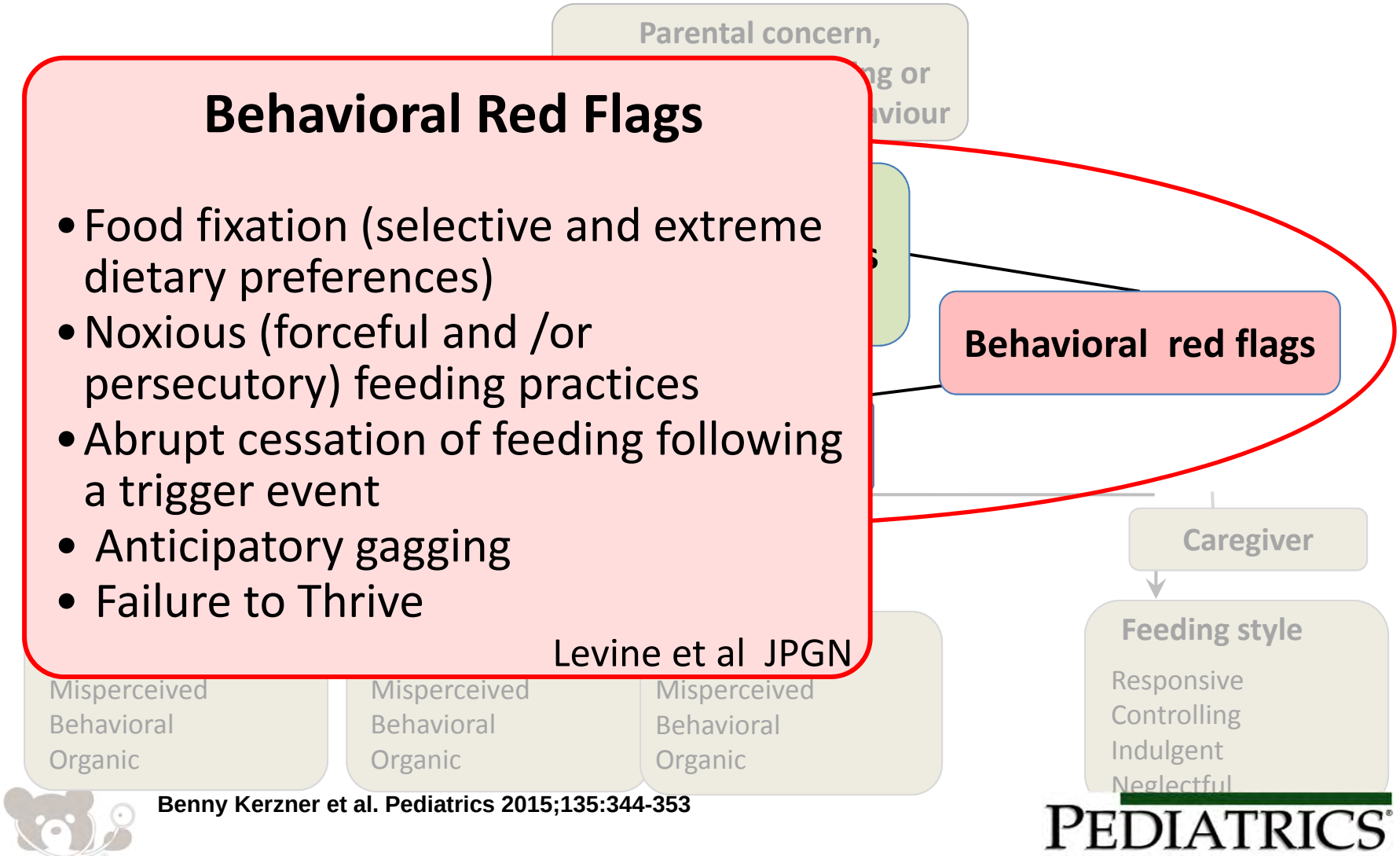
Volume 308(6920) 1 January 1994 pp 35-38

Fortnightly Review: Failure to Thrive.

[Education & Debate]

Marcovitch, Harvey.

Identification and investigation



Behavioral Red Flags

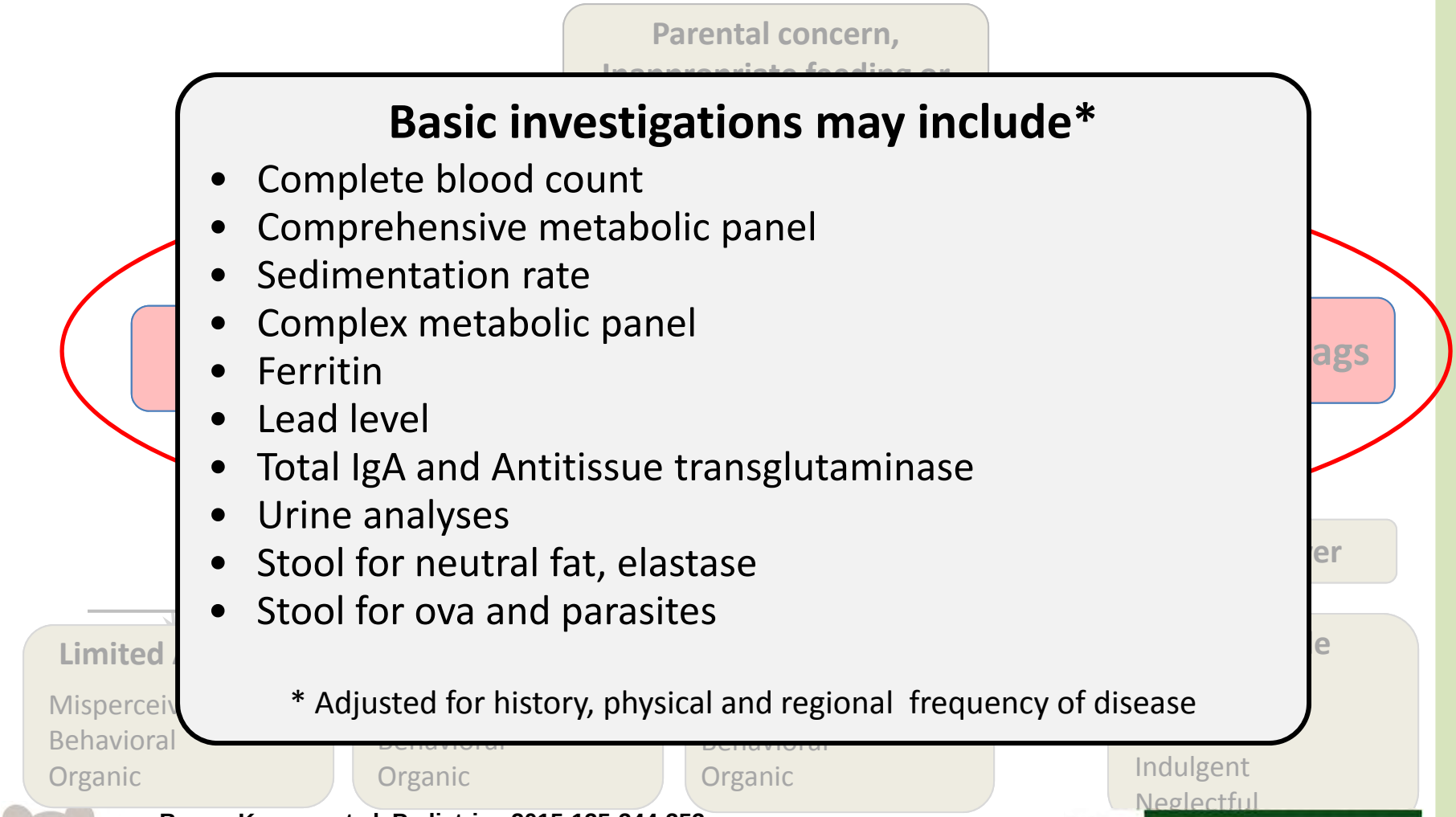
- Food fixation (selective and extreme dietary preferences)
- Noxious (forceful and /or persecutory) feeding practices
- Abrupt cessation of feeding following a trigger event
- Anticipatory gagging
- Failure to Thrive

Levine et al JPGN

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

Identification and investigation



Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

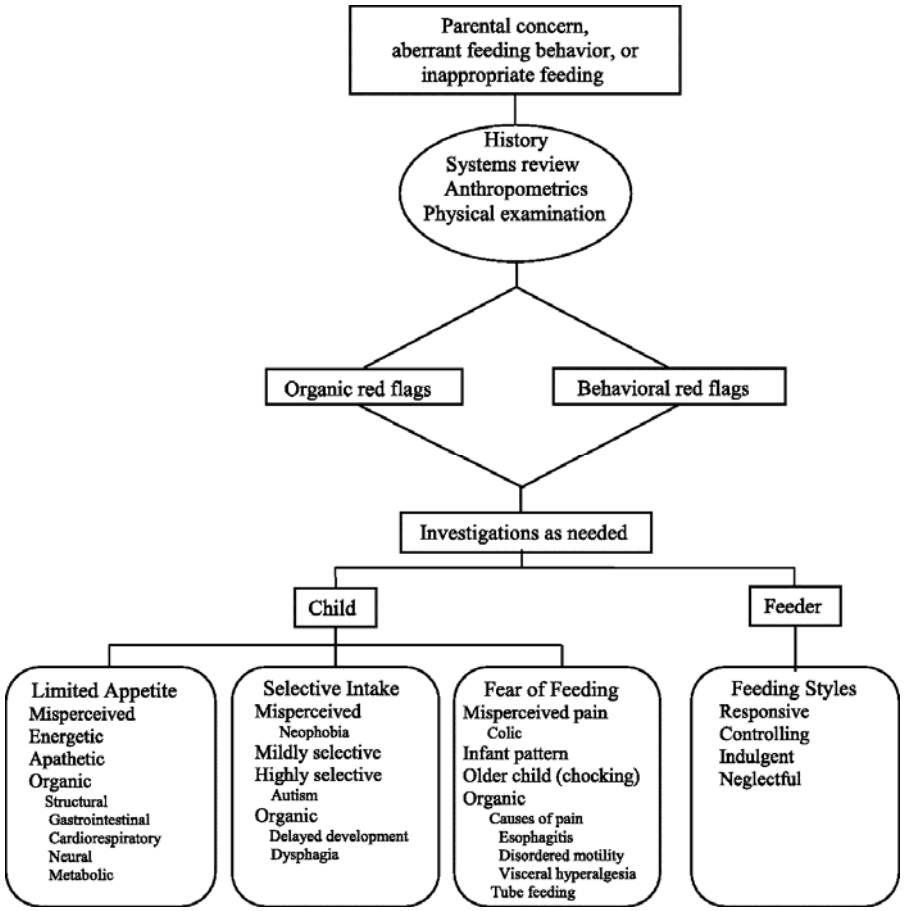
An approach to identifying and managing feeding difficulties

Background

Presentation

Evaluation

Classification and Management



Benny Kerzner et al. Pediatrics 2015;135:344-353

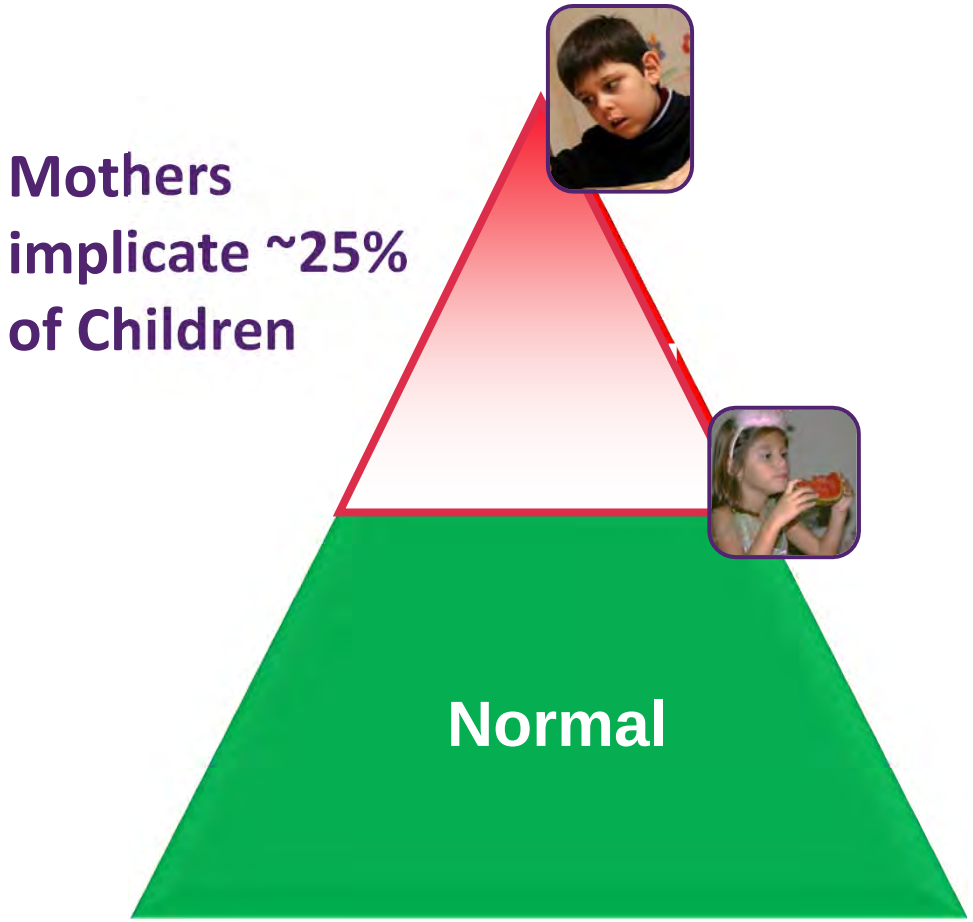
PEDIATRICS®

Early attempts at classification

O'Brien, Repp, Williams & Christopher (1991)

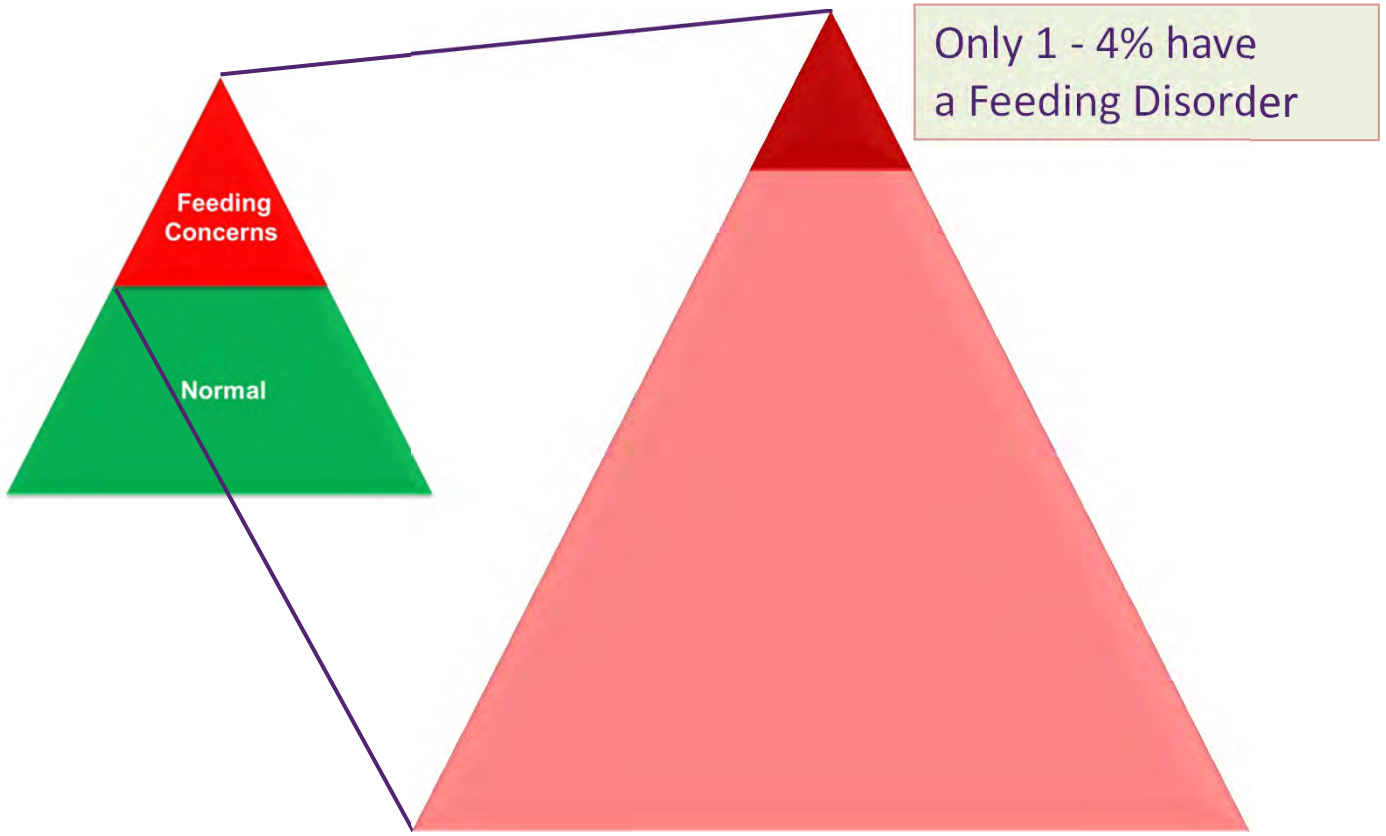
- Food refusal
- Food type selectivity
- Food texture selectivity
- Liquid refusal or selectivity
- Grams of calories consumed low
- Sucking and swallowing problems
- Problems with chewing
- Delays in self feeding
- Delays in self drinking
- Lack of utensil use
- Inappropriate utensil use
- Problems with lunch box or tray
- Leaving table
- Spitting
- Throwing items
- Aggression
- Inappropriate verbalizations
- Inappropriate noises
- Amount of spillage
- Rate of intake
- Chewing with mouth open
- Lack of napkin use

The population of children with feeding difficulties



The Population of Children

The population of children with feeding difficulties



Chatoor classified Feeding Disorders

- A system related to child's development
  - **Disordered state regulation** *Newborn*
  - **Disordered reciprocity (neglect)** *3 to 8 months*
  - **Infantile anorexia** *Transition to self-feeding*
- Plus
  - **Sensory food aversions** *Any age*
  - **Concurrent medical condition** *Any age*
  - **Post traumatic** *Any age*

Chatoor I. *Child Adolesc Psychiatric Clin N Am.* 2002;11;163-183

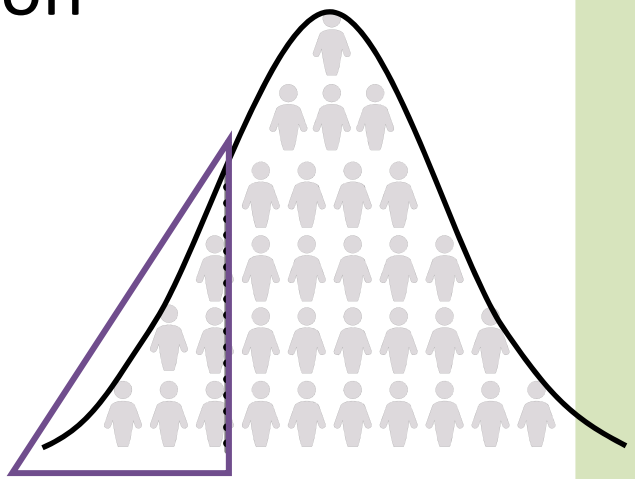
Chatoor classified feeding disorders

- Mildly involved cases
  - considered sub-threshold expressions of the same feeding disorders -

Chatoor I. *Child Adolesc Psychiatric Clin N Am.* 2002;11;163-183

Many considered poor feeders are actually within the normal range

- Prospective study of 494 children, 30% characterized as “poor eaters”
- Weight-adjusted energy consumption no different to the rest of the population
- They are smaller and therefore eat less
- Parents misperceived them to be small because they believed they ate too little



Saarilehto S, et al. *Pediatr*. 2004;144(3): 363-367.

Kerzner's modifications of Chatoor's classification

- Four categories based on behavior not development
- Red flags used to address organic causes
- Terminology familiar to most clinicians
- Includes children misperceived to have a poor appetite

Chatoor I. *Child Adolesc Psychiatric Clin N Am.* 2002;11;163-183.
Kerzner B et al. 2009 Clinical Pediatrics

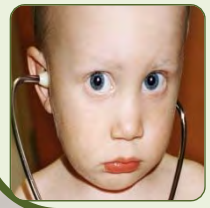
The Four major Symptom-Related Groups

Poor appetite

Parental misperception

Energetic and playful child

Apathetic and withdrawn child

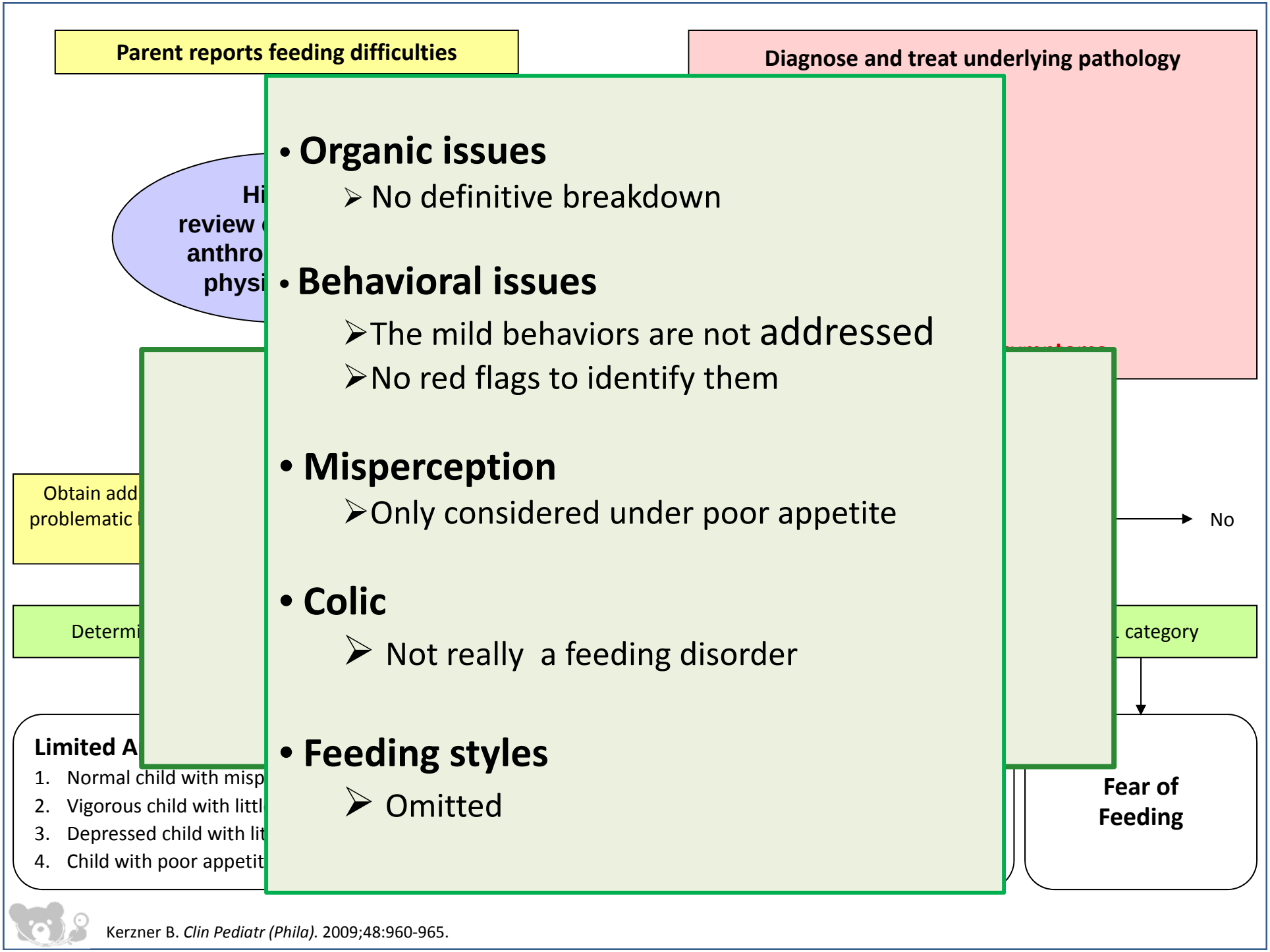


Organic disease

Highly selective

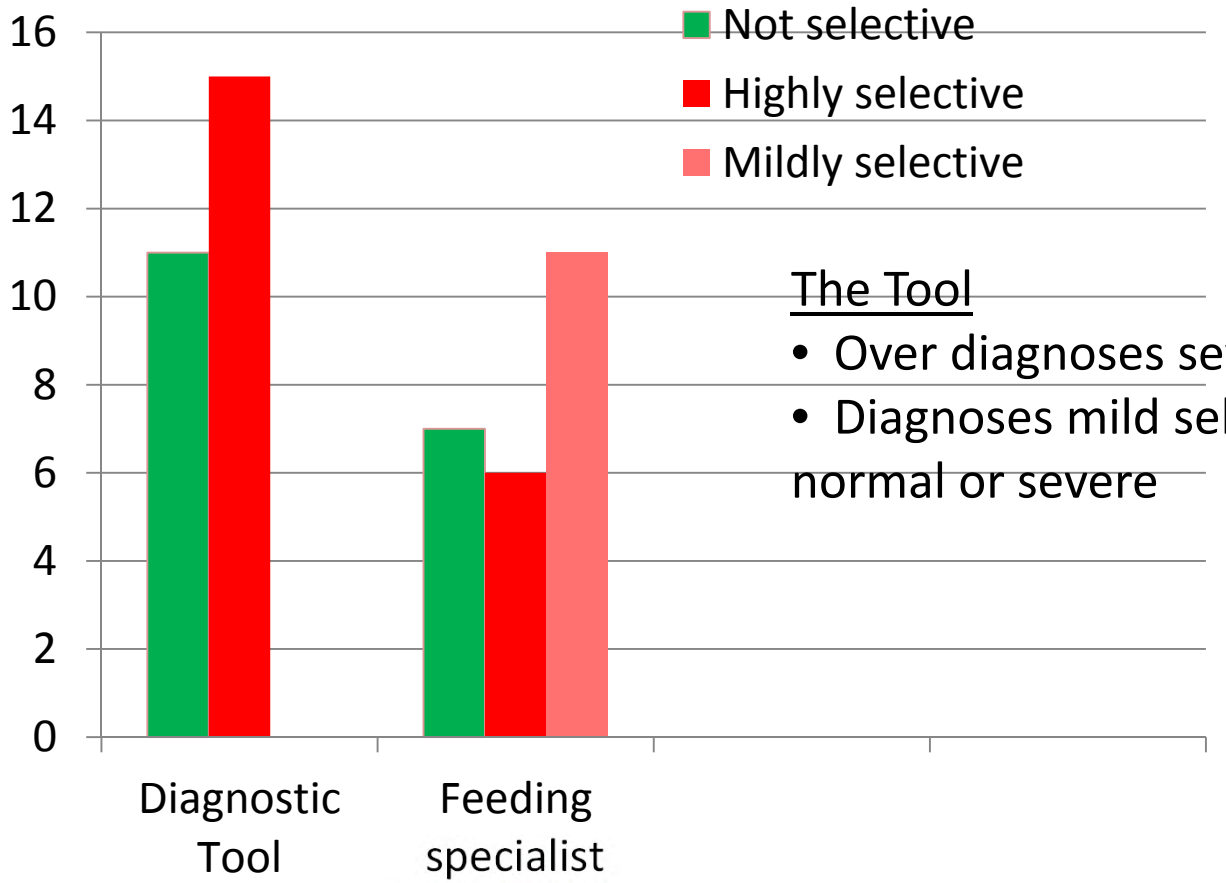
Crying interfering with feeding (Colic)

Fear of feeding



Kerzner B. *Clin Pediatr (Phila).* 2009;48:960-965.

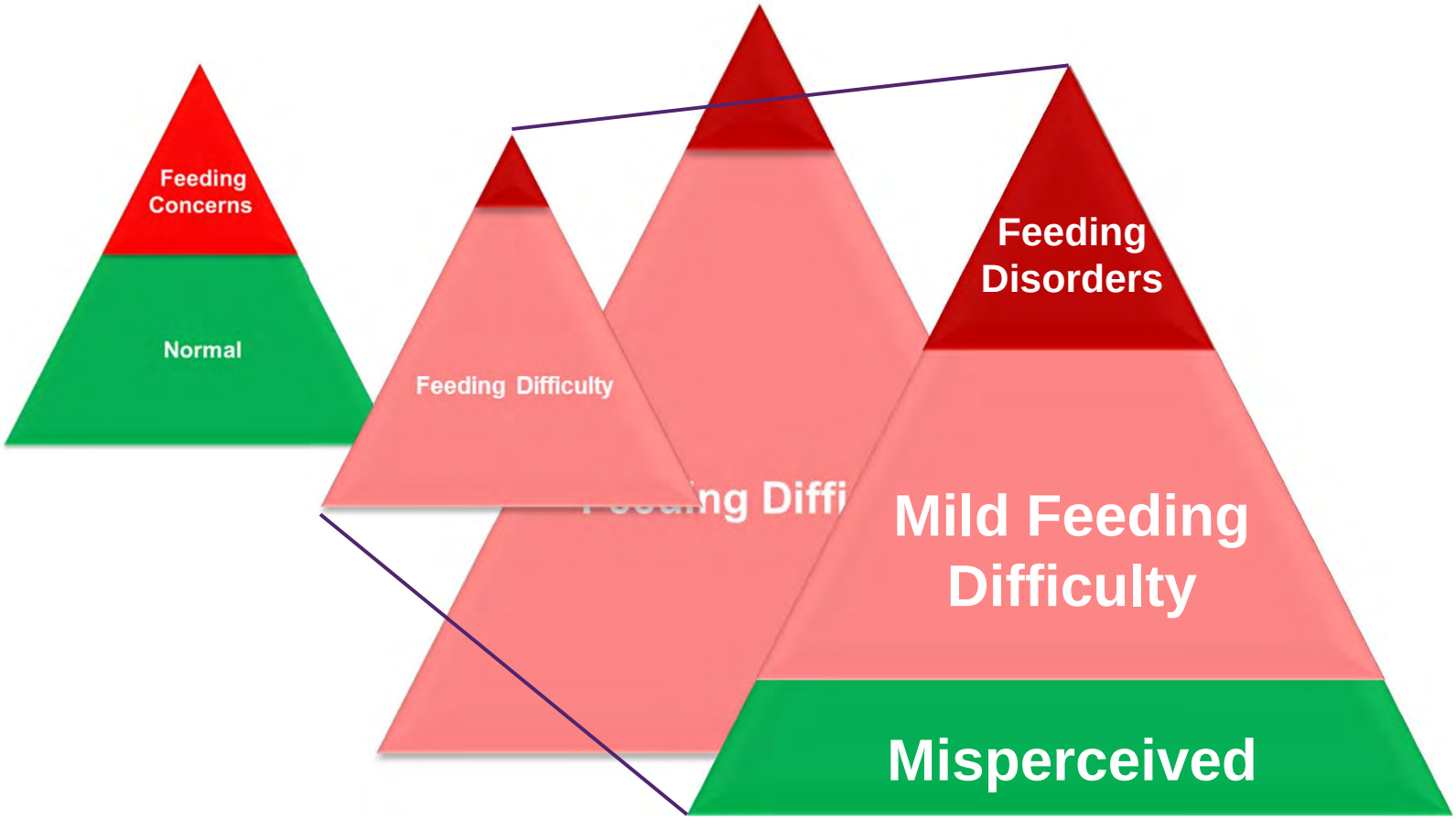
Failure of the a Diagnostic Tool to identify mildly selective cases (n=26)



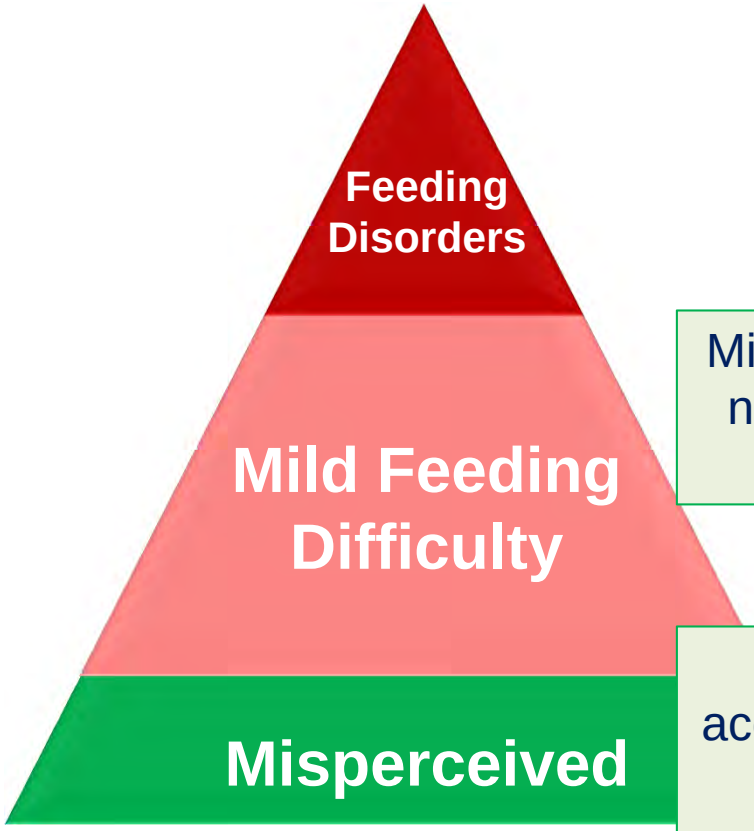
<u>The Tool</u>

- Over diagnoses severe selectivity
- Diagnoses mild selectivity as normal or severe

The population of children with feeding difficulties



The population of children with feeding difficulties



Milder conditions still need inclusion and classification

Misperceived accounts for ~20% of Mild Feeding Difficulties

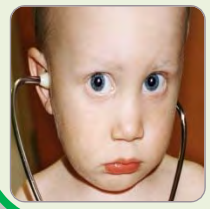
Four major symptom groups give way to three

Limited appetite

is a parental misperception

in an active and playful child

in an apathetic and withdrawn child



due to organic disease

Selective

Crying interfering with feeding (Colic)

Fear of feeding

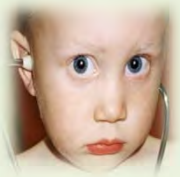
Limited appetite: Expanding the organic component

Limited appetite

Misperception

Energetic and playful

Apathetic and withdrawn



Organic disease

Organic disease

Structural

Gastrointestinal

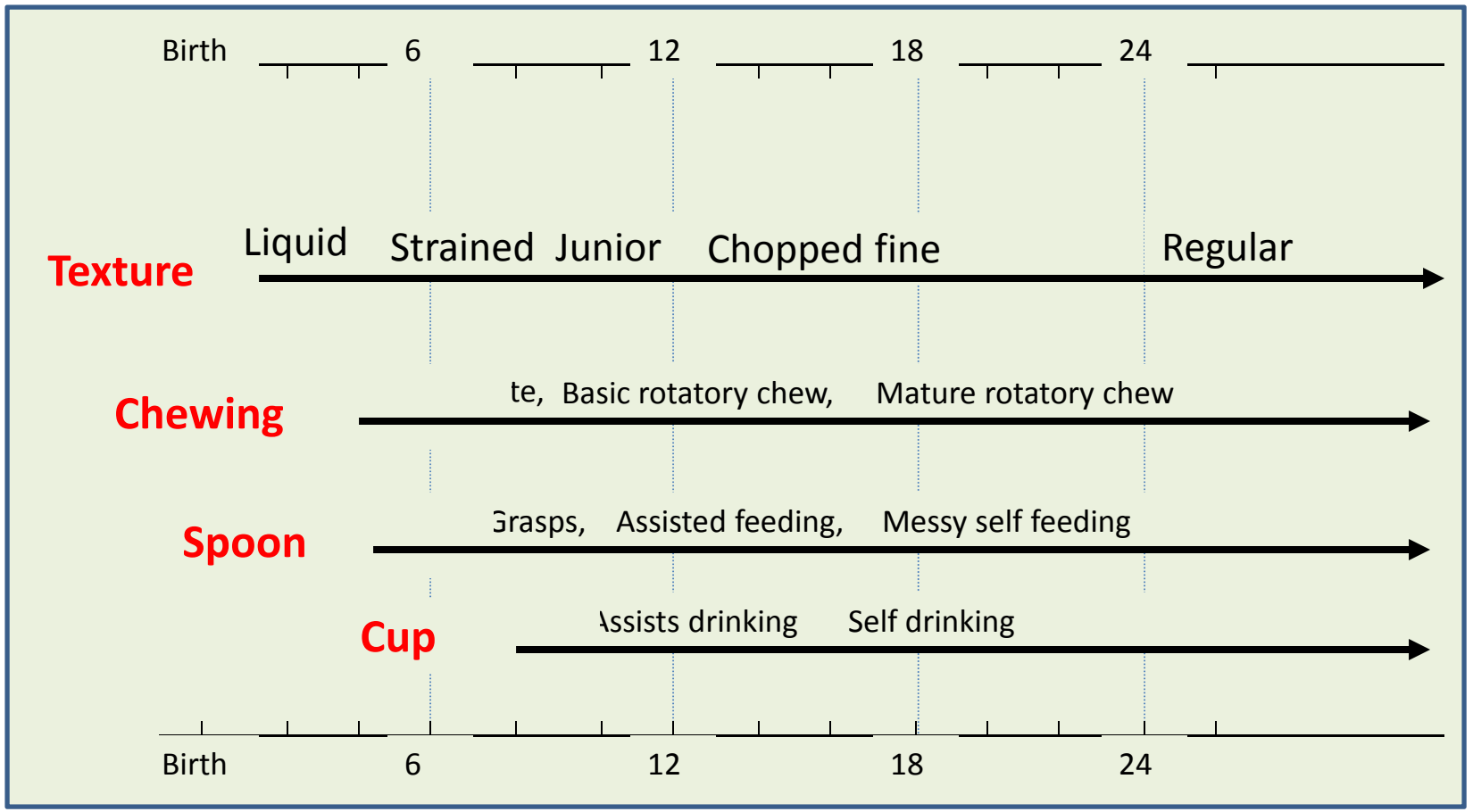
Cardiorespiratory

Neural

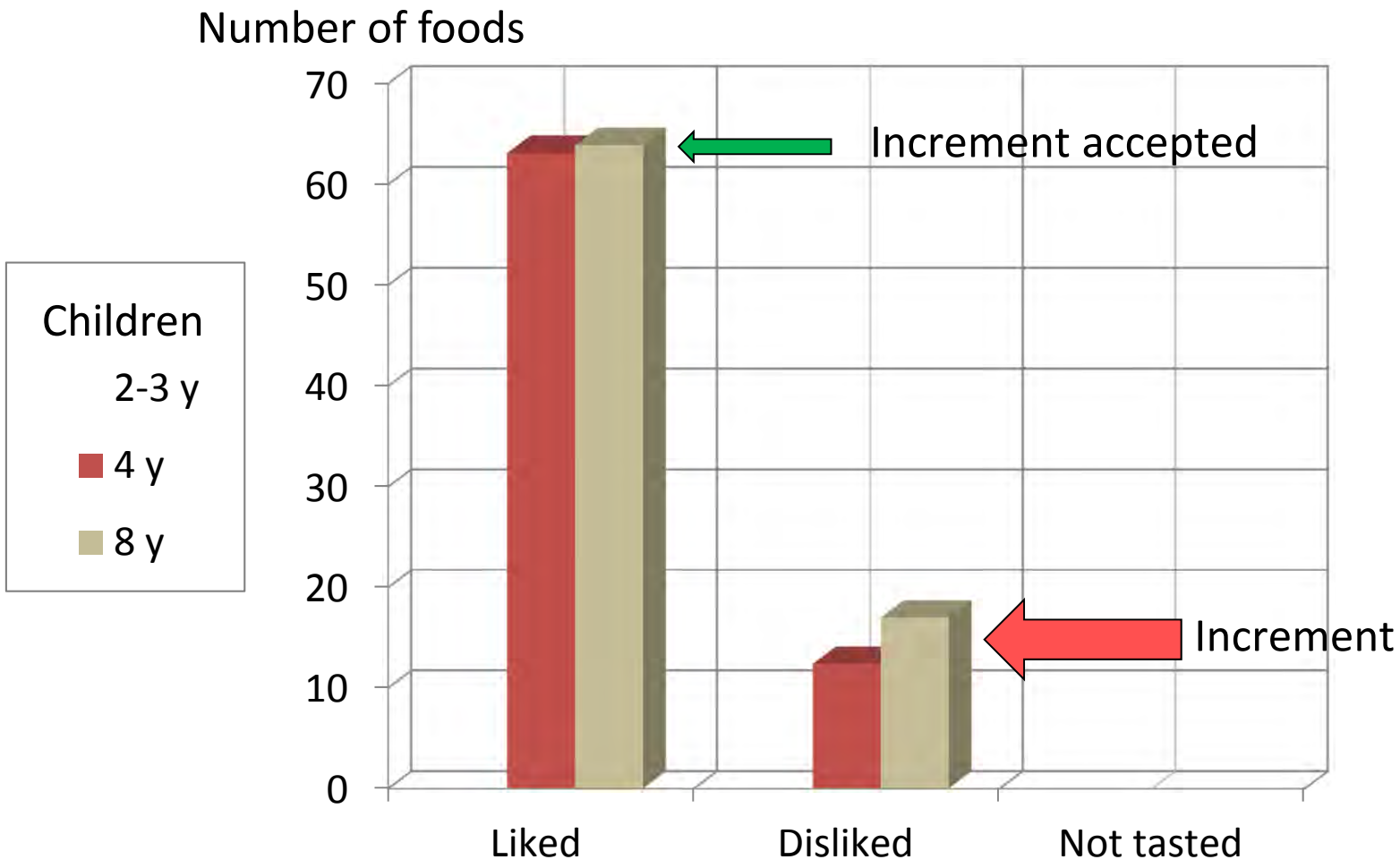
Metabolic

Burklow KA, et al 1998 JPGN127:143-7

Expanding selectivity
Taking development into account

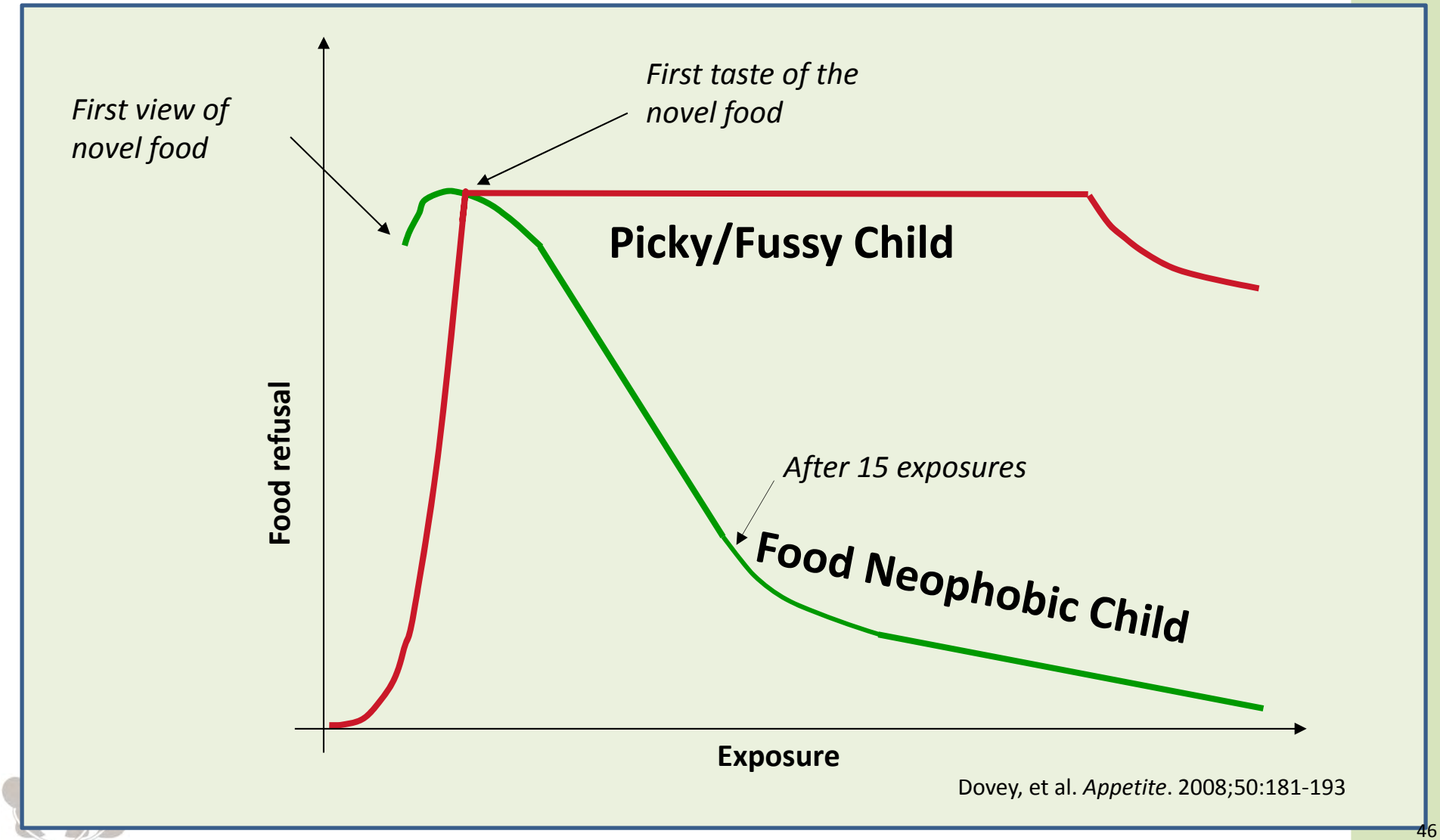


Limitations in selection are a normal phenomenon between 2 and 8 years of age



Skinner et. al.Journal of the American Dietetic Association Nov 2002

Neophobia
is a normal phenomenon early in life



Dovey, et al. *Appetite*. 2008;50:181-193

Expanding selectivity

Highly

Selective

Misp
(Dev
Neo

Mild

High

Selective

Misperceived
(Developmental
& Neophobia)

Mildly selective

Highly selective

Organic

Adjustments to the 'fear of feeding' category

Fear of feeding

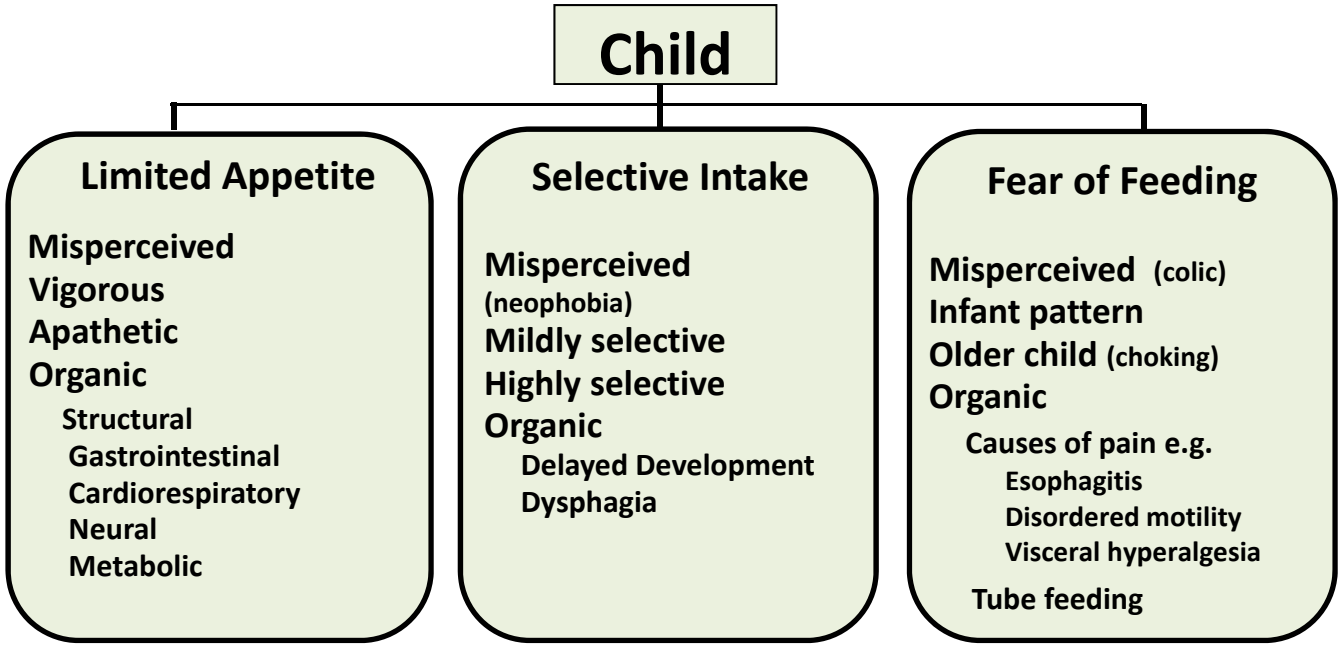
Misperceived (colic)

Younger child (anticipatory anxiety)

Older child (post choking)

Organic (e.g. GERD and Tube fed

Classification of the children



- Three groups readily separated by fundamental behaviors
- Each ranging from misperception through mild to severe
- Each with systematic division of the organic and behavioral issues

……but it is not all about the child

Chatoor I. *Diagnosis and Treatment of Feeding Disorders in Infants, Toddlers, and Young Children*. Washington, DC: Zero to Three; 2009.

…the feeding dynamic involves a dyad

Responsive

Limited Appetite

Controlling

Caregiver

Child

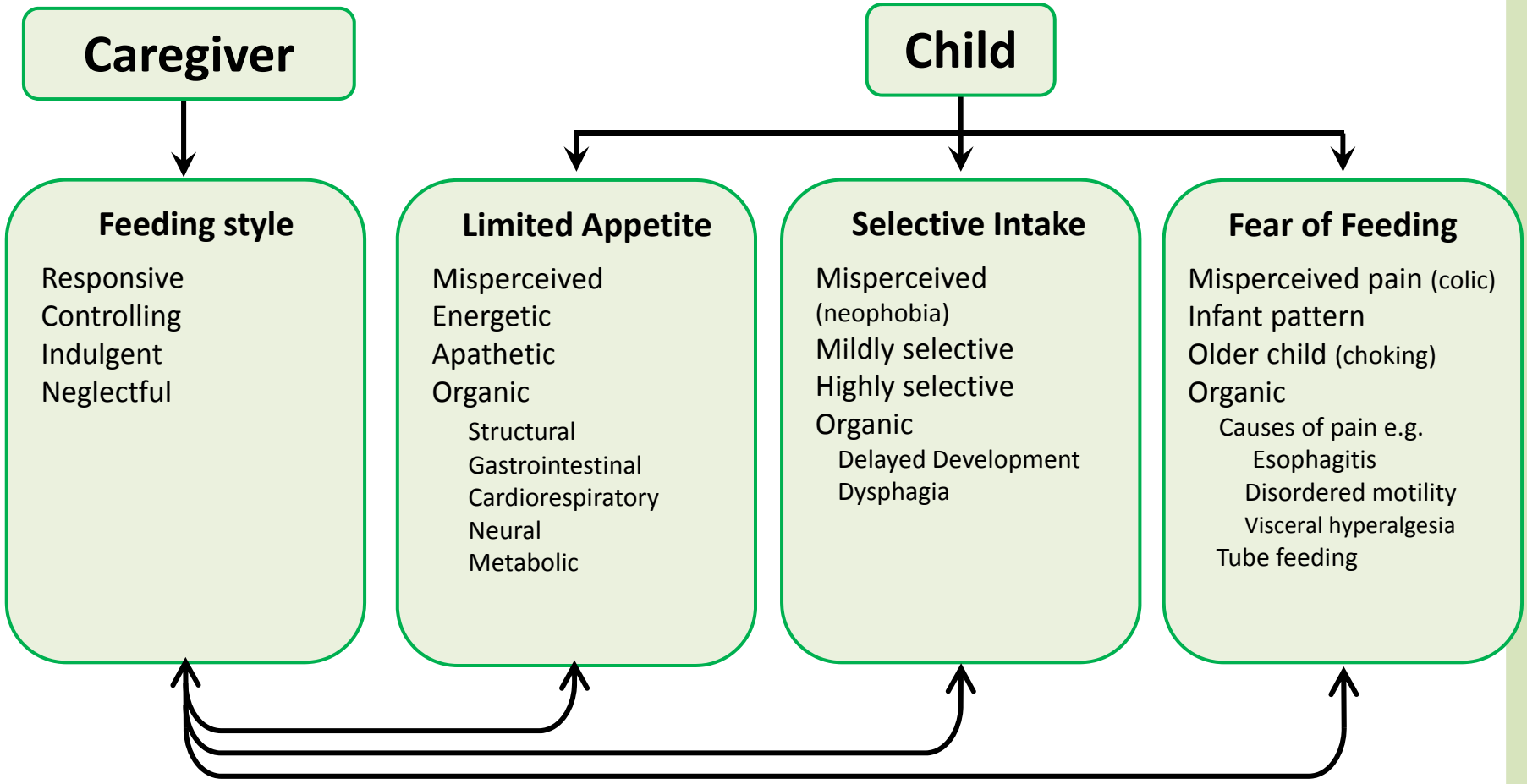
Selective

Indulgent

Neglectful

Fearful of feeding

Algorithm for the management of feeding difficulties



Every child and caregiver is influenced by the feeding experience

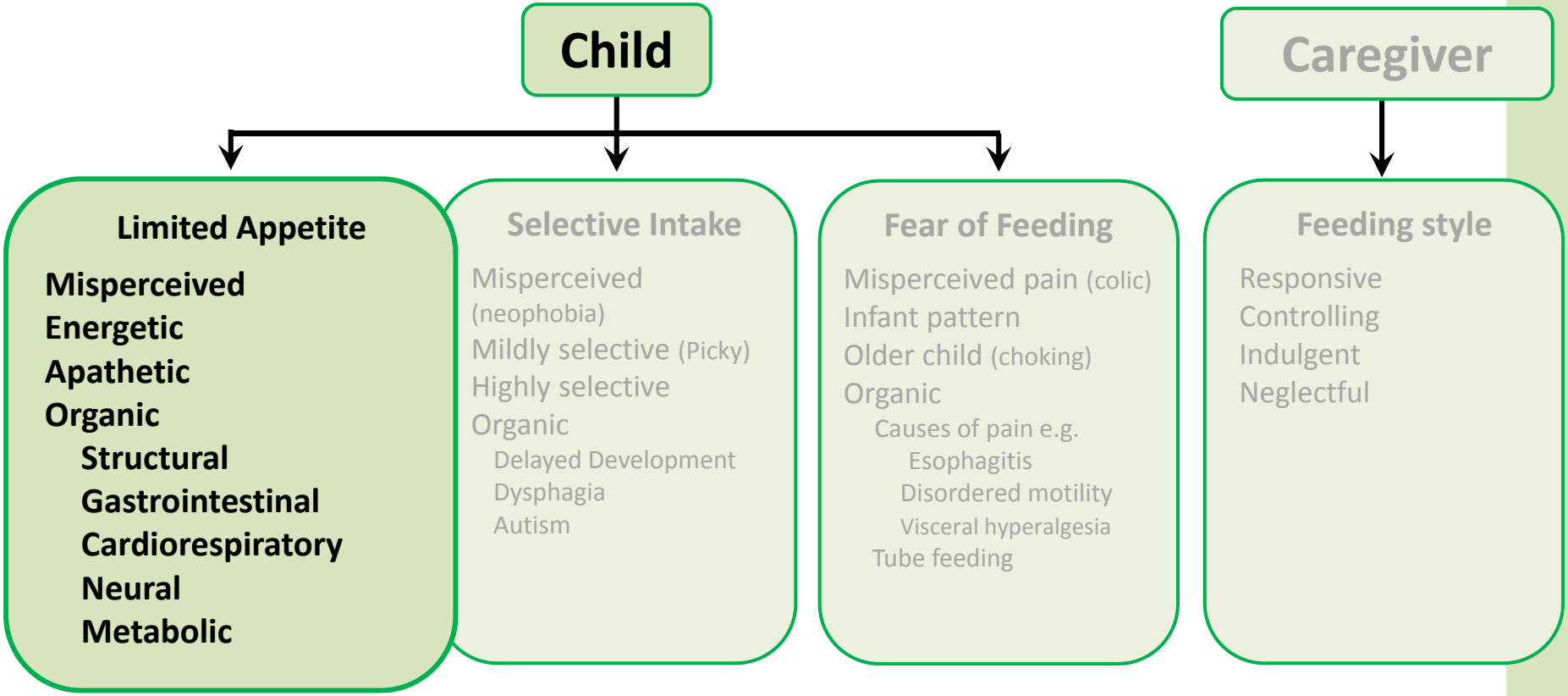
PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

A Practical Approach to Classifying and Managing Feeding Difficulties

Benny Kerzner, Kim Milano, William C. MacLean Jr, Glenn Berall, Sheela Stuart and Irene Chatoor

Pediatrics 2015;135;344; originally published online January 5, 2015;
DOI: 10.1542/peds.2014-1630

Subcategories



Limited appetite

Misperceived

- Appropriate appetite is considered limited
- Excessive parental concern

Need reassurance and education

Energetic apparently healthy

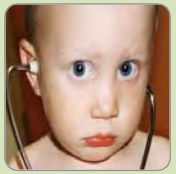
-Alert active inquisitive
- Play and talk instead of eating
- Easily distracted
- Often FTT

Promote appetite, resolve conflict, supplement if FTT. Cyproheptadine may have a place

Apathetic apparently ill

- Withdrawn, limited communication with caregiver
- Features of malnutrition and possibly neglect

Feeding by an empathetic caregiver

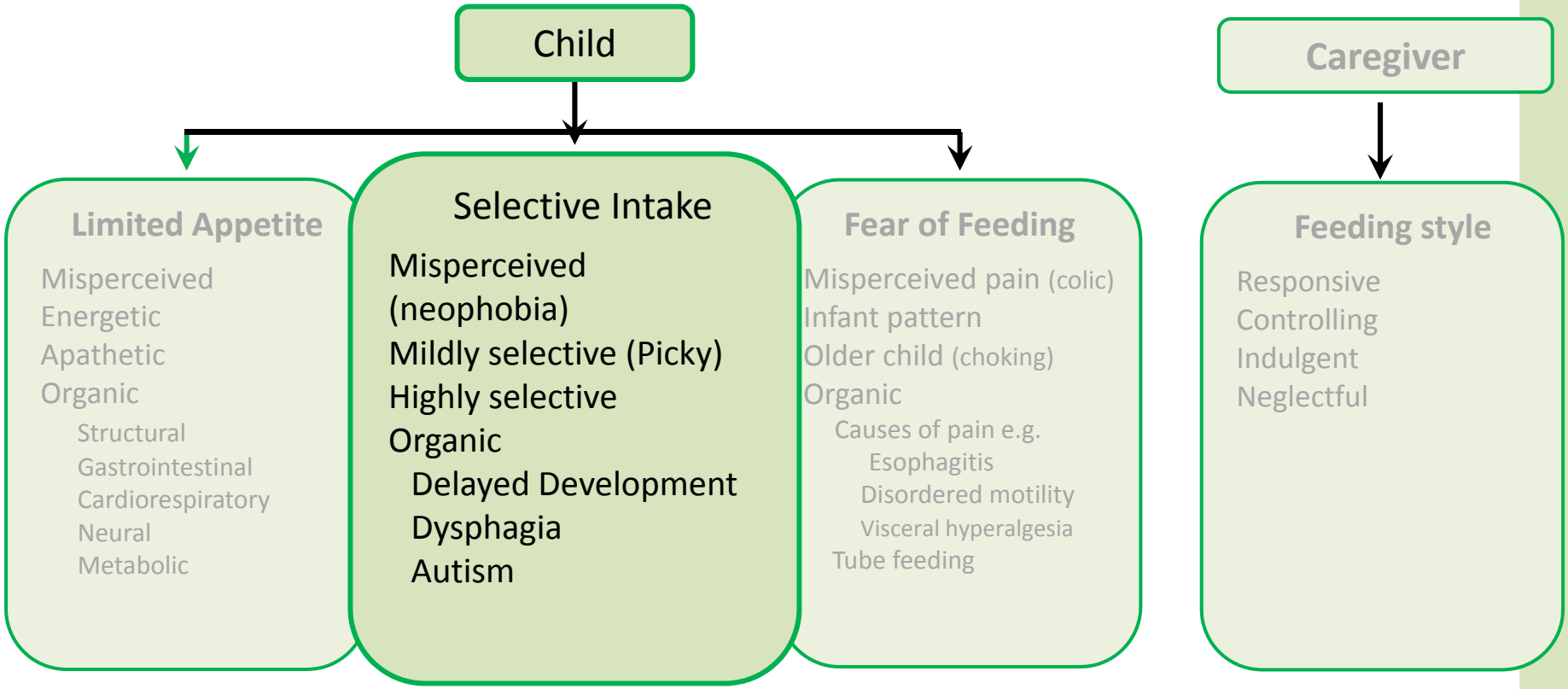


Organic

- Red flags will identify many
- Be alert for subtle presentations, eg. celiac disease

Treat underlying pathology

Subcategories

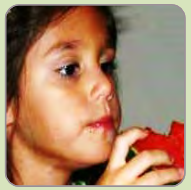


Selectivity

Misperceived

- Normal developmental limitation
- oral-motor
- taste preferences
- neophobia

Need time and education



Mild

- Mild rejection doesn't eliminate entire food groups
- No immediate negative social, physical, nutritional or emotional effects
- Accept more than 15 foods

Model eating and simple strategies to encourage healthy eating

Severe

- Phobic responses,
- Reject complete classes of food
- Potential nutrient deficiency

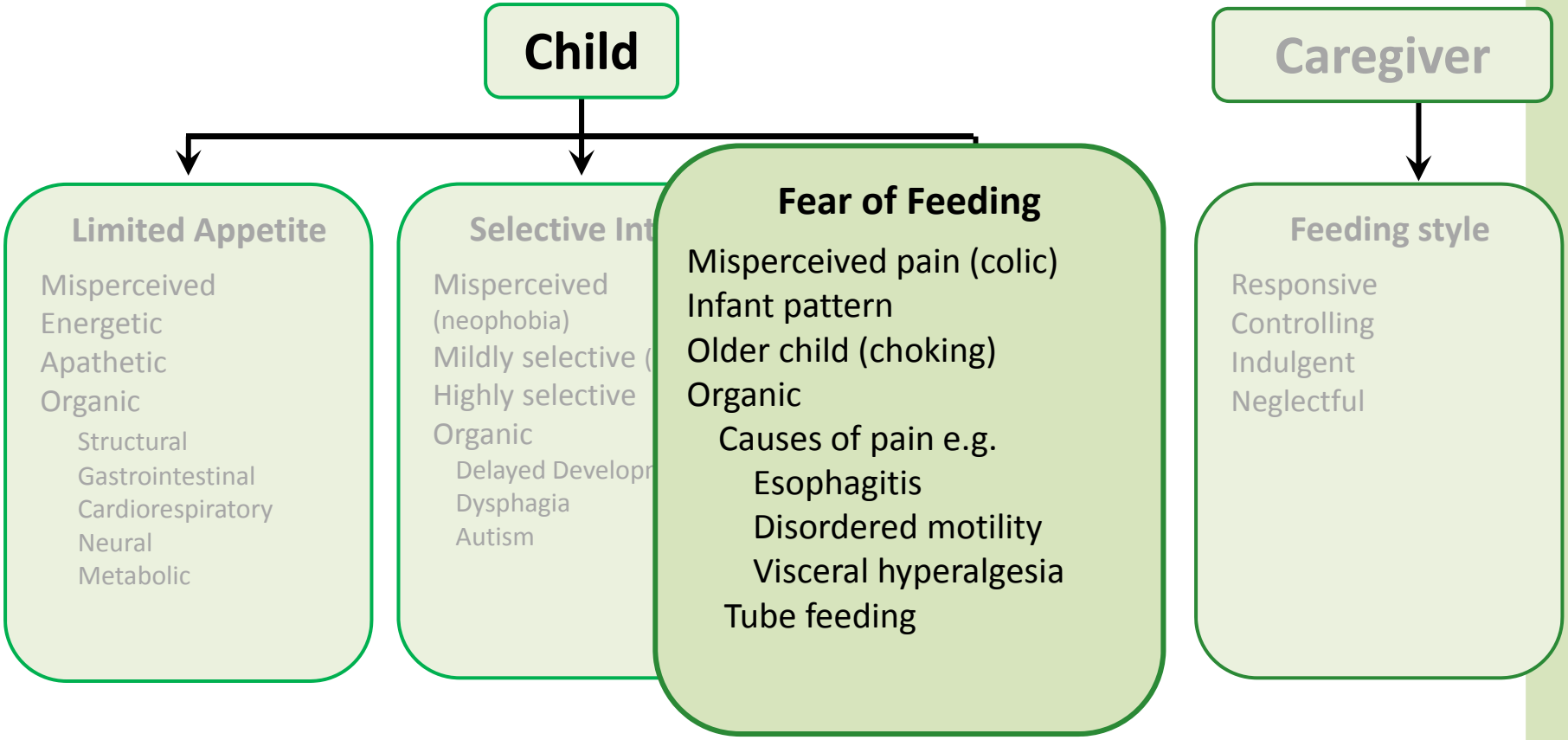
More complex systematic approaches e.g. 'food chaining"

Organic

- Limitation imposed by organic disease e.g developmental disability
- Hyper or hypo responsive gag reflex

Even more subtle or demanding methods – "shaping" and "fading"

Subcategories



Fear of Feeding

Misperceived

- Inconsolable crying under age four
- No pathology
- Dif. Diagnosis: protein sensitivity to constipation
- Fed too frequently

Calm baby and reassure parent

Young Child

- Cries at sight of food or high chair
- Hungary but in pain after a few sucks
- Sleep feeds

Avoid noxious feeding and desensitize with sleep feeding

Older Child

- Sudden transition from normal to no eating
- Usually post chocking
- Rejects solid food

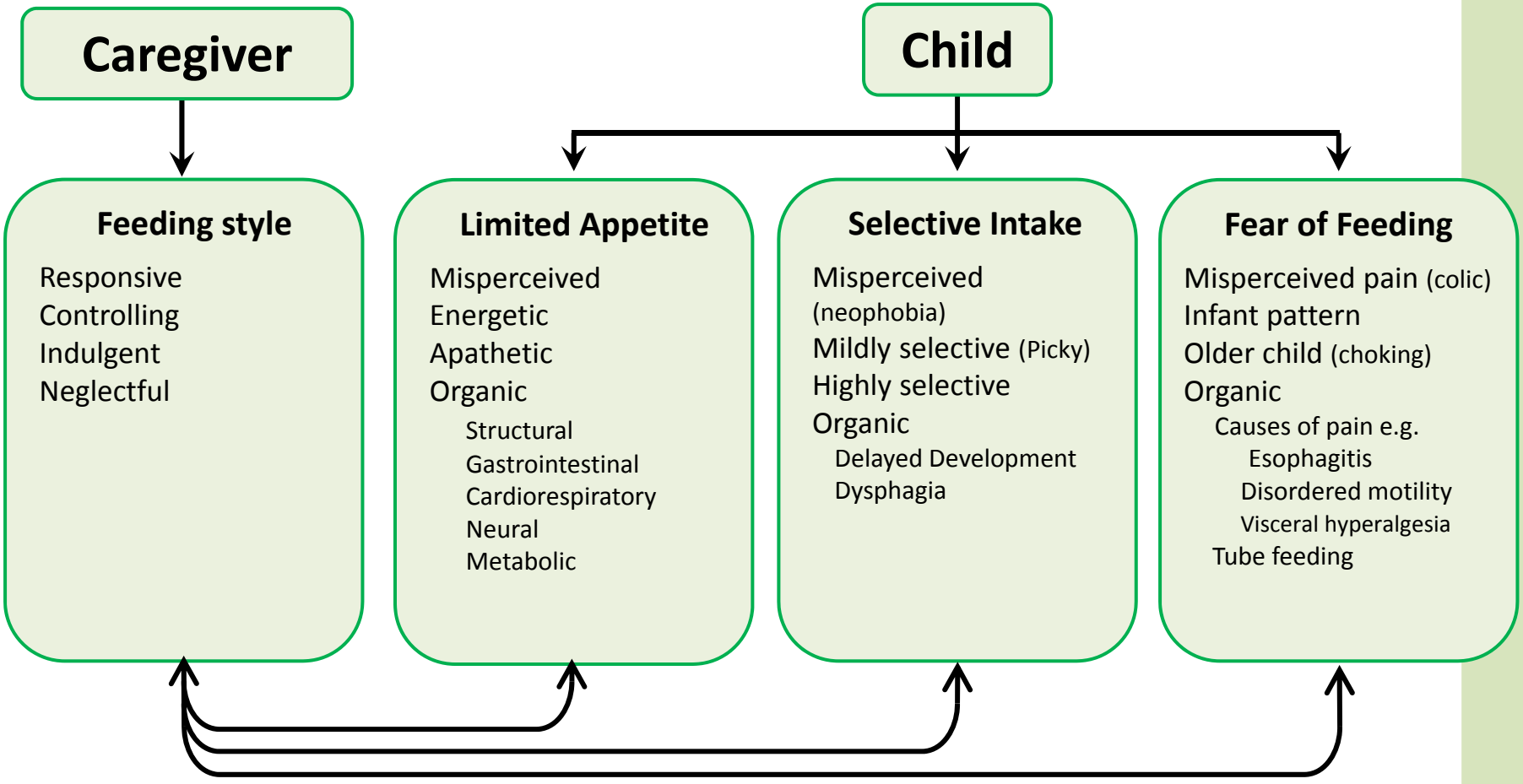
Avoid coercion
Reassure and reduce stress

Organic

- Overt pathology
- Frequently tube fed
- Suppressed appetite
- Visceral hyperalgesia

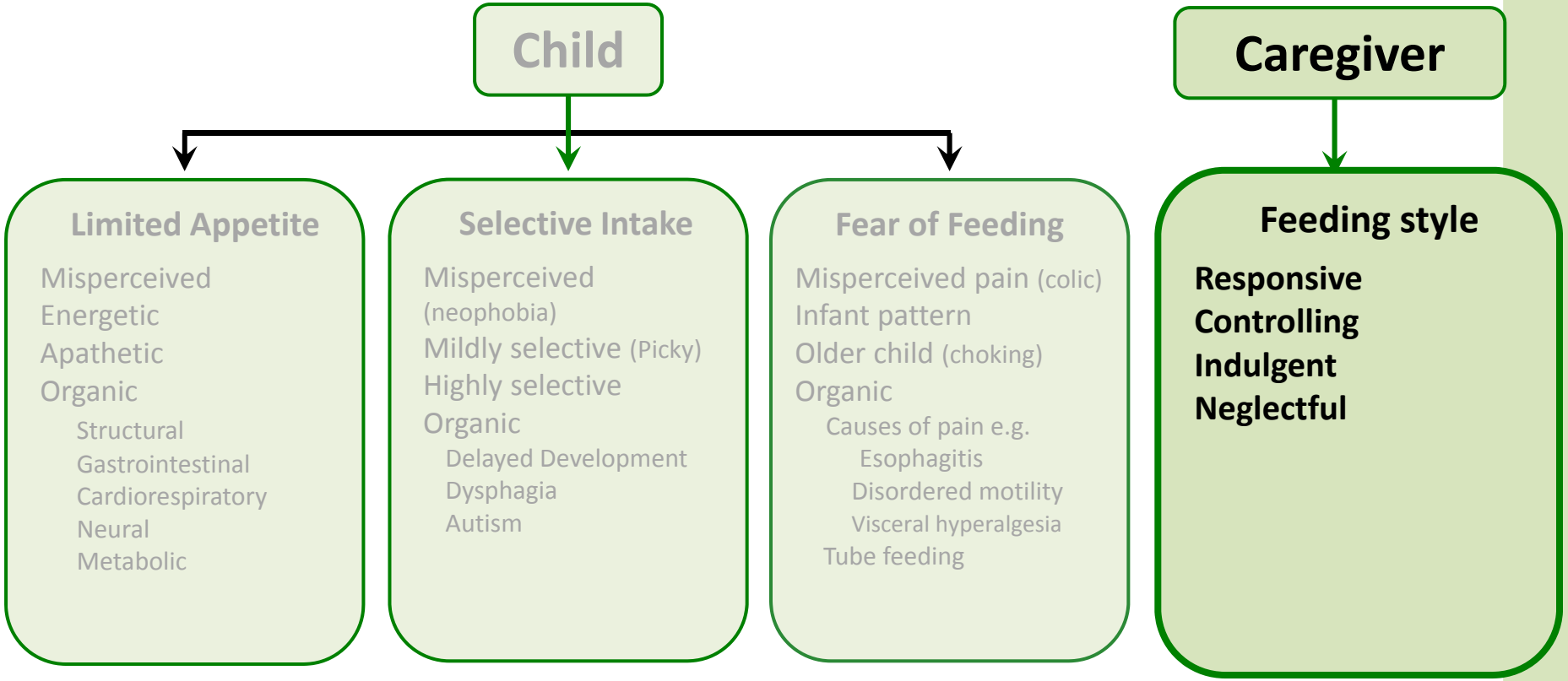
Multi-disciplinary resolution

Algorithm for the management of feeding difficulties



Every child and caregiver is influenced by the feeding experience

Subcatagories



Feeding styles

Responsive

Limits **W**here **W**hen and **W**hat

Models appropriately

Responds to child's hunger signals

Guides child's eating

Eats more fruit, veg. and dairy

Eats less 'junk' food

May protect against both under and overweight

Reassure

Controlling

Pressures child to eat

Restricts foods

Ignores hunger satiation signals

Adjusts calories poorly

Eats fewer fruits and vegetables

More likely under or overweight

Offer guidance rather than precise orders

Indulgent

Sets no limits

Accedes to **W**here, **W**hen, and **W**hat

Makes special foods

Ignores satiation signals

Eat diets lower in most nutrients except fat

Drink less milk

Learn to set limits

Neglectful

Gives up feeding responsibilities

Sets no limits

Ignores hunger signals, emotional and physical needs

More likely underweight or overweight

Needs tight instruction

Summary of the diagnostic process

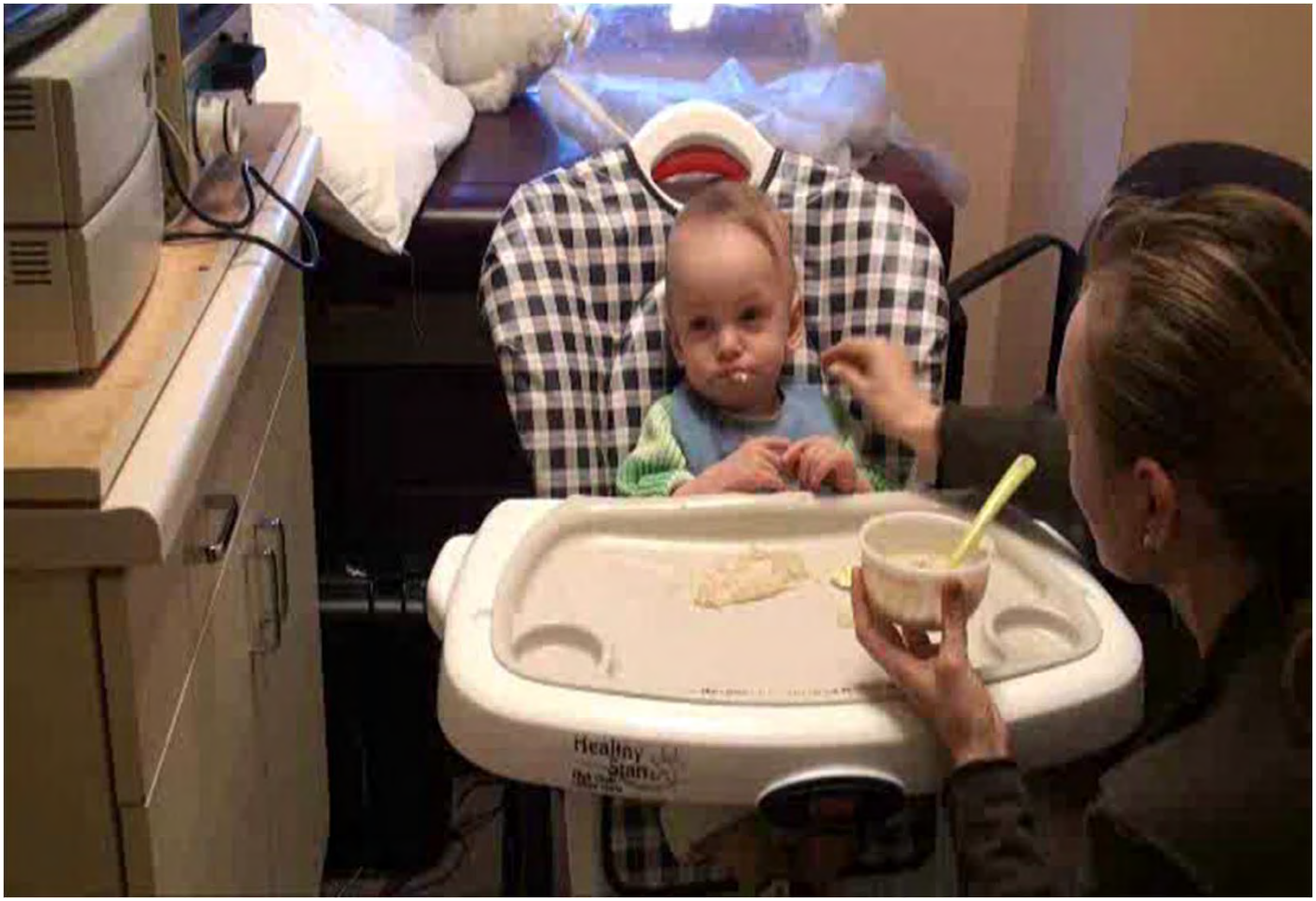
- Respect maternal concerns and resolve misperceptions with positive advice so as to enhance normal feeding behavior
- Proceed to the diagnosis by following the algorithm
- Recognize the red flags
- Address serious conditions requiring prompt resolution
- Children with organic disease very frequently have perseverant behavioral feeding behavior problem
- Children may have more than one feeding difficulty
- The manifestations of the problem is modulated or even caused by feeding styles; therefore they need to be addressed

In conclusion

The parent should leave the office:

- Understanding the feeding problem
- Confident to carry out interventions
- Appreciating the dangers of controlling, indulgent and neglectful feeding styles

Closing Video



Slide 65

3 Imbed video

Kim Milano, 2/13/2014

Feeding guidelines for all children

- Avoid distraction during mealtimes (television cell phones etc.)
- Maintain a pleas ude
- Feed to encoura
  - Limit duration (
  - 4 -6 snacks a day
- Serve age appropriate foods
- Systematically introduce times)
- Encourage self-feed
- Tolerate age approp

Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS

…but there are limits