Clinical Pathways

Eating Disorder

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MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

BEST CHILDREN'S HOSPITAL WOMEN'S CHOICE AWARD 2023

What is a Clinical Pathway?

An evidence-based guideline that decreases unnecessary variation and helps promote safe, effective, and consistent patient care.

Objectives of the Eating Disorder Pathway

- Restart nutrition in a safe manner to prevent refeeding syndrome
- Promote patient weight gain and gradual medical stability in a structured manner
- Provide appropriate treatment for the patient's medical needs and begin to address underlying psychiatric causes

- Some admissions for medical stabilization are entirely focused on giving the patient nutrition

  → Our pathway is focused on getting the patient to take the nutrition

  → medical and psychological focus

Why is this pathway necessary?

- To achieve the following goals:
  - Reinitiate nutrition in a safe environment
  - Prevent Refeeding Syndrome
  - Establish the ability to maintain weight with activity
  - Develop a discharge plan with appropriate referrals
  - Streamline care between the ED and the inpatient floors

Refeeding Syndrome

- A shift from fat to carbohydrate metabolism occurs, evoking insulin release → increasing cellular uptake of glucose, phosphate, potassium, magnesium, and water → further depletion
- Predominant features:
  - **Hypophosphatemia**
  - Hypokalemia
  - Hypomagnesemia

- The Eating Disorder pathway starts with a main first page, and then divides care for Anorexia/Bulimia (page 2), and Avoidant Restrictive Food Intake Disorder - ARFID (page 3).
- This is page 1 of 3 of the Eating Disorder Clinical Pathway.
- We will be reviewing each component in the following slides.

CLINICAL PATHWAY:

Eating Disorder

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

Inclusion Criteria: Established or newly diagnosed eating disorder AND moderate or severe malnutrition[1]
Exclusion Criteria: Active gastrointestinal pathology causing malnutrition

PCP and/or ED Assessment
History of: weight loss, binging/purging, diet (intake), alcohol or substance use, medications, exercise, syncope, menstrual periods
Physical: height & weight with % median body mass index (% mBMI - see Appendix A), orthostatic BP and HR (BP + HR after patient supine for 3 min, then repeat after patient standing for 3 min), hydration status, cardiac and peripheral exam, signs of intentional vomiting (dental erosion, knuckle abrasions)

Pre-treatment evaluation
Chem 10, AST/ALT, GGT, alkaline phosphatase, ferritin, % iron saturation, T4 & TSH, albumin, pre-albumin, triglycerides, CBC w/differential, ESR, IgA, TTG IgA, UA, urine for hCG, 12-lead EKG
(if tests were recently completed, use provider discretion whether or not to repeat)

[1]**Malnutrition Defined:**

	Moderate	Severe
% mBMI	70-79%	<70%
BMI z score	-2 to -2.9	-3 or greater
Weight Loss	≥7.5% in 6 months	≥10% in 6 months

Admission Criteria [2]

[2]**Admission Criteria:**
Must be established or newly diagnosed eating disorder ***AND*** *moderate or severe malnutrition* ***AND*** *one or more of the following:*

- <75% mBMI OR <80% mBMI if < 10 year of age or pre-menarchal
- Acute food refusal > 24hrs
- HR ≤40 bpm supine & resting (consider if ≤45 with other criteria)
- Systolic BP <80 mmHg
- Orthostatic changes in SBP (>20 mmHg)
- Syncope or pre-syncope with standing
- Electrolyte disturbances (e.g. hypokalemia, hypophosphatemia, hypomagnesemia, hypochloremia)
- Dehydration
- Temperature <36°C
- Arrhythmia (prolonged QTc)
- Intractable vomiting or hematemesis
- Failure of outpatient treatment

No

- Patient does not meet inpatient criteria
- Consider behavioral health consult for partial hospitalization programs or outpatient counseling, and notify PCP
- May always call Psychiatry or Hospital Medicine to discuss

Yes

Admit to Hospital Medicine

- PCP or ED provider reviews clinical pathway management with patient and family [3]
- ED provider gives patient and family the Patient Handout that outlines expectations during the admission (see Appendix C)
- If patient ≥ 18 years, must call hospitalist to discuss admission

Inpatient Initial Management

- Patient handout to be given to and signed by the patient and family at time of admission (see Appendix C)
- Place patient in 1:1 observation per Appendix B
- Place patient on continuous CR monitoring
- Order strict I/O's
- Place appropriate consults. Calls for consults may need to be placed the following morning if late admission.
  - Psychiatry consult for all patients
  - Nutrition consult for all patients
  - Consult GI if presence of dysphagia or recurrent choking, or concerns for GI pathology, or if patient referred by GI or is an established GI patient
- PCA to print Nursing/PCA Job Aid (Appendix B) and Nursing/PCA Protocol Worksheet (Appendix I)

If Anorexia/Bulimia:

- Proceed to page 2: Anorexia/Bulimia Inpatient Management

If Avoidant Restrictive Food Intake Disorder (ARFID)[4]:

- Proceed to page 3: ARFID Inpatient Management

[3]**Example script for ED when notifying of admission:**
"Your child is being admitted for medical stabilization for malnutrition due to disordered eating. The treatment requires a structured approach, with slow and gradual re-introduction of nutrition in a safe way. There is an initial restriction of activity, which is advanced based on medical stability."

[4]**Avoidant Restrictive Food Intake Disorder (ARFID) Definition:**

Disordered eating due to one of the following:

- Concern about unpleasant consequences of eating, such as pain, vomiting, choking
- Avoidance based on sensory qualities
- Seeming lack of interest in eating or food

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Inclusion Criteria: Established or newly diagnosed eating disorder AND moderate or severe malnutrition[1]
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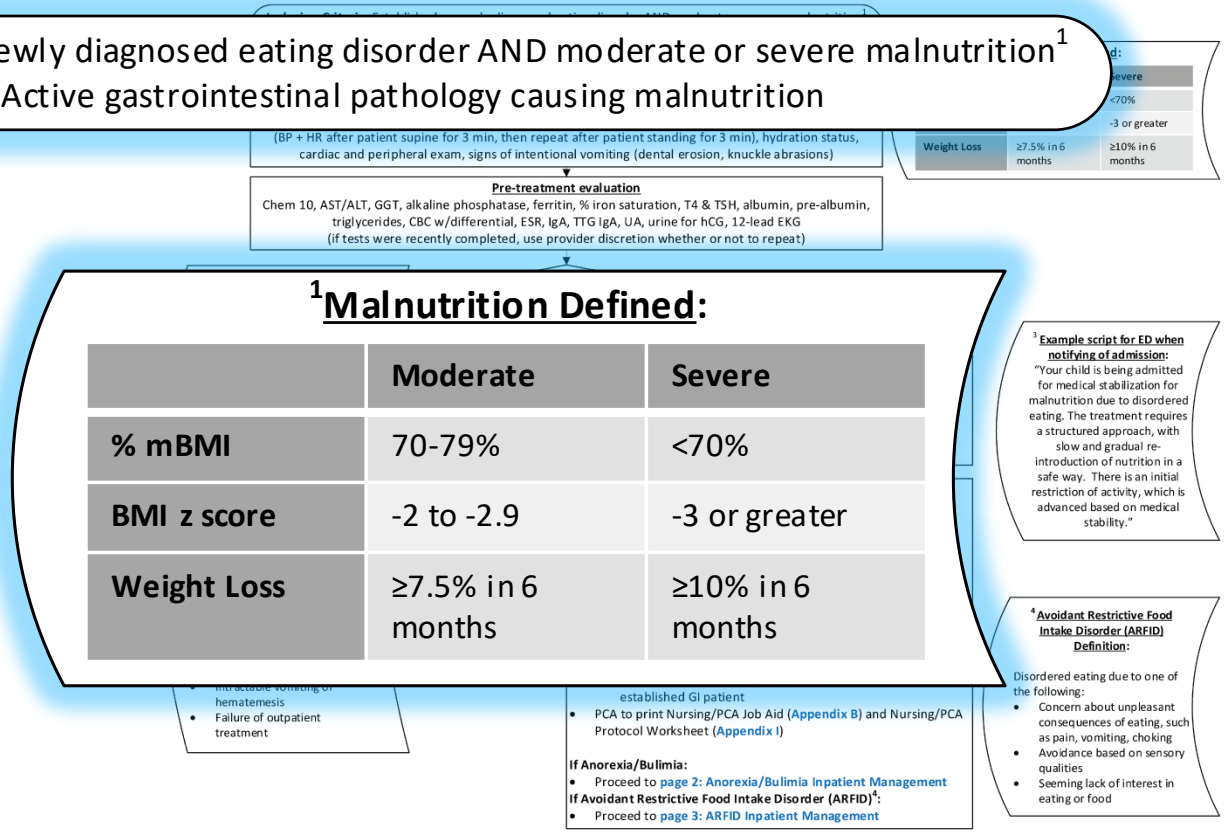
Inclusion Criteria:

- Established or newly diagnosed eating disorder AND moderate or severe malnutrition
- Malnutrition severity is clearly defined



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If Anorexia/Bulimia:
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If Avoidant Restrictive Food Intake Disorder (ARFID)[4]:
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for medical stabilization for malnutrition due to disordered eating. The treatment requires a structured approach, with slow and gradual re-introduction of nutrition in a safe way. There is an initial restriction of activity, which is advanced based on medical stability."

[4] **Avoidant Restrictive Food Intake Disorder (ARFID) Definition:**

Disordered eating due to one of the following:
- Concern about unpleasant consequences of eating, such as pain, vomiting, choking
- Avoidance based on sensory qualities
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Prior to admission:

- Complete a thorough history and physical with all of the elements outlined.
- Appendix A is a guide to help calculate the patient's median BMI (mBMI)

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CLINICAL PATHWAY:
Eating Disorder
Appendix A: Guide to Calculating % Median Ideal Body Weight

Steps:

1. Find patient's BMI using the following link (need patient's height & weight):
   Calculate Your BMI - Metric BMI Calculator (nih.gov)
2. Using a CDC growth/BMI chart (or one of the links below):
   BOYS:
   2 to 20 years: Boys, Body mass index-for-age percentiles (cdc.gov)
   GIRLS:
   2 to 20 years: Girls, Body mass index-for-age percentiles (cdc.gov)

   Find the BMI at the 50th percentile* for the patient's age.

3. % Median BMI (mBMI) = Patient's BMI ÷ BMI at 50th %* for age

   Example:
   15 year old girl has a BMI of 14 (based on entering her height & weight in Step #1)
   BMI at 50th percentile for age = 20 (based on BMI chart in Step #2)

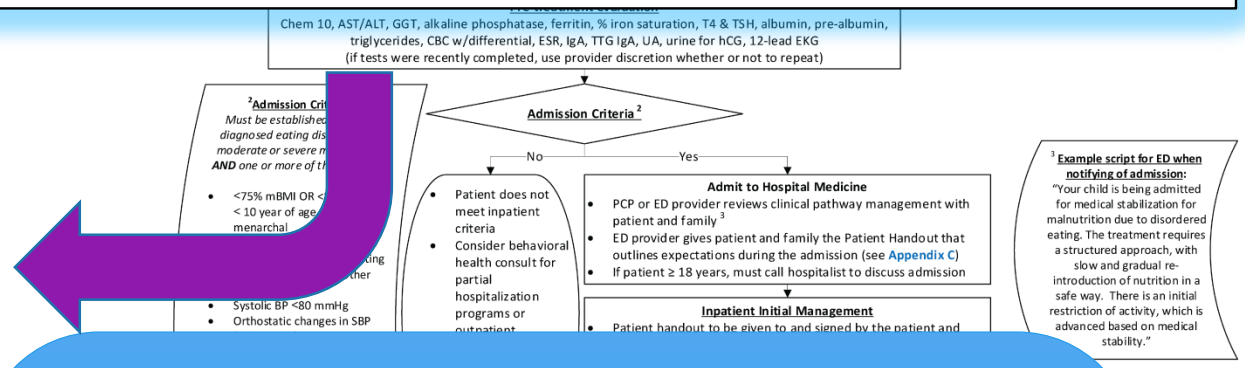
   % mBMI = 14 ÷ 20 = 70%

** The dietitian and/or medical team may adjust the patient's % mBMI to a different BMI %ile (other than 50th%ile) based on the patient's previous growth history (e.g. if the patient has tracked at the 25th percentile prior to weight loss, use this for mBMI calculation).*

PCP and/or ED Assessment

History of: weight loss, binging/purging, diet (intake), alcohol or substance use, medications, exercise, syncope, menstrual periods

Physical: height & weight with % median body mass index (% mBMI - see **Appendix A**), orthostatic BP and HR (BP + HR after patient supine for 3 min, then repeat after patient standing for 3 min), hydration status, cardiac and peripheral exam, signs of intentional vomiting (dental erosion, knuckle abrasions)



Appendix A: Guide to Calculating Median BMI

- It may not be possible to get a nutrition consult in the ED. If unable to get a consult, provider should:
  - Obtain growth charts from PCP
    OR
  - Use growth chart in EPIC to determine mostly at the 25th, 50th, or 75th percentile prior to weight loss.

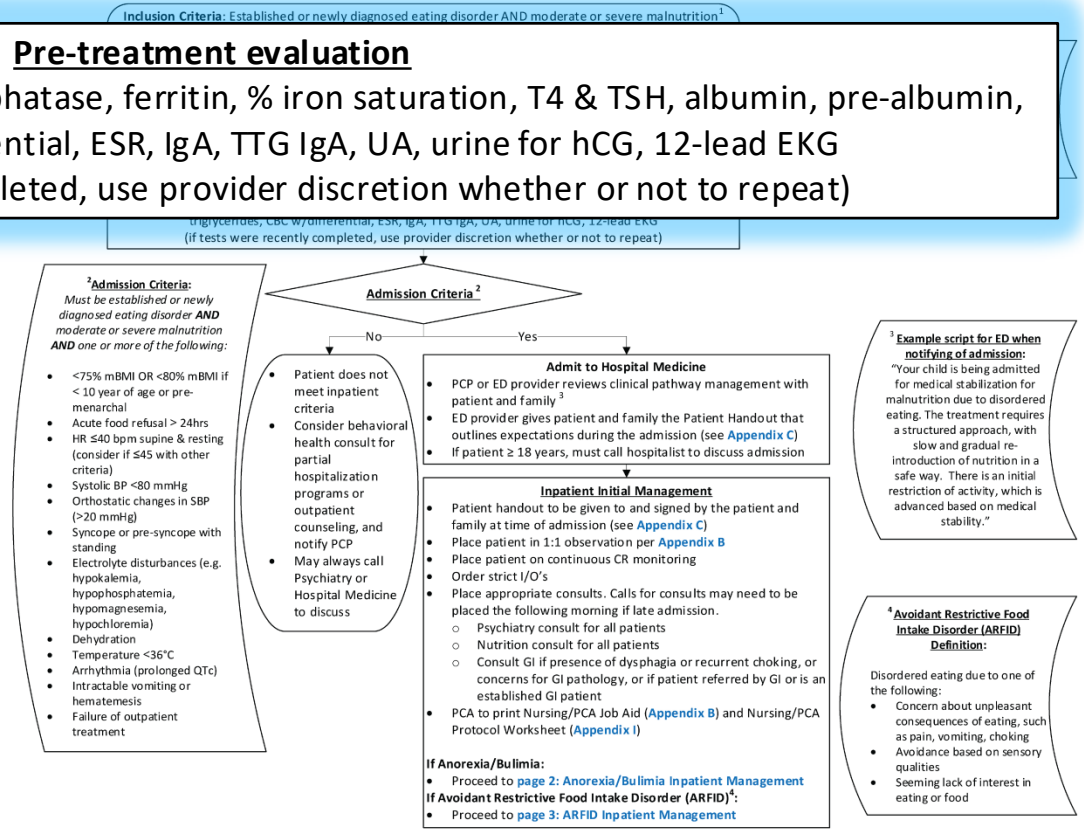
Inclusion Criteria: Established or newly diagnosed eating disorder AND moderate or severe malnutrition[1]

Pre-treatment evaluation

Chem 10, AST/ALT, GGT, alkaline phosphatase, ferritin, % iron saturation, T4 & TSH, albumin, pre-albumin, triglycerides, CBC w/differential, ESR, IgA, TTG IgA, UA, urine for hCG, 12-lead EKG
(if tests were recently completed, use provider discretion whether or not to repeat)

Pre-treatment evaluation:

- Patients may come to the ED with some or all of this work-up done by their primary care physician. It is at the provider's discretion whether to repeat or not.
- Be sure to consider findings identified by the PCP
  - For example, a patient with bradycardia in the PCP's office may not be bradycardic in the ED due to anxiety



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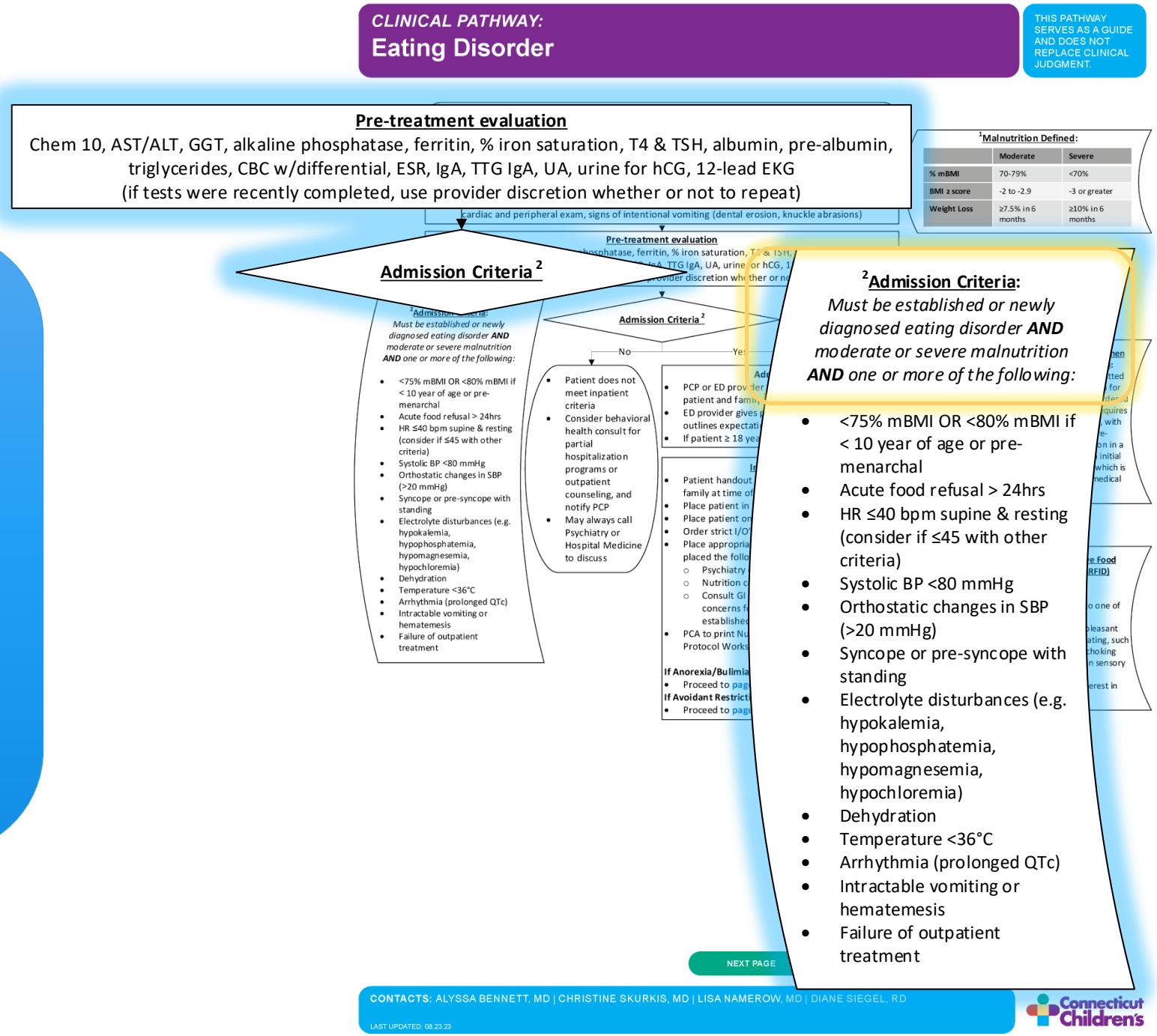
Admission Criteria:

In addition to having a new or previous diagnosis of eating disorder **and** moderate or severe malnutrition, the patient must meet 1 or more criteria for admission.

Note: this was newly updated in 2023.



Admission Criteria:

If the patient does **not** meet inpatient criteria, considering behavioral health support is critical.

- Patient does not meet inpatient criteria
- Consider behavioral health consult for partial hospitalization programs or outpatient counseling, and notify PCP
- May always call Psychiatry or Hospital Medicine to discuss

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Eating Disorder

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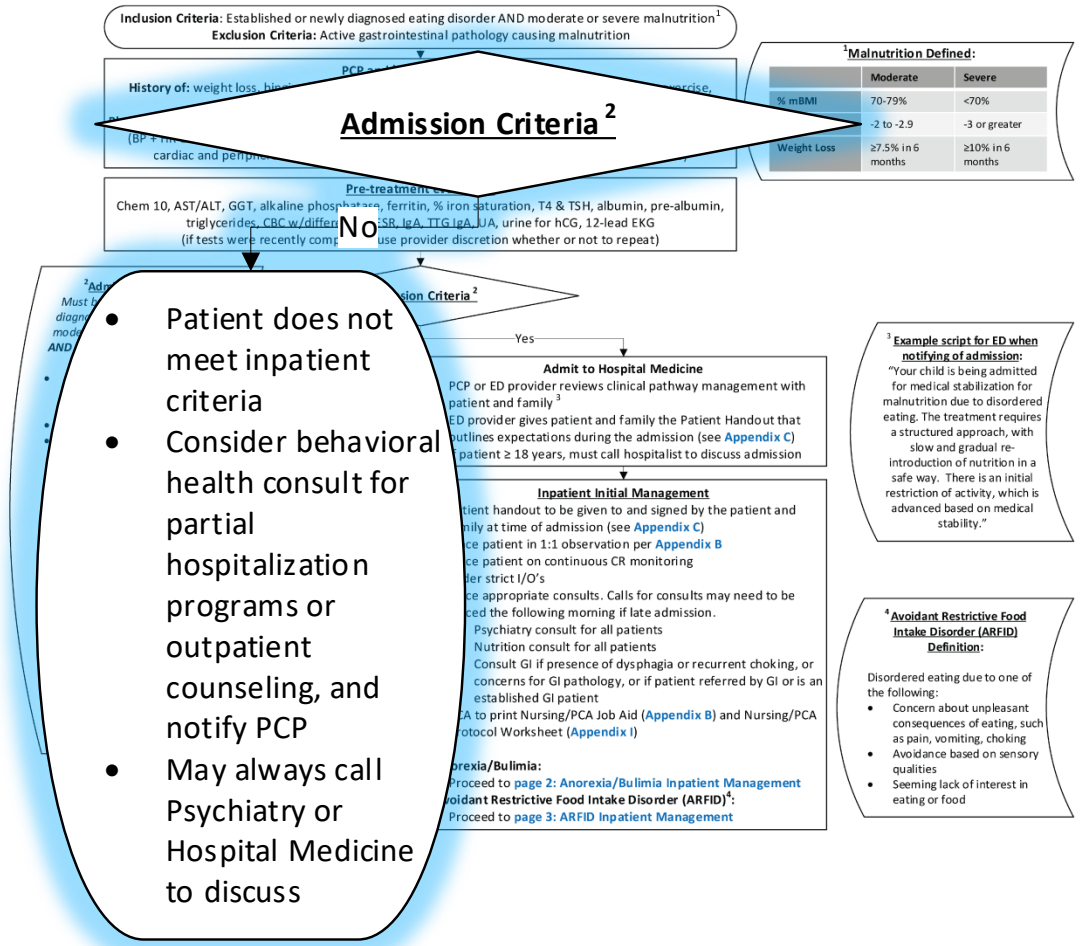

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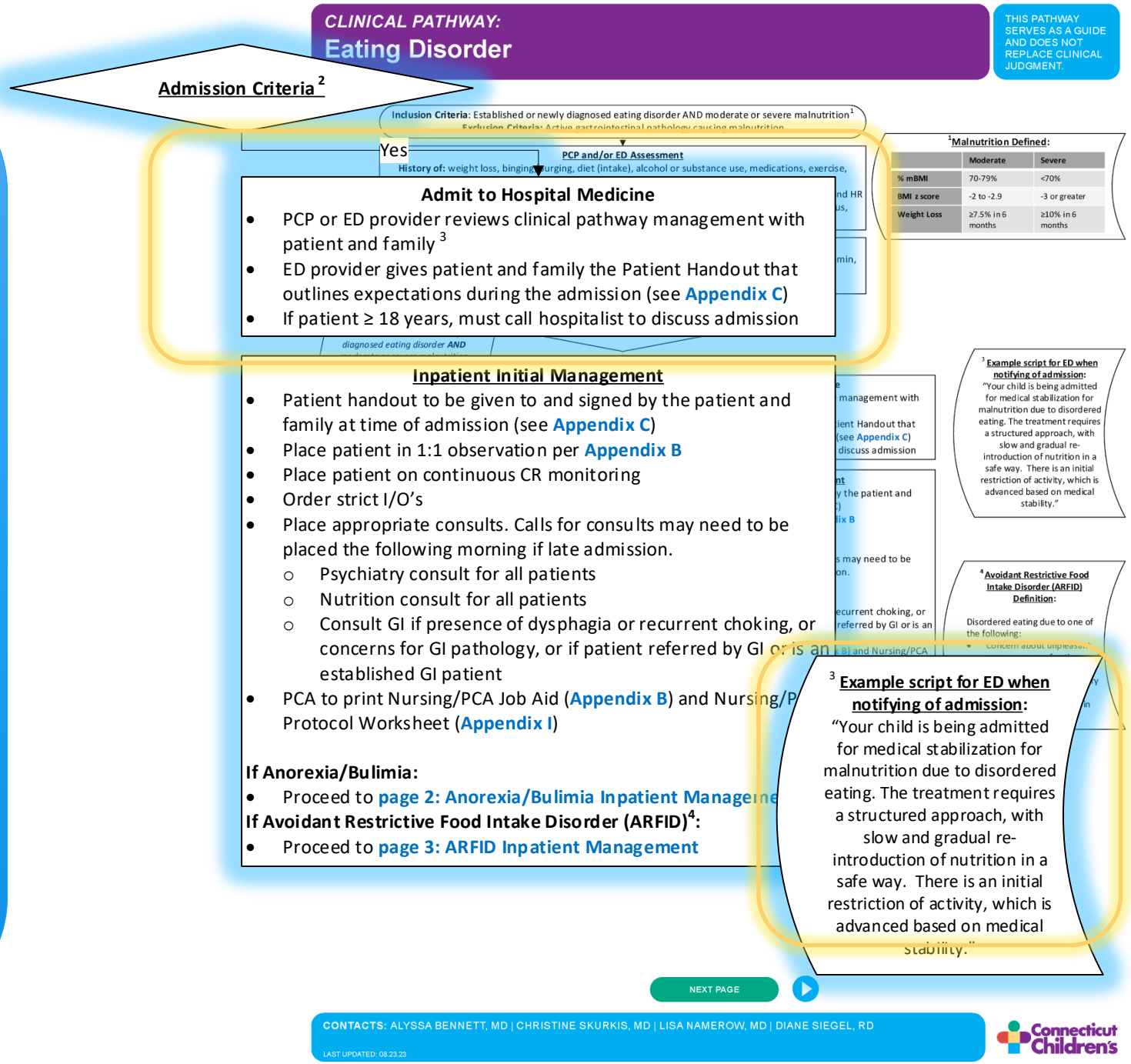
If patient admitted:

- Early communication and expectation setting is critical to success
- ED provider reviews clinical pathway management with patient and family
  - See example script
- ED provider gives patient and family the patient handout that outlines what to expect during the admission
  - See Appendix C
- If patient ≥18 years, ED must call hospitalist to discuss admission
- If any delays in obtaining inpatient bed, initiate pathway from the ED (patient should not miss meal, initiate 1:1 and privilege restrictions



CLINICAL PATHWAY:
Eating Disorder
Appendix C: Patient Handout

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Visiting:

1. Immediate family and clergy may visit at any time, except mealtime, unless otherwise ordered by the team.
2. Visits with friends and extended family members will be considered once medical stability is achieved and in accordance with current hospital visitation guidelines.

Activity:

1. All patients are admitted on bedrest.
2. You will be placed on a cardiac monitor upon admission. *This means stickers on your chest will measure your heart rate and breathing.* The duration of cardiac monitoring depends on your medical condition.
3. Vital signs (blood pressure, heart rate, breathing rate and temperature) will be taken at least every 4 hours, or more frequently, if your medical condition warrants.
4. Any transports for medical care off the unit must be via wheelchair or stretcher.
5. Activity level will be advanced as the medical status improves.
   a. All patients are admitted on Activity 1 (bed rest) and activity is progressed as nutritional status stabilizes and will be identified by level 1, 2, and 3 with increasing ability to leave the room in a wheelchair and move about the room out of bed.
   b. Medical stability requirements for each activity level can be described by the medical team in the sequence per protocol.
   c. The patient and family will be updated daily regarding advancements in activity level.
   d. If the family and/or patient need clarification of a privilege or activity level, they are encouraged to check with the medical team, nurse, or PCA.

Reinforcement:

1. All safe patients will be admitted to a standard room with access to usual comfort items and child life activities that are available to all patients
2. No personal mobile devices
3. A behavioral plan will be considered if it is needed to support nutritional stabilization
4. All activities will be stored and/or turned off (e.g. television, video games, crafts) before meals and at bedtime.

Date Reviewed with Patient: _____

Patient Signature: _____
(signature indicates patient received a copy of this handout)

Dinner = 5:00pm – 5:30pm
Snack = 8:30pm – 9:00pm

RETURN TO THE BEGINNING

Appendix C: The Patient Handout

- This is a 3 page document given to the patient and family in the ED
- It must be signed by patient and family on admission
- Explains and reinforces reasons for admission, treatment goals, and patient expectations

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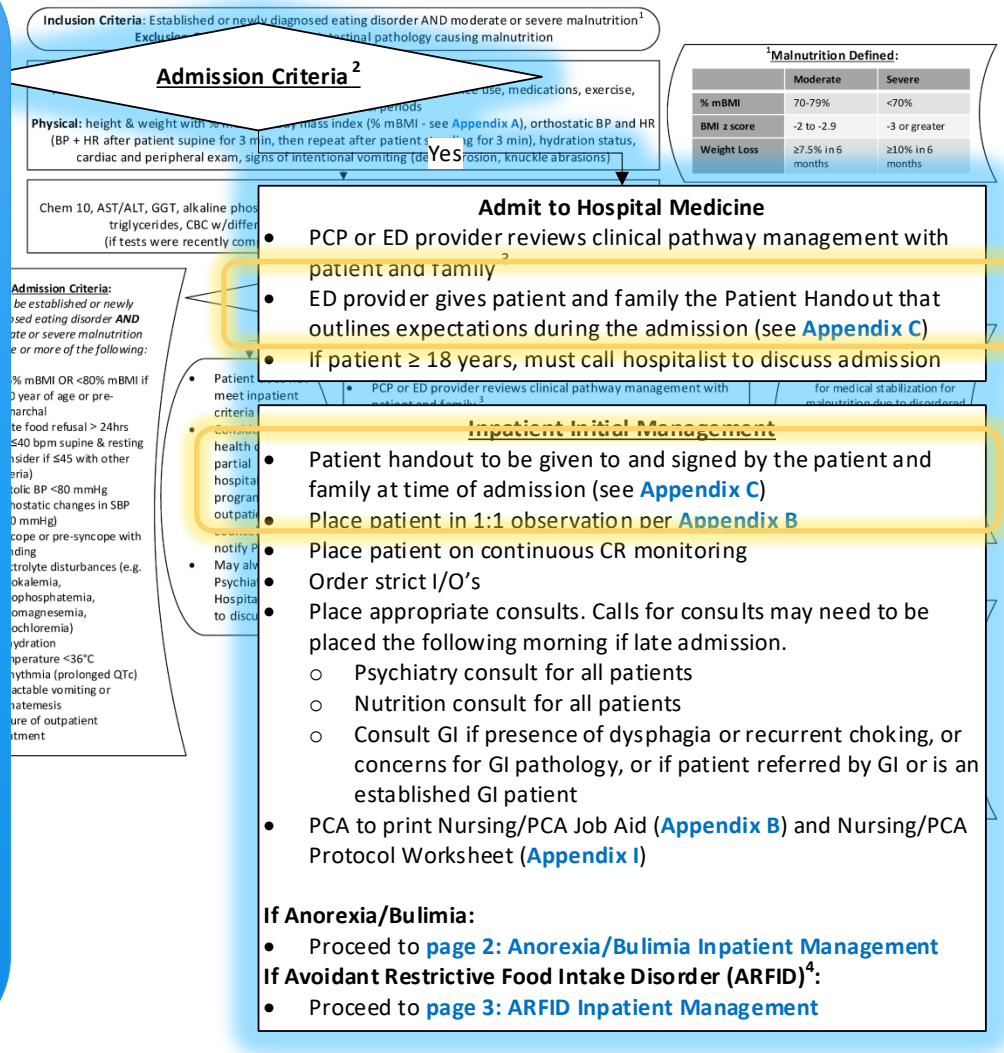

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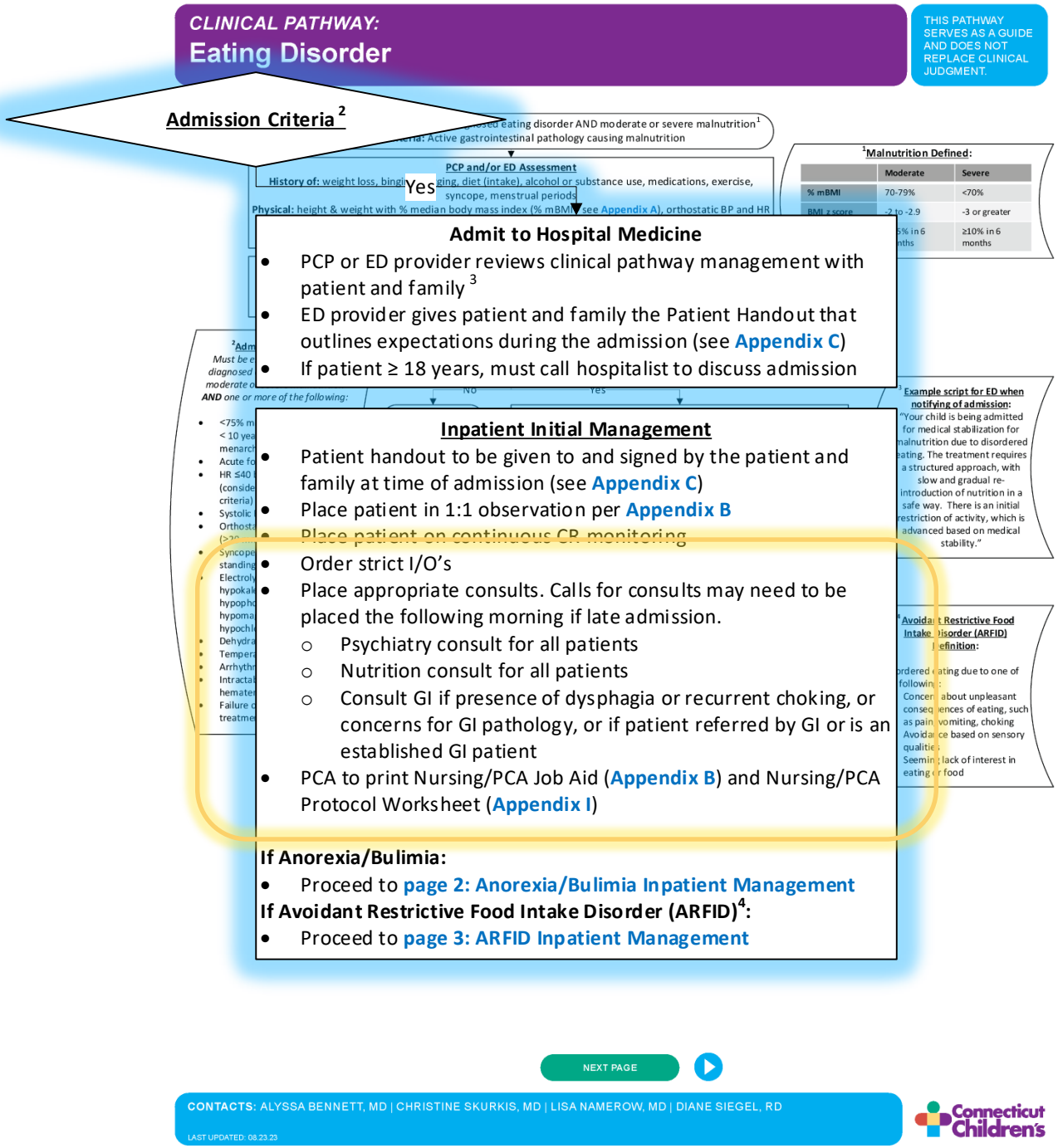
Basic patient care:

- Multidisciplinary approach involving patient and family, PCAs, RNs, Hospitalists, Psychiatry, Nutritionists, and other specialties as needed
- PCA job aid and the Nursing/PCA protocol worksheet are designed to help assist with workflow and pathway guidelines.
  - See Appendix B and I for these documents



CLINICAL PATHWAY:
Eating Disorder
Appendix B: Nursing/PCA Job Aid

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1:1 observation specifics:

- Recommend patient use bathroom before meals
- Make bed in preparation for meal. If patient is on activity level 1 and eating meals in bed, patient must lay/sit on blankets
- For activity level 2 and higher, patient must eat sitting in a chair without blankets
- Sitter remains in the room at the bedside during meals and for the observed time after completion of the nutrition. The 1:1 observing for an extended time beyond meals may then move to the doorway, unless an order is placed stating otherwise.
- The computer should remain outside of the room when the sitter is at the bedside
- Monitor for and document on Appendix I (Observation Worksheet) attempts at hiding or vomiting food
- Monitor for and document on Appendix I (Observation Worksheet) eating behaviors such as cutting food into tiny pieces, moving food around on the plate, excessive chewing, gagging, etc.
- Provide meal support by utilizing strategies such as supportive comments and distractions (refer to Appendix G: Meal Support Strategies)
- We ask that families and staff do not discuss meals, weight, or other eating-related topics, as these topics may raise anxiety.

Eating disorder secure room:

- Before admission:
  - Remove trash receptacles, bins, tissue boxes that could be used to hide food or purge into
  - Remove excessive linens/blankets
  - Consider covering mirror in room
- Bedside curtains must be kept open, except when dressing
- Lights remain on during the day except brief naps
- Bathroom use is supervised by staff with door cracked open when on 1:1 observation
- Staff will measure all urinary output and stool

Any earned privileges materials will be stored at night after bedtime

Activity Status:

Patient will be admitted to Activity Level 1. Activity level is advanced based on increasing medical stability. Providers use the eating disorder order set to change activity level.

Level 1:

- Strict bed rest due to vital sign instability
- Out of Bed for bathroom use only

Level 2: Advance to this level once BP and orthostatic symptoms stabilize (may still be orthostatic by HR)

- Out of bed in room for meals
- Out of bed in wheelchair for scheduled floor activities as determined by medical team
- Shower based on medical and psychiatric team clearance

Level 3: Advance to this level once oral intake promotes weight gain

- First, ad lib activity in room
- Then, advance to 1 to 3 five minute walks per day (advancement based on medical stability)

RETURN TO THE BEGINNING

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Yes

[1] **Malnutrition Defined:**

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No — Yes

[3] Example script for ED when ...

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CLINICAL PATHWAY:
Eating Disorder
Appendix I: Observation Worksheet

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Patient Name: Date: Unit:

Date	Day	Meal Step Plan	100% Compliance	Activity Level (Assigned)	Distraction techniques that work for the patient	Comments Eating behaviors/exercise/other
	Admit		Yes / No			
	1		Yes / No			
	2		Yes / No			
	3		Yes / No			
	4		Yes / No			
	5		Yes / No			
	6		Yes / No			
	7		Yes / No			
	8		Yes / No			

Yes

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CLINICAL PATHWAY:
Eating Disorder
Anorexia/Bulimia Inpatient Management

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VITAL SIGNS Q4HR

Orthostatics:
- Instructions for obtaining orthostatics: BP + HR after patient supine for 3 min, then repeat after patient standing for 3 min
- Obtain 1st set on admission
- If orthostatic for BP or HR, take daily until normalized (positive if SBP drops by ≥ 20 mmHg or DBP by ≥ 10 mmHg, HR increase by ≥ 20)

Weight:
- Weigh patient QAM after 1st void and before breakfast
- Weight to be done in hospital gown only (no socks, underwear etc.)
- Neither patient nor family are to be told the weight
- Obtain growth charts from PCP

LABS & DIAGNOSTICS

Day 1:
- Consider echocardiogram for any patient with a positive cardiac ROS or at provider discretion based upon severity of malnutrition (in echo order, select "Eating Disorder patients")

If not previously obtained in the ED:
- UA
- Urine hCG (female pts)

Days 2-5:
- i-STAT Chem 10 daily for 5 days, then PRN based on risk of refeeding syndrome

** If patient is admitted in the evening/night and admission chem 10 is normal, do not need to repeat chem 10 on the 1st morning*

NUTRITION & FLUIDS

Nutrition:
See Appendix D for Anorexia and Bulimia diet plans
- Initiate meal plan immediately after admission lab results reviewed
- RD will ask patient for 3 food dislikes
- Advance diet based on PO compliance (includes water intake) and medical necessity until weight gain is achieved with advancement of activity
- Place next day's diet order after evening snack by modifying existing diet order
- Start with 24oz of free water and then adjust per RD recommendations
- See Appendix F for Ensure replacement guideline
- Place nasogastric tube (NGT) after snacks if not 100% compliant with caloric goals (Appendix D regarding NGT feedings)

IV Fluids:
- Consider NS bolus and/or continuous IVFs if severe dehydration or patient refusing PO fluids (consider smaller bolus if signs of heart failure)

MEDICATIONS

Anorexia:
- Complete multivitamin 1 tablet daily
- Thiamine 100 mg/day x7 days total
- Consider Tums for low calcium levels
- Consider oral phosphorus if serum phos < 3 mg/dL [Phos-NaK contains 250mg Phos, 160mg (7mEq) Na, 280mg (7.2mEq) K]
- Consider IV phos supplement if phosphate level ≤ 2mg/dL

Bulimia:
- Consider IV phos supplement if phosphate level ≤ 2mg/dL
- Consider sodium bicarbonate or oral Bicitra if bicarbonate levels are low
- Consider potassium supplement if low serum K and normal pH (indicates dangerous reduction of total body K)

ACTIVITY & 1:1 OBSERVATION STATUS

Activity
Advancement based on increasing medical stability.

Level 1 (start at admission):
- Strict bed rest due to VS instability
- OOB for bathroom use only

Level 2: (usually by 24 hours)
- Advance to this level once BP and orthostatic symptoms stabilize (may still be orthostatic by HR)
- OOB in room for meals
- OOB in wheel chair for limited scheduled activities as determined by medical team
- Shower based on medical & psych clearance

Level 3:
- Advance to this level once oral intake promotes weight gain or weight stability
- First, ad lib activity in the room
- Then, advance to 1-3 five-minute walks per day (may advance more slowly or rapidly based upon medical stability)

Observation:
- Based on daily review of progress, or at any time exclusion criteria are identified, care team can escalate to a higher observation level. For example, if the patient is not gaining weight despite adequate nutrition (Appendix B)

Reinforcement and Meal Support

Reinforcement:
- All safe patients will be admitted to a standard room with access to usual comfort items and child life activities that are available to all admitted patients
- No personal mobile devices
- If an additional reinforcement plan is needed to support compliance with nutrition, then additional reinforcers will be used from Child Life services, including but not limited to:
  - iPad
  - Kindle
  - Nintendo Switch
  - Xbox One

Meal Support
- See Appendix B: Nursing/PCA Job Aid and Appendix G: Meal Support Strategies
- See Appendix I for nursing/PCA protocol worksheet

Discharge Criteria/Medications:
- Medically cleared with stable labs and vital signs
- Patient adherent to prescribed nutrition plan with weight gain, especially with ad lib activity
- Appropriate placement arranged in inpatient, PHP or outpatient program with psychiatry team input
- Medications at discharge: complete multivitamin; thiamine (if 7 days not complete)

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Admission Criteria [2]

Yes

Admit to Hospital Medicine
- PCP or ED provider reviews clinical pathway management with patient and family [3]
- ED provider gives patient and family the Patient Handout that outlines expectations during the admission (see **Appendix C**)
- If patient ≥ 18 years, must call hospitalist to discuss admission

Proceed to page 2 to place patient on the Anorexia/Bulimia arm of the pathway .

Inpatient Initial Management
- Patient handout to be given to and signed by the patient and family at time of admission (see **Appendix C**)
- Place patient in 1:1 observation per **Appendix B**
- Place patient on continuous CR monitoring
- Order strict I/O's
- Place appropriate consults. Calls for consults may need to be placed the following morning if late admission.
  - Psychiatry consult for all patients
  - Nutrition consult for all patients
  - Consult GI if presence of dysphagia or recurrent choking, or concerns for GI pathology, or if patient referred by GI or is an established GI patient
- PCA to print Nursing/PCA Job Aid (**Appendix B**) and Nursing/PCA Protocol Worksheet (**Appendix I**)

If Anorexia/Bulimia:
- Proceed to **page 2: Anorexia/Bulimia Inpatient Management**

If Avoidant Restrictive Food Intake Disorder (ARFID)[4]:
- Proceed to **page 3: ARFID Inpatient Management**

CLINICAL PATHWAY:
Eating Disorder
ARFID Inpatient Management

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

VITAL SIGNS Q4HR

Orthostatics:
- Instructions for obtaining orthostatics: BP + HR after patient supine for 3 min, then repeat after patient standing for 3 min
- 1st set on admission
- If orthostatic for BP or HR, take daily until normalized (positive if SBP drops by ≥ 20 mmHg or DBP by ≥ 10 mmHg, HR increase by ≥ 20)

Monitoring:
- Place on cardiorespiratory monitor
- Discontinue continuous monitor at Level 3 activity

Weight:
- Weigh patient QAM after 1st void and before breakfast
- Weight to be done in hospital gown only (no socks, underwear etc.)
- Neither patient nor family are to be told the weight
- Obtain growth charts from PCP

LABS & DIAGNOSTICS

Day 1:
- Consider echocardiogram for any patient with a positive cardiac ROS or at provider discretion based upon severity of malnutrition (in echo order, select "Eating Disorder patients")

If not previously obtained in the ED:
- UA
- Urine hCG (female pts)

Days 2-5:
- i-STAT Chem 10 daily for 5 days, then PRN based on risk of refeeding syndrome

** If patient is admitted in the evening/night and admission chem 10 is normal, do not need to repeat chem 10 on the 1st morning*

NUTRITION & FLUIDS

Nutrition:
Appendix E for ARFID plans
- Initiate meal plan immediately after admission lab results reviewed
- RD will identify food likes, which will make up a large portion of meals
- Advance diet based on PO compliance (includes water intake) and medical necessity until weight gain is achieved with advancement of activity
- Place next day's diet order after evening snack by modifying existing diet order
- Start with 24oz of free water and then adjust per RD recommendations
- See Appendix F for Ensure replacement guideline
- The decision to begin nasogastric tube (NGT) feedings is based on medical necessity as determined by the multi-disciplinary team (Appendix E regarding NGT feedings)

IV Fluids:
- Consider NS bolus and/or continuous IVFs if severe dehydration or patient refusing PO fluids (consider smaller bolus if signs of heart failure)

MEDICATIONS

- Complete multivitamin 1 tablet daily
- Thiamine 100 mg/day x7 days total
- Consider Tums for low calcium levels
- Consider oral phosphorus if serum phos < 3 mg/dL [Phos-NaK contains 250mg Phos, 160mg (7mEq) Na, 280mg (7.2mEq) K]
- Consider IV phos supplement if phosphate level ≤ 2mg/dL

ACTIVITY & 1:1 OBSERVATION STATUS

Activity
Advancement based on increasing medical stability.

Start at Level 2:
- If hypotension or symptomatic othostasis, start at Level 1: bedrest until stabilizes (may still be orthostatic by HR)
- OOB in room for meals
- OOB in wheel chair for limited scheduled activities as determined by medical team
- Shower based on medical & psych clearance

Level 3:
- Advance to this level once oral intake promotes weight gain or weight stability
- First, ad lib activity in the room
- Then, advance to 1-3 five-minute walks per day (may advance more slowly or rapidly based upon medical stability)

Observation:
- Based on daily review of progress, or at any time exclusion criteria are identified, care team can escalate to a higher observation level. For example, if the patient is not gaining weight despite adequate nutrition (Appendix B)

Reinforcement and Meal Support

Reinforcement:
See Appendix H ARFID Behavioral Plan
- Behavioral plan will be created with multidisciplinary input, identifying:
  - Patient motivators
  - Reinforcers for small goals
  - Reinforcers for large goals
  - Less desirable activities when goals are not met

Meal Support
- See Appendix B: Nursing/PCA Job Aid and Appendix G: Meal Support Strategies
- See Appendix I for nursing/PCA protocol worksheet

Discharge Criteria/Medications:
- Medically cleared with stable labs and vital signs
- Patient adherent to prescribed nutrition plan with weight gain, especially with ad lib activity
- Appropriate placement arranged in inpatient, PHP or outpatient program with psychiatry team input
- Medications at discharge: complete multivitamin; thiamine (if 7 days not complete)

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Admission Criteria [2]

Yes

However, if the patient meets criteria for Avoidant Restrictive Food Intake Disorder (ARFID), place them on the ARFID arm of the pathway.

Admit to Hospital Medicine
- PCP or ED provider reviews clinical pathway management with patient and family [3]
- ED provider gives patient and family the Patient Handout that outlines expectations during the admission (see **Appendix C**)
- If patient ≥ 18 years, must call hospitalist to discuss admission

[4] **Avoidant Restrictive Food Intake Disorder (ARFID) Definition:**

Disordered eating due to one of the following:
- Concern about unpleasant consequences of eating, such as pain, vomiting, choking
- Avoidance based on sensory qualities
- Seeming lack of interest in eating or food

- P… …y the patient and f… …C)
- … …dix B
- … …g
- … …lts may need to be … …sion.
- C… …ecurrent choking, or … …referred by GI or is an
- PCA … …and Nursing/PCA Protocol Worksheet (**Appendix I**)

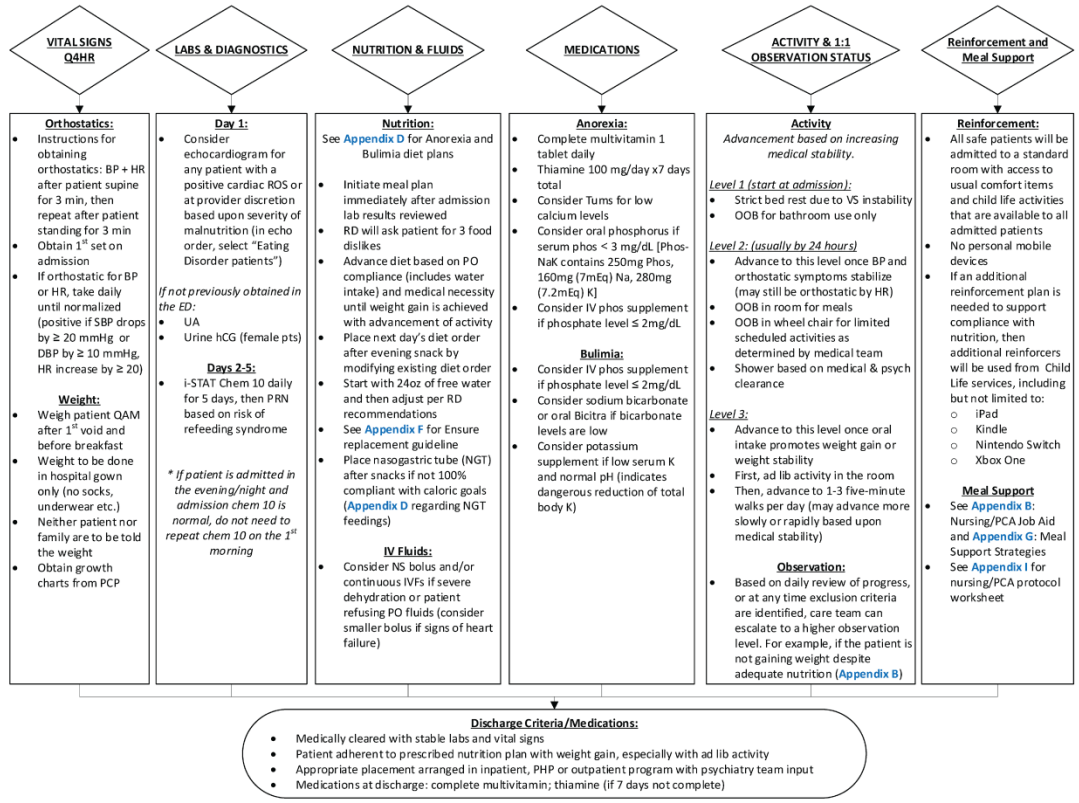
If Anorexia/Bulimia:
- Proceed to **page 2: Anorexia/Bulimia Inpatient Management**

If Avoidant Restrictive Food Intake Disorder (ARFID) [4]**:**
- Proceed to **page 3: ARFID Inpatient Management**

We will start with reviewing the Anorexia and Bulimia arm of the pathway.

CLINICAL PATHWAY:
Eating Disorder
Anorexia/Bulimia Inpatient Management

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.



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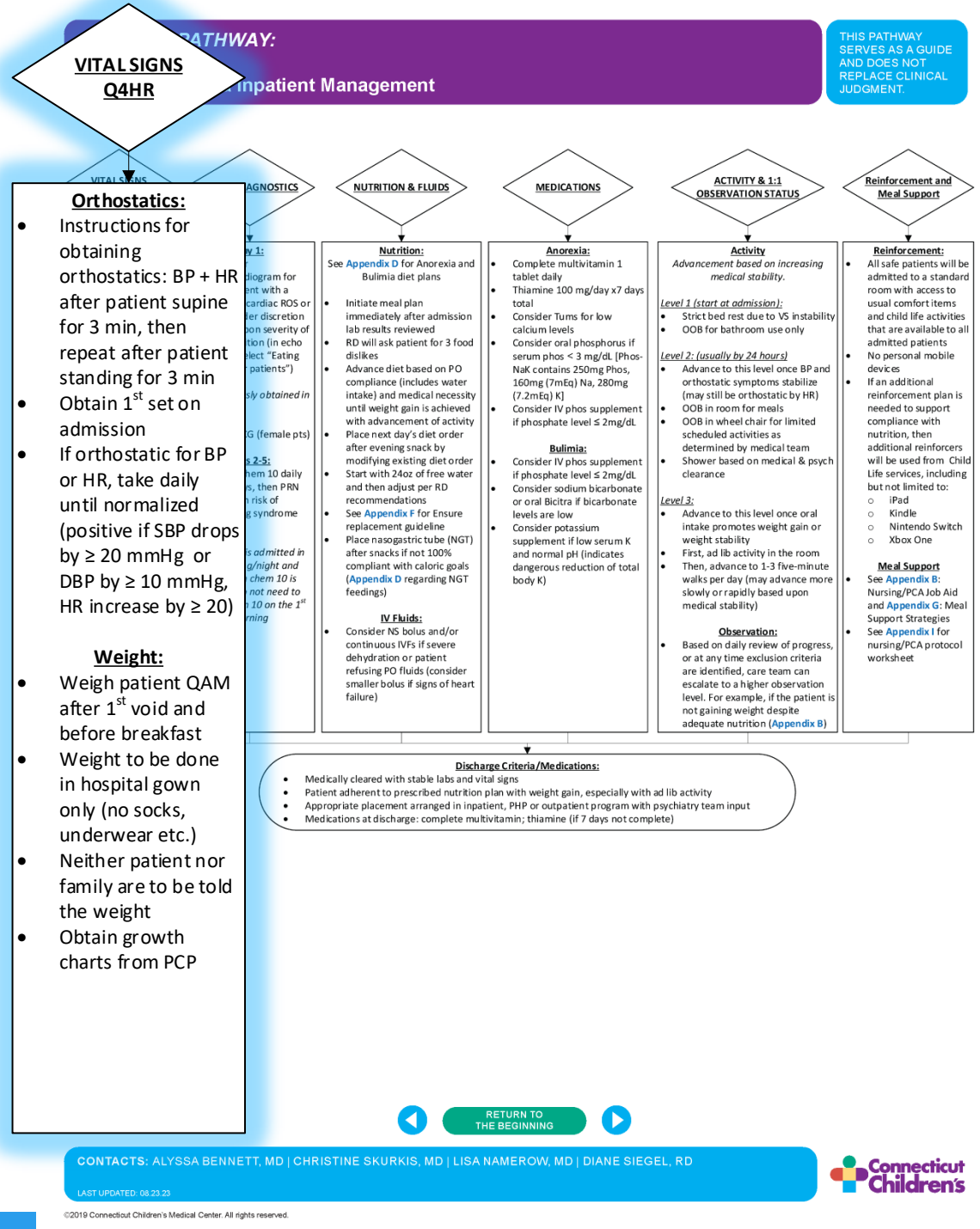
Orthostatics

- Instructions for how to obtain orthostatics are given

Daily weights:

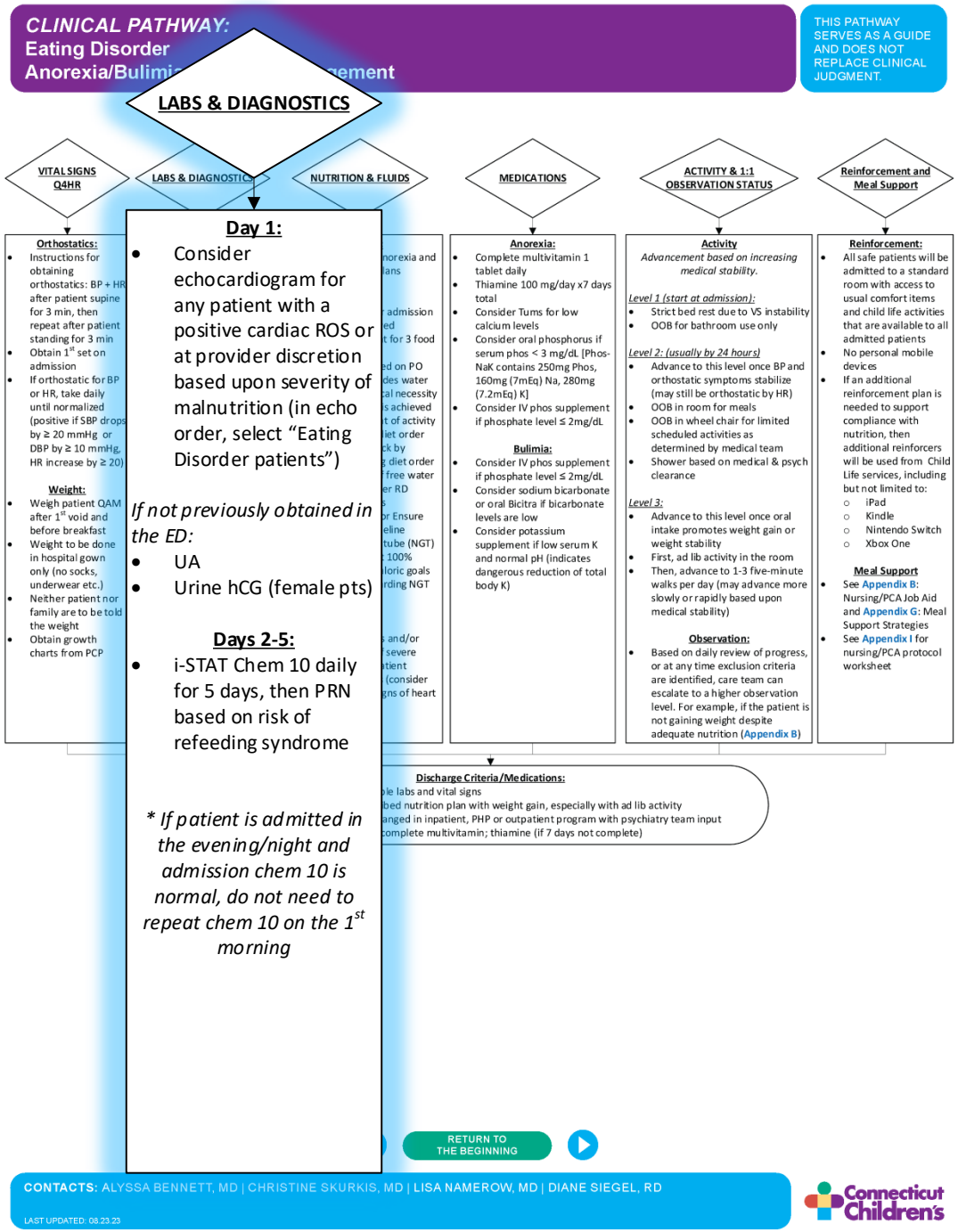
- Done in the morning and in hospital gown only
- Patient and family are NOT told the exact weight/BMI or the amount gained/lost
  - They can be told if the weight is up, down, or the same.

It is critical that weight, BMI, and calories of the diet are **not** shared with the patient and family.



Labs and Diagnostics:

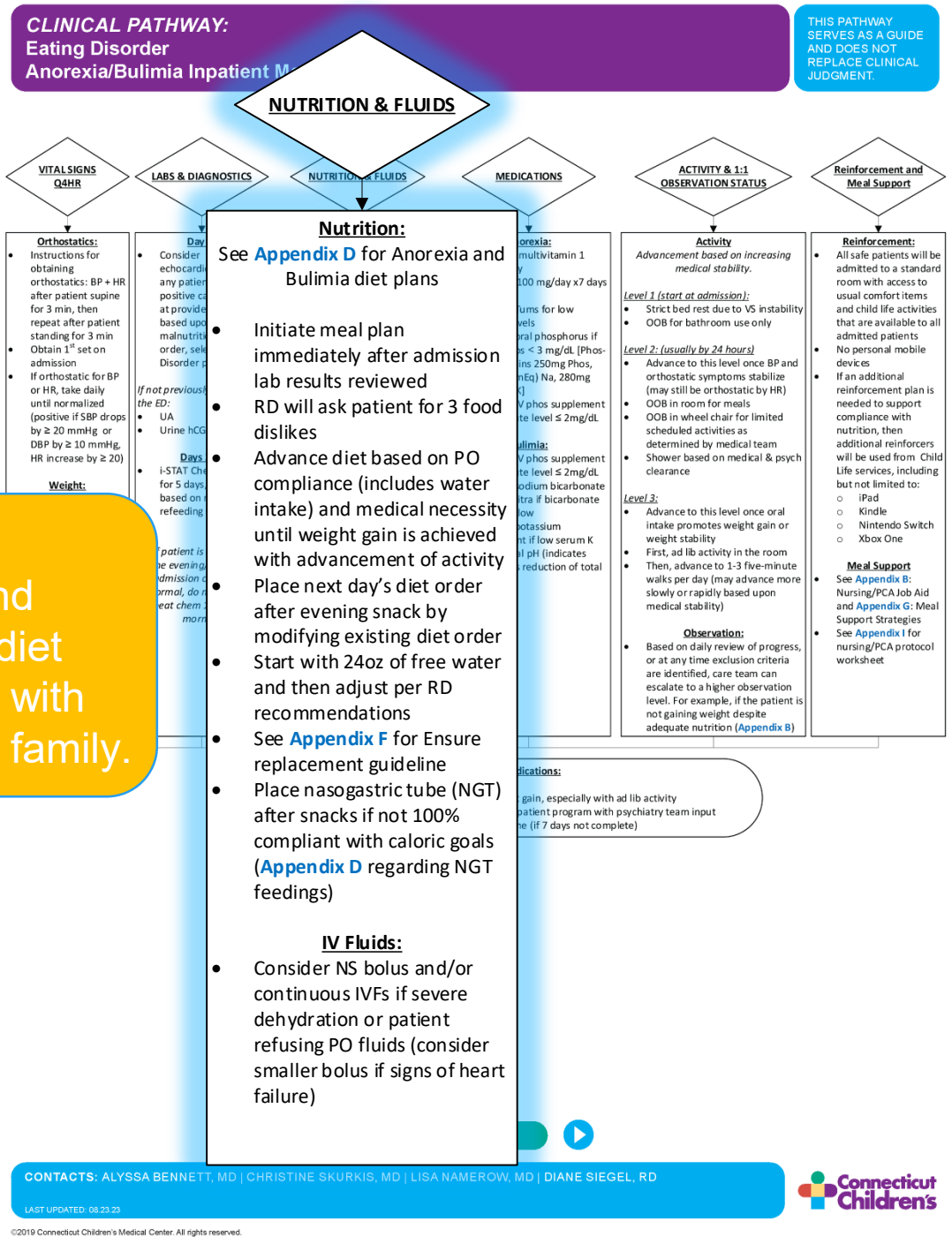
- Consider (not automatic) echocardiogram on any patient with a positive cardiac ROS or at provider discretion based upon severity of malnutrition
- Consider daily urinalysis if concerns of dehydration or water loading
- Daily chemistry panels to monitor for refeeding syndrome
  - Daily for at least 5 days then PRN



Nutrition and Fluids:

- Diet advancement usually occurs daily but should consider PO compliance and medical necessity
- If patient is medically stable and requires NG for large portion of nutrition, consider not advancing
- The next day's diet order is placed after evening snack and review of daily intake (modify diet order)
- Water is included in daily meal compliance
- IV fluids are rarely needed and be aware that dextrose can contribute to refeeding syndrome

It is critical that weight, BMI, and calories of the diet are **not** shared with the patient and family.



The goal of the meal plan for the first 4 days is to prevent further weight loss and to encourage the patient to eat by mouth. The patient may not gain weight initially.

Do not share calorie levels with patient.

- The meal plan consists of 3 meals and 3 snacks
- The Registered Dietician (RD) will choose the meal plan to meet the patient's nutritional needs
- Minimum of 24oz of water per 24-hour period
- No additional coffee, tea, diet soda, or juice
- If initial diet order is placed after 1800, each meal that first night will be 230 ml of Ensure + 1 packet of saltine crackers or food chosen by the parent or guardian. These can be initiated and provided in the ED or upon arrival to the floor. PCA will document everything consumed the EPIC flowsheet.
- The patient will be allowed to choose 3 food dislikes, and will be told that the dislikes will be started on the following day

- **Step One:** (1500 total calories per day)
  Begins the first meal after admission through a minimum of 1 calendar day
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Two:** (1800 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Three:** (2100 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Four:** (2400 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- Increase intake by 20% or 200-300 kcal/day to initial goal set by Clinical Nutrition.
  Step numbers continue to advance until reach adequate intake, as determined by weight stability or weight gain with advancing activity based on patient need

If a patient does not finish an entire meal (breakfast, lunch, dinner), he/she will have the opportunity to take in the missed calories at the next snack by drinking a liquid nutrition supplement (Refer to
Appendix F; consult with Diet Tech if needed). An NGT will be placed at the end of each snack time if the patient does not consume the goal calories for that snack and the prior meal. The remainder of the calories will be provided via the NGT. The NGT will then be removed when the feeding is completed. The patient will then be given a "fresh start" to be able to achieve 100% compliance with the next meal.

The decision to place an NGT in a patient < 11 years old will be determined by the multi-disciplinary team.

If a patient has needed an NGT more than twice, in consultation with psychiatry, consideration should be made to keep the NGT in place, particularly if there has been no progress in PO feeds after the NGT is pulled.

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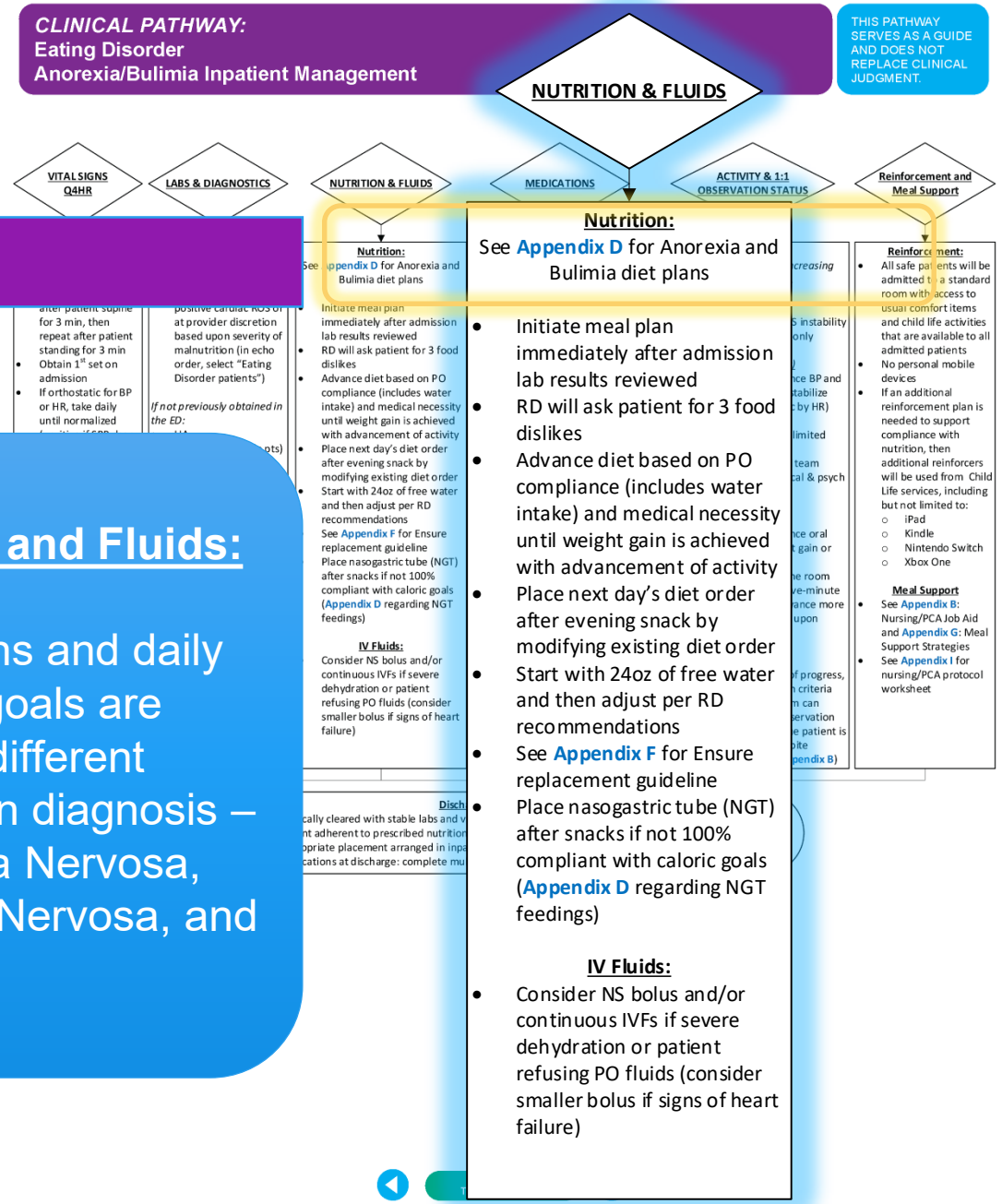
CLINICAL PATHWAY:
Eating Disorder
Anorexia/Bulimia Inpatient Management

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.



Nutrition and Fluids:

- Diet plans and daily calorie goals are slightly different based on diagnosis – Anorexia Nervosa, Bulimia Nervosa, and ARFID

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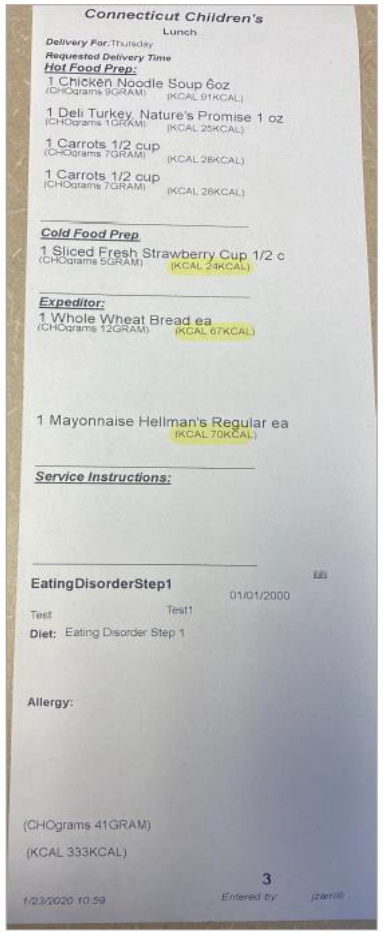
- Refer to CBORD meal ticket for total and individual food calories for each meal and snack
- For all food and beverage not consumed, calculate number of calories remaining on tray
- Give patient 1 ml Ensure (30 kcal/oz) per calorie remaining on tray
- Please save all meal and snack tickets in patient's thin chart

Example:

Patient ate all her chicken noodle soup, turkey, and carrots, but she only eats ½ her portion of strawberries and does not eat her bread or mayonnaise. How much Ensure will she need to replace the food she did not eat?

- Step 1: Use the ticket to calculate number of calories patient did not eat.
  - ½ strawberries = 12 kcal
  - Bread = 67 kcal
  - Mayonnaise = 70 kcal
  - Total = 12 + 67 + 70 = 149 kcal
- Step 2: Convert to ml Ensure (1 kcal = 1 ml Ensure)
  - Patient needs to drink 149 ml Ensure


Connecticut Children's
Lunch
Delivery For: Thursday
Requested Delivery Time
Hot Food Prep:
1 Chicken Noodle Soup 6oz (CHOgrams 9GRAM) (KCAL 91KCAL)
1 Deli Turkey, Nature's Promise 1 oz (CHOgrams 1GRAM) (KCAL 25KCAL)
1 Carrots 1/2 cup (CHOgrams 7GRAM) (KCAL 28KCAL)
1 Carrots 1/2 cup (CHOgrams 7GRAM) (KCAL 28KCAL)
Cold Food Prep
1 Sliced Fresh Strawberry Cup 1/2 c (CHOgrams 5GRAM) (KCAL 24KCAL)
Expeditor:
1 Whole Wheat Bread ea (CHOgrams 12GRAM) (KCAL 67KCAL)
1 Mayonnaise Hellman's Regular ea (KCAL 70KCAL)
Service Instructions:
EatingDisorderStep1 01/01/2000
Test Test1
Diet: Eating Disorder Step 1
Allergy:
(CHOgrams 41GRAM)
(KCAL 333KCAL)
3
1/23/2020 10:59 Entered by: jzarilli

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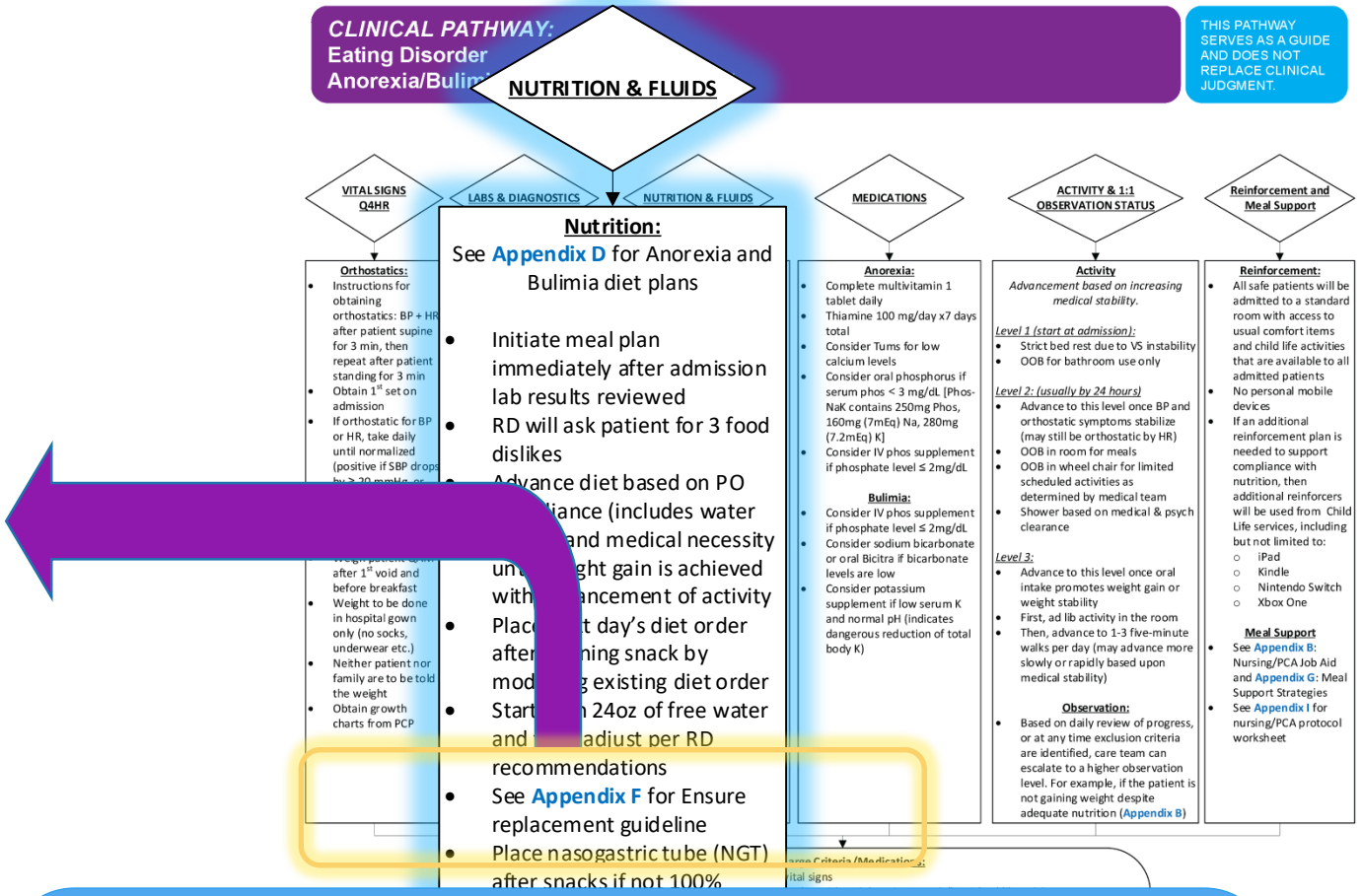

Meal Replacement:

- If patient does not finish an entire meal, missed calories should be offered at the next snack in the form of liquid nutrition supplement (offer up to 3 times per day)
  - See appendix F for how to calculate the amount of Ensure replacement based on food not eaten

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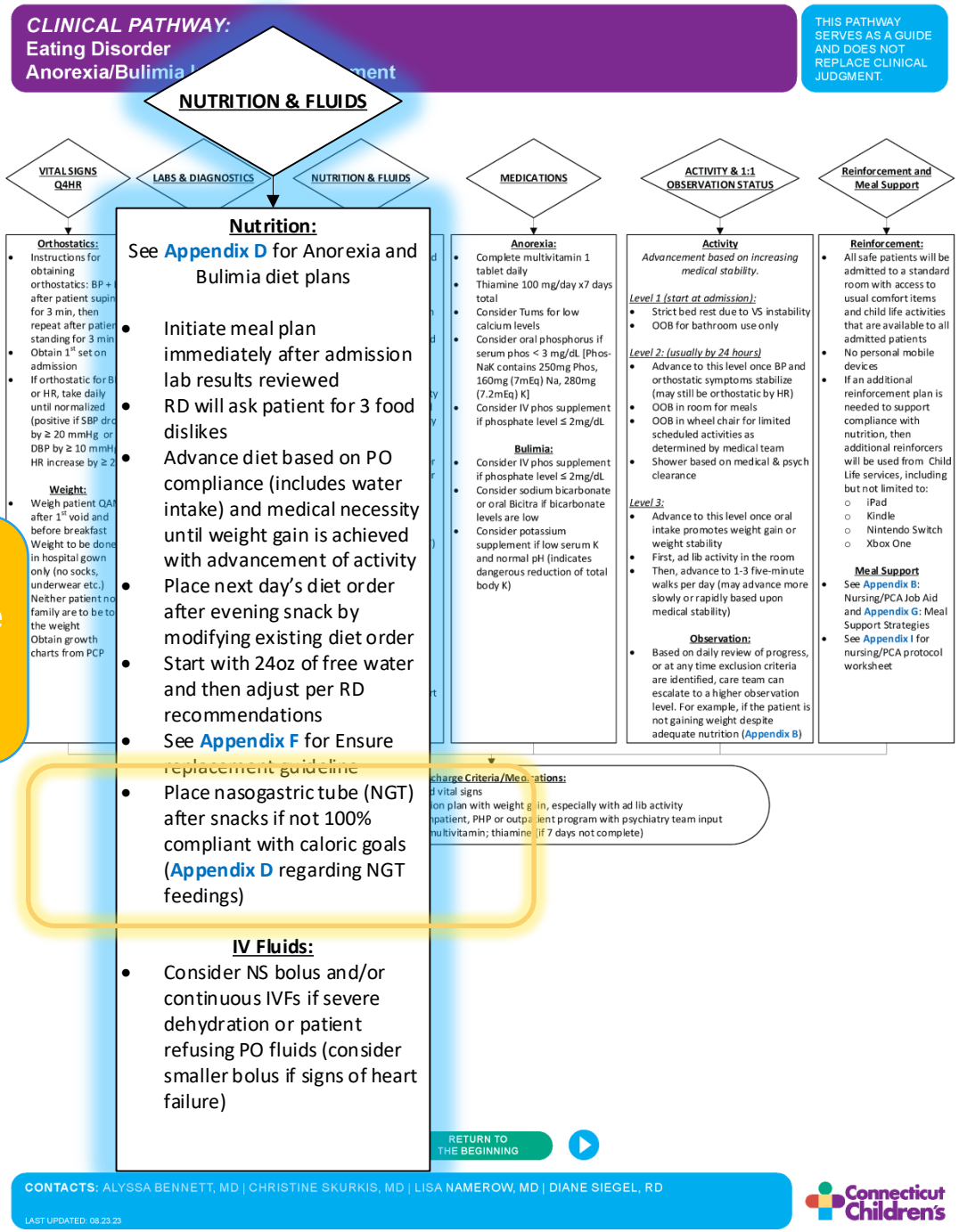
Nasogastric Tube (NGT) Placement:

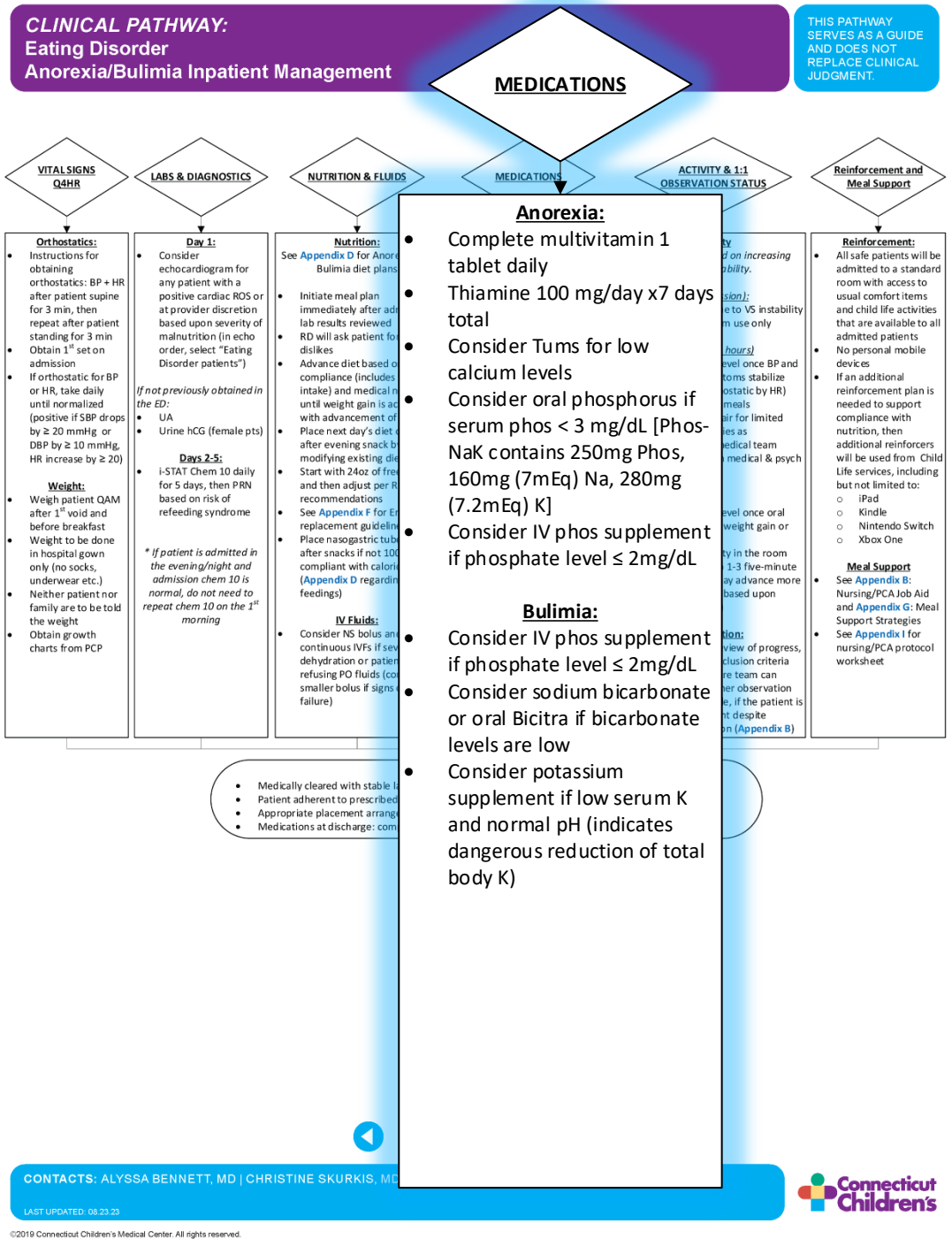
- If medically necessary, place NGT after snacks if not 100% compliant with caloric goals for the previous meal (assess 3 times per day)
- For patients <11 years, the decision to place an NGT should include discussion with the multidisciplinary team
  - Refer to appendix D

It is critical that calories of the diet are **not** shared with the patient and family.



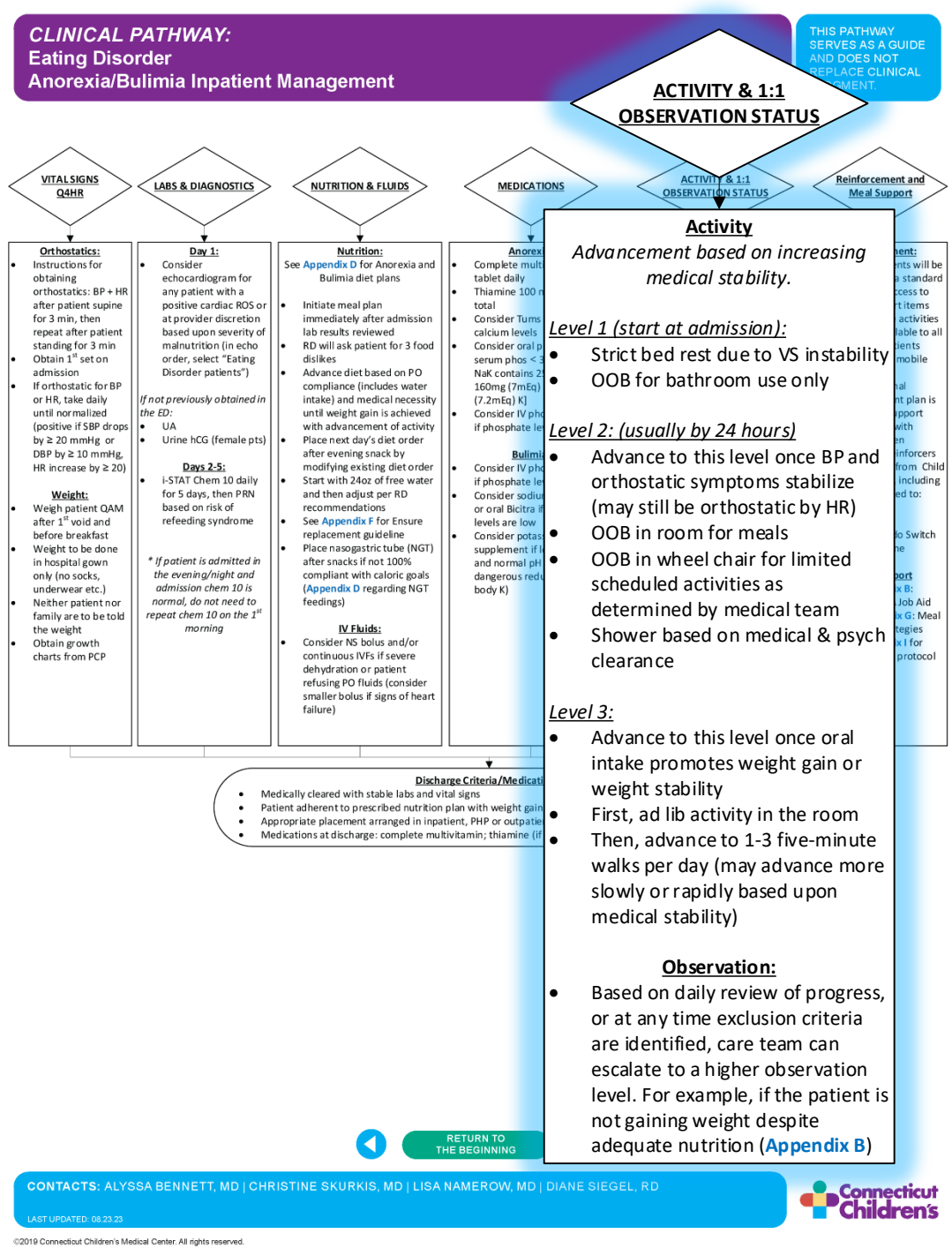
Medications:

- All patients with Anorexia Nervosa/Bulimia need:
  - Complete multivitamin
  - Thiamine
- May vary based on lab results and underlying nutritional deficiencies.



Activity Status:

- Initially all patients are on bedrest with continuous monitoring
- Activity level is advanced in a stepwise fashion
- Advancement is made based on medical stability
  - Of note, may advance once BP and orthostatics stabilize (still might be orthostatic by HR which can take much longer to resolve)



Strategies and Games that can help during meals

Get the patient's and family's input

- What strategies have worked in the past?
- Would you like to talk about something while you're eating?
- Would you like to listen to me while eating?
- Get to know the patient's interests

Distraction – Engage in conversation about topics unrelated to food

- Categories – pick a topic (animals, items found at the mall, places…) take turns coming out with items in chosen category beginning with the letters of the alphabet in order
- Going to the beach, on a picnic, or going shopping – Starting in alphabetical order take turns saying something that you would find or take with you. (A- ant, B-ball…)
- 20 questions – one person thinks of something (person, place, or object) the other person has to correctly identify and name it by asking "yes" or "no" questions. Then switch rolls (thinker becomes the question asker)
- Mad libs

For Young Children with ARFID

Be a food scientist

- What do you see? (shape, color, size)
- What does it feel like? (hard, soft, bumpy, smooth, fuzzy, wet, slippery, dry)
- What does it smell like? (sweet, sour, spicy, mild, strong)
- What does it taste like? (sweet, salty, tart, fruity, spicy)
- What does it sound like? (loud, quiet, crunchy, no sound)

Hokey Pokey: (you put the broccoli in, you take the broccoli out, you put the broccoli in and you move it all about)

Eat around the plate – use at least **3** foods (1. something always eaten, 2. something occasional eaten 3. something USED TO eat or something never eaten)

- First, use all preferred foods to teach protocol and reduce anxiety
- Use a divided plate or small bowls - have child place 2-3 preferred foods into each section
- Teach rules of even rotation (1 bite from each section of plate/bowl)
  Alternate difficult foods and easy foods - begin with reinforcing each bite of new food, progress to reinforcing following full sequence completion
  - Difficult food may first be an occasionally eaten food or a food with a slight change to taste, texture or brand
  - Gradually progress to a never eaten food
  - If unable to actually eat food, reward any attempts to move up food hierarchy (touch, kiss, lick bite)

***** You can play a game while following the above "eat around the plate" progression – such as candy land, chutes and ladders, trouble, UNO *****

- Assign a food to each color OR assign a food to each number
- Take turns playing the game, taking bites of the assigned foods

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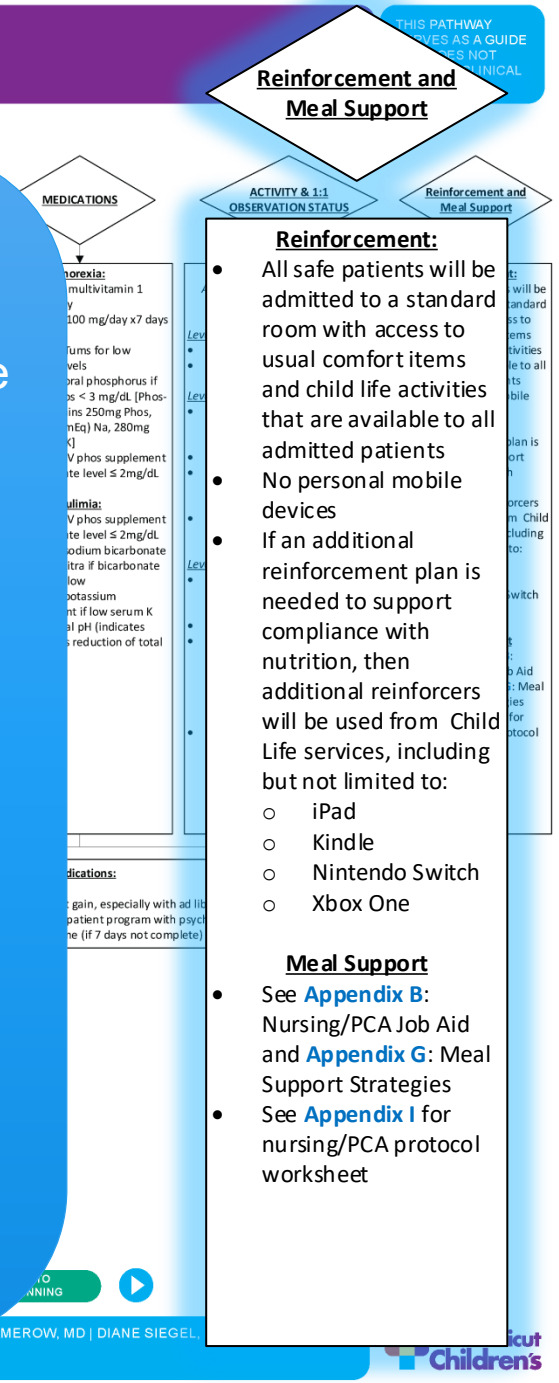

Reinforcement and Meal Support:

- Usual comfort items from home and standard child life activities are universally allowed.
- Personal mobile devices (such as cell phones) are never allowed. Laptops for school work may be allowed on a case-by-case basis.
- Meal Support strategies as outlined in Appendices B and G may be helpful to encourage nutritional compliance.
- Some children may benefit from additional tangible reinforcement items offered by Child Life.

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Discharge Criteria/Medications:

Discharge criteria and home medications are outlined

CLINICAL PATHWAY:
Eating Disorder
Anorexia/Bulimia Inpatient Management

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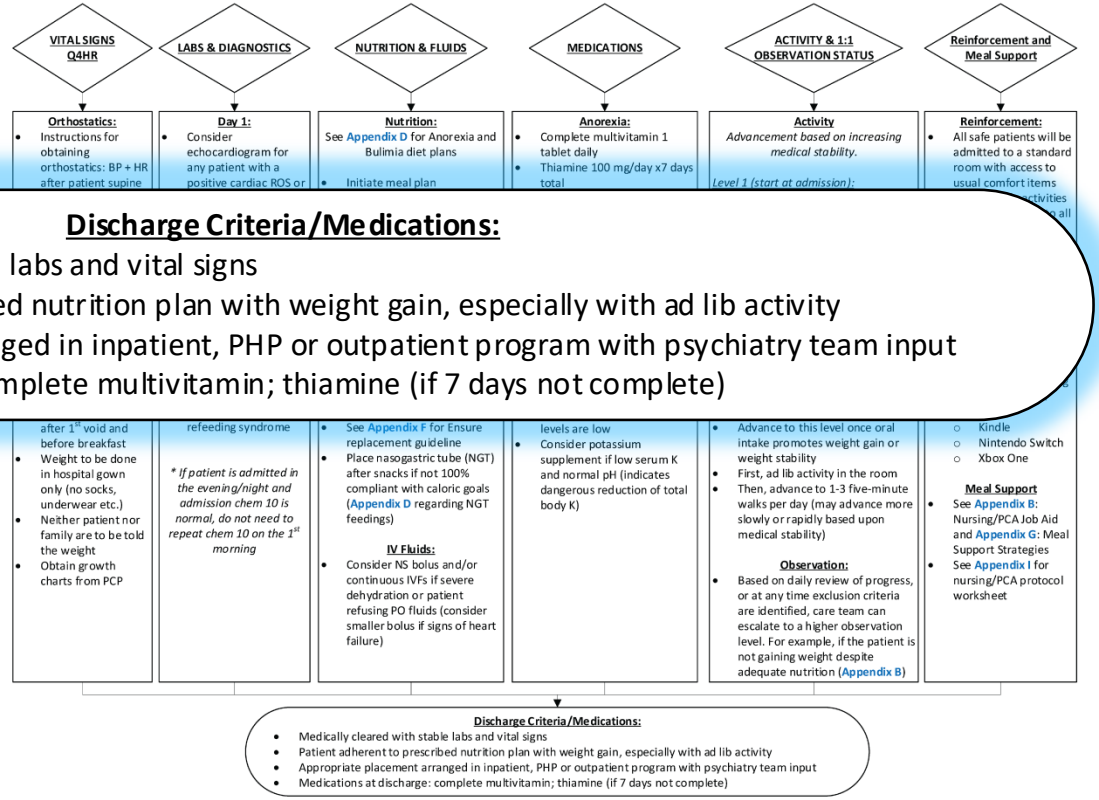

Discharge Criteria/Medications:

- Medically cleared with stable labs and vital signs
- Patient adherent to prescribed nutrition plan with weight gain, especially with ad lib activity
- Appropriate placement arranged in inpatient, PHP or outpatient program with psychiatry team input
- Medications at discharge: complete multivitamin; thiamine (if 7 days not complete)

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Page 3 of the pathway describes specific treatment goals for patients with ARFID

CLINICAL PATHWAY:
Eating Disorder
ARFID Inpatient Management

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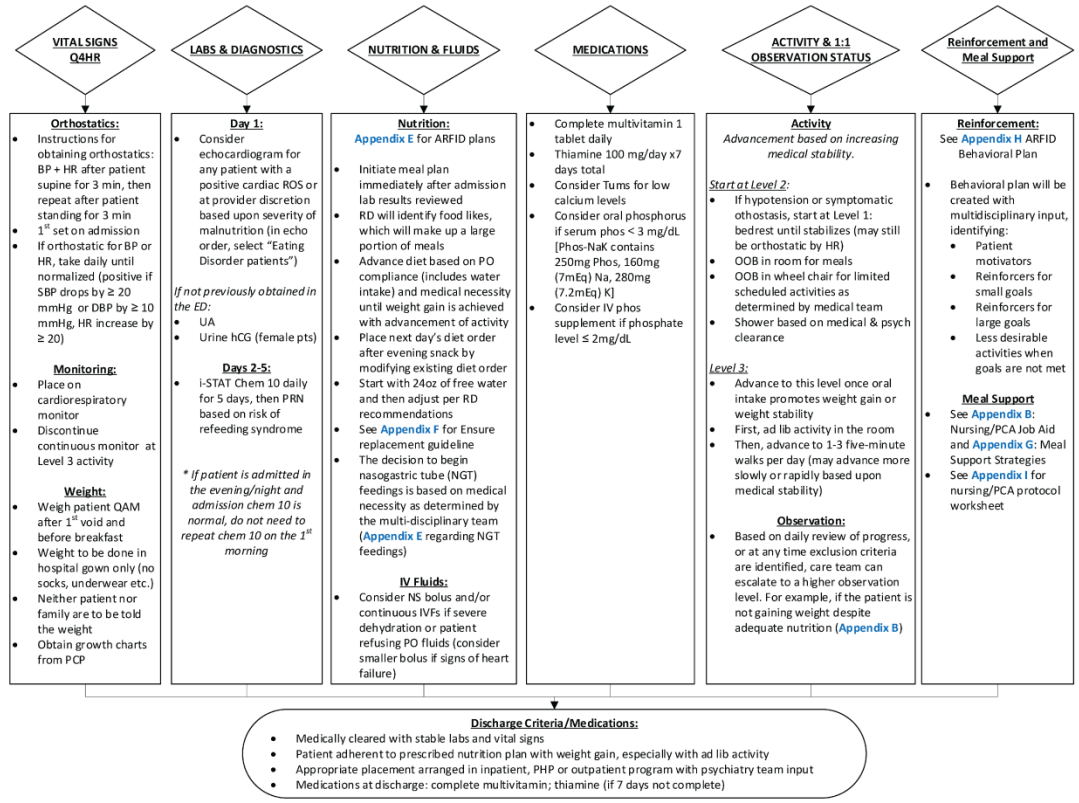

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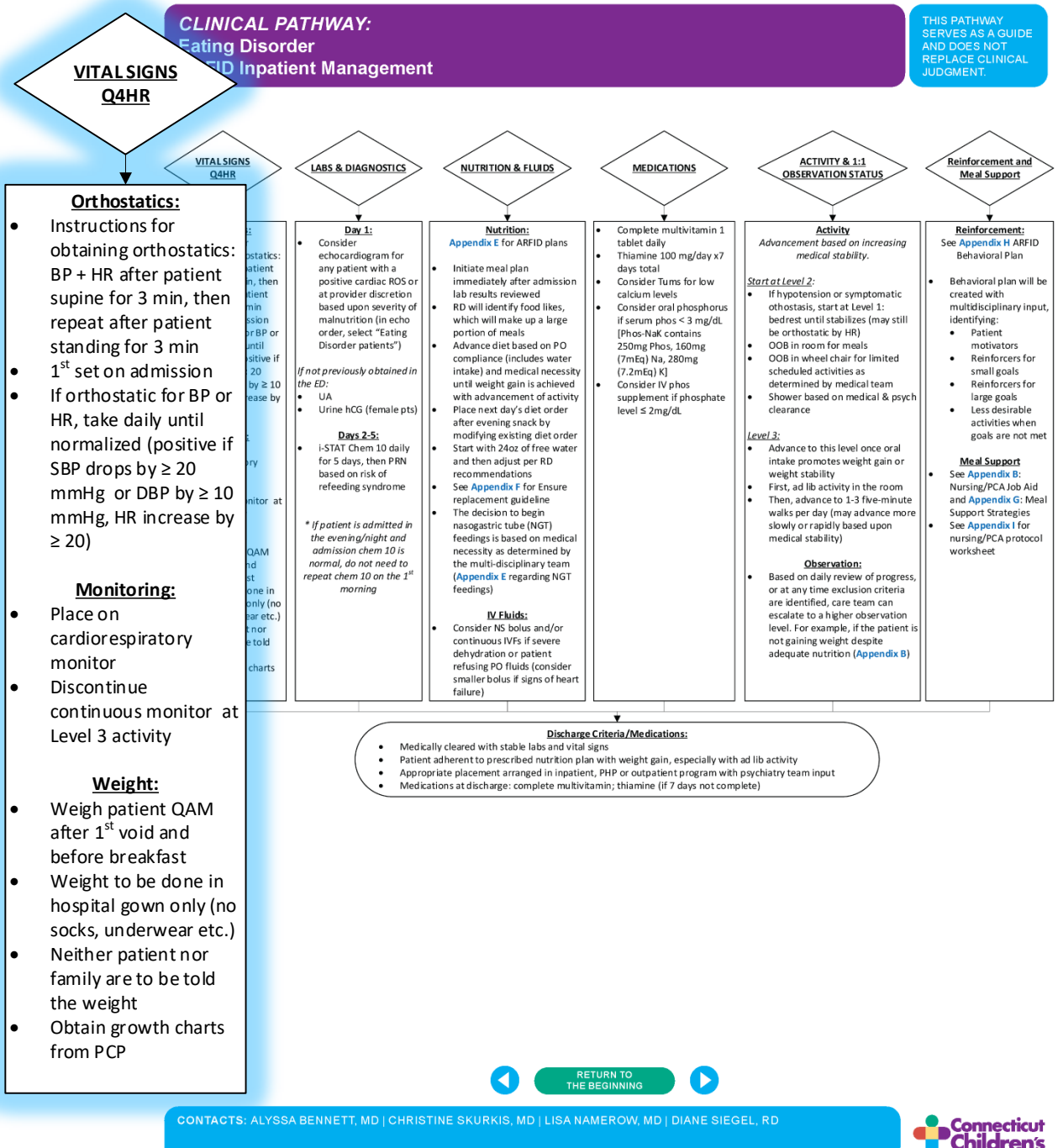
Daily weights and BP are performed according to the same standards as for patients with anorexia or bulimia

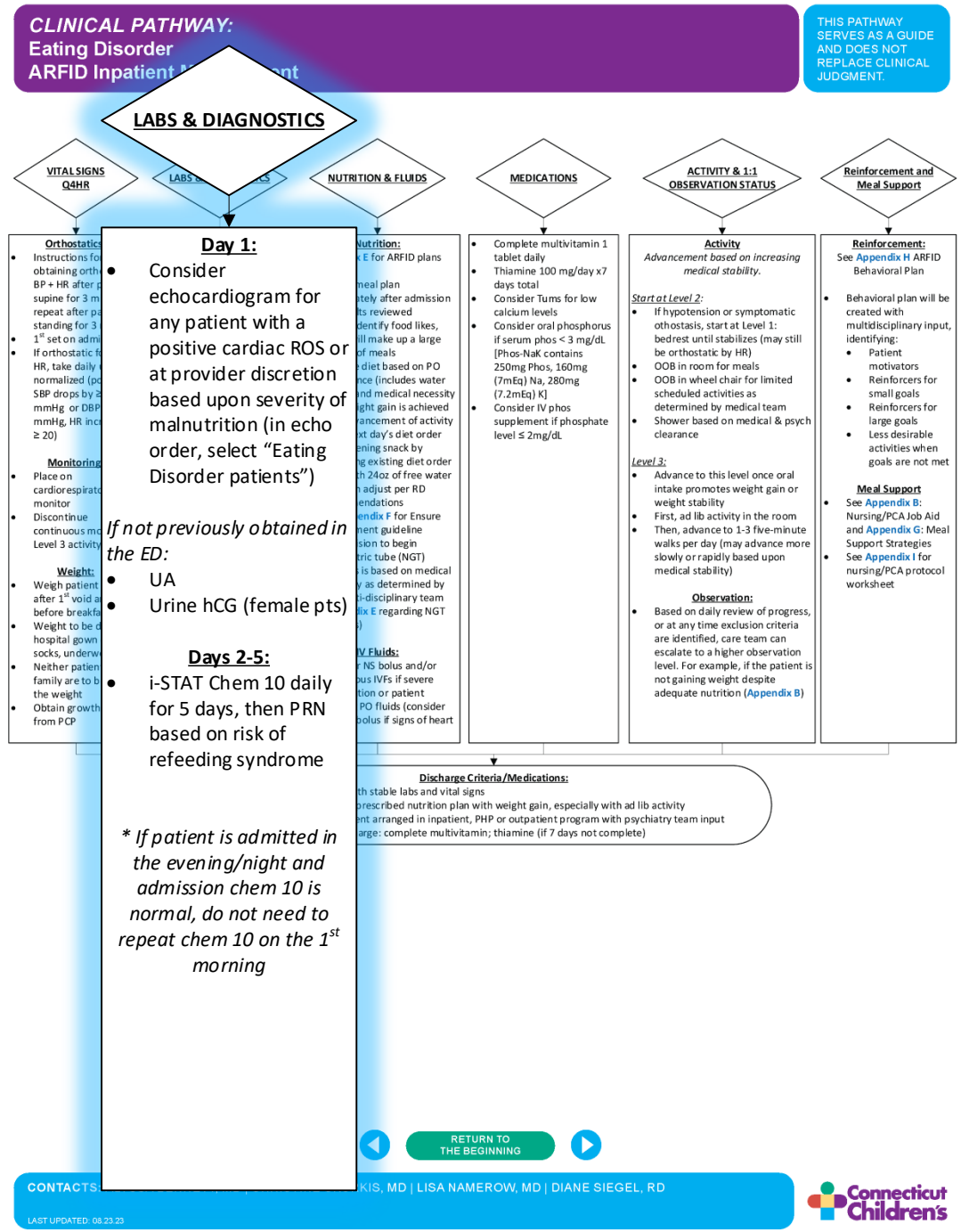
Patients with ARFID are also placed on a continuous cardiorespiratory monitor until reaching level 3 activity.

It is critical that weight, BMI, and calories of the diet are **not** shared with the patient and family.



Labs and Diagnostics:

- Same as for patients with anorexia or bulimia



CLINICAL PATHWAY:
Eating Disorder
Appendix E: Meal Plan for a Patient with Avoidant Restrictive Food Intake Disorder (ARFID)

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

The goal of the meal plan for the first day is to learn about the patient's food history, current and recent food likes, as well as reinforcers that will help engage the patient to eat

The goal of the meal plan for the next 4 days is to prevent further weight loss and to encourage patient to eat by mouth. The meals will include many likes and familiar foods. There will be less of a focus on nutritional balance.

Patients with ARFID will likely be on a behavioral plan using more frequent reinforcers for goals such as smelling, touching, tasting and/or eating small bites or a percentage of the meal.

- The meal plan consists of 3 meals + 3 snacks
- The Registered Dietician (RD) will choose the meal plan with a focus on likes and familiar foods
- Minimum of 24oz of liquid per 24-hour period.
- If initial diet order is placed after 1800, each meal that first night will be 230 ml of Ensure + 1 packet of saltine crackers or food chosen by the parent or guardian. These can be initiated and provided in ED or upon arrival to the floor. PCA will document everything consumed.
- A feeding team evaluation will occur on the first day

- **Step One:** (1500 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Two:** (1800 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Three:** (2100 total calories per day)
  Advance to next step based on severity of malnutrition and/or 100% PO completion

- **Step Four:**
  Increase intake by 20% or 200-300 kcal/day to a goal set by Clinical Nutrition.
  Step number continues to advance until reaching adequate intake, as determined by Clinical Nutrition.

If a patient does not finish an entire meal (breakfast, lunch, dinner), he/she will have the opportunity to take in the missed calories at the next snack by drinking a liquid nutrition supplement (Refer to
Appendix F; consult with Diet Tech if needed).

Patients with ARFID are more likely to require nasogastric tube (NGT) feedings. The decision to begin nasogastric tube (NGT) feedings is based on medical necessity as determined by the multi-disciplinary team. Once an NGT is placed, the medical team will determine if the tube should be removed or left in place.

The decision to place an NGT in a patient < 11 years old will be determined by the multi-disciplinary team.

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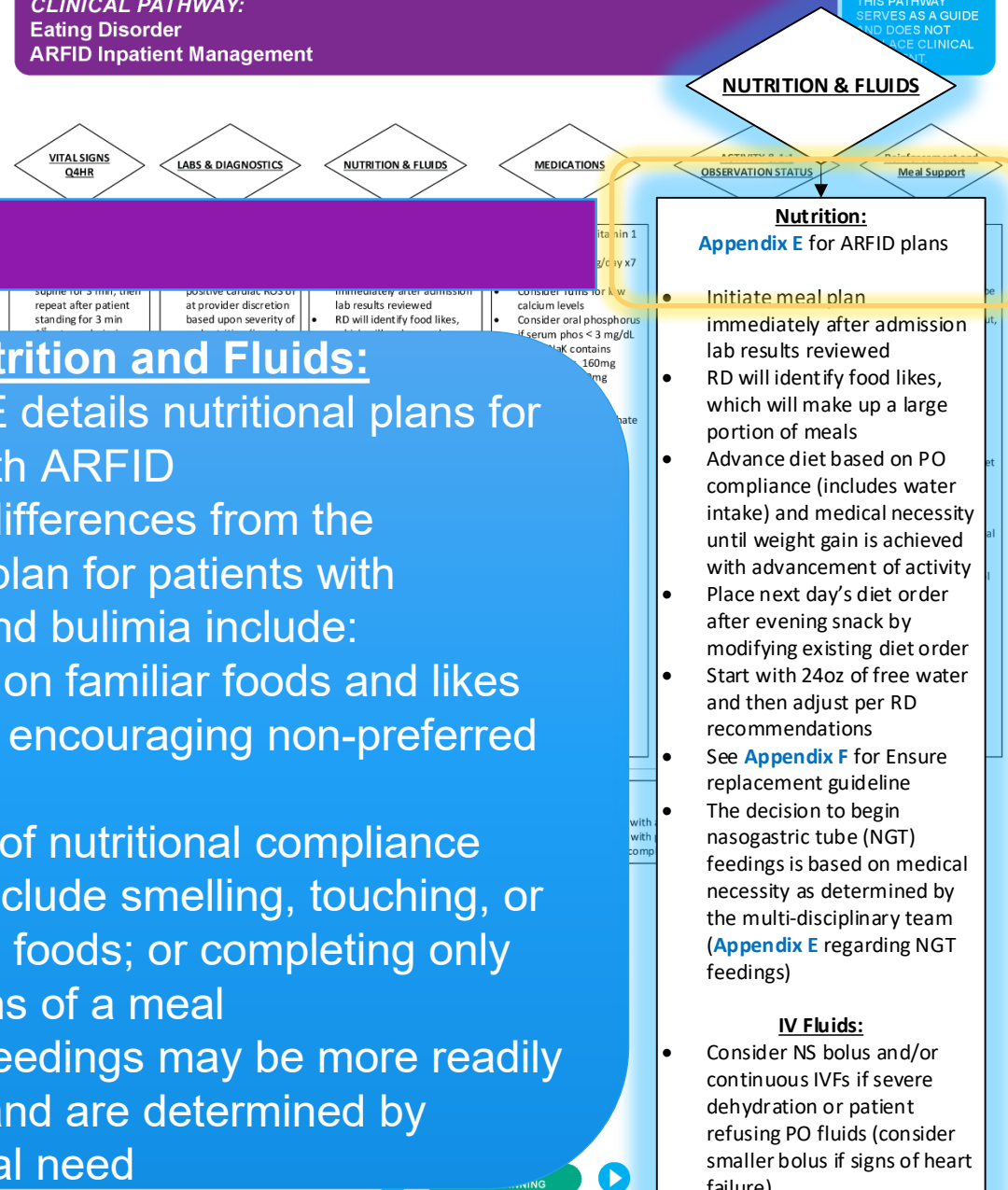
CLINICAL PATHWAY:
Eating Disorder
ARFID Inpatient Management

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.



Nutrition and Fluids:

- Appendix E details nutritional plans for patients with ARFID
- The main differences from the nutritional plan for patients with anorexia and bulimia include:
  - Focus on familiar foods and likes before encouraging non-preferred food
  - Goals of nutritional compliance may include smelling, touching, or tasting foods; or completing only portions of a meal
  - NGT feedings may be more readily used and are determined by medical need

Nutrition:
Appendix E for ARFID plans

- Initiate meal plan immediately after admission lab results reviewed
- RD will identify food likes, which will make up a large portion of meals
- Advance diet based on PO compliance (includes water intake) and medical necessity until weight gain is achieved with advancement of activity
- Place next day's diet order after evening snack by modifying existing diet order
- Start with 24oz of free water and then adjust per RD recommendations
- See Appendix F for Ensure replacement guideline
- The decision to begin nasogastric tube (NGT) feedings is based on medical necessity as determined by the multi-disciplinary team (Appendix E regarding NGT feedings)

IV Fluids:

- Consider NS bolus and/or continuous IVFs if severe dehydration or patient refusing PO fluids (consider smaller bolus if signs of heart failure)

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The goal of the meal plan for the first day is to learn about the patient's food history, current and recent food likes, as well as reinforcers that will help engage the patient to eat

The goal of the meal plan for the next 4 days is to prevent further weight loss and to encourage patient to eat by mouth. The meals will include many likes and familiar foods. There will be less of a focus on nutritional balance.

Patients with ARFID will likely be on a behavioral plan using more frequent reinforcers for goals such as smelling, touching, tasting and/or eating small bites or a percentage of the meal.

- The meal plan consists of 3 meals + 3 snacks
- The Registered Dietician (RD) will choose the meal plan with a focus on likes and familiar foods
- Minimum of 24oz of liquid per 24-hour period.
- If initial diet order is placed after 1800, each meal that first night will be 230 ml of Ensure + 1 packet of saltine crackers or food chosen by the parent or guardian. These can be initiated and provided in ED or upon arrival to the floor. PCA will document everything consumed.
- A feeding team evaluation will occur on the first day

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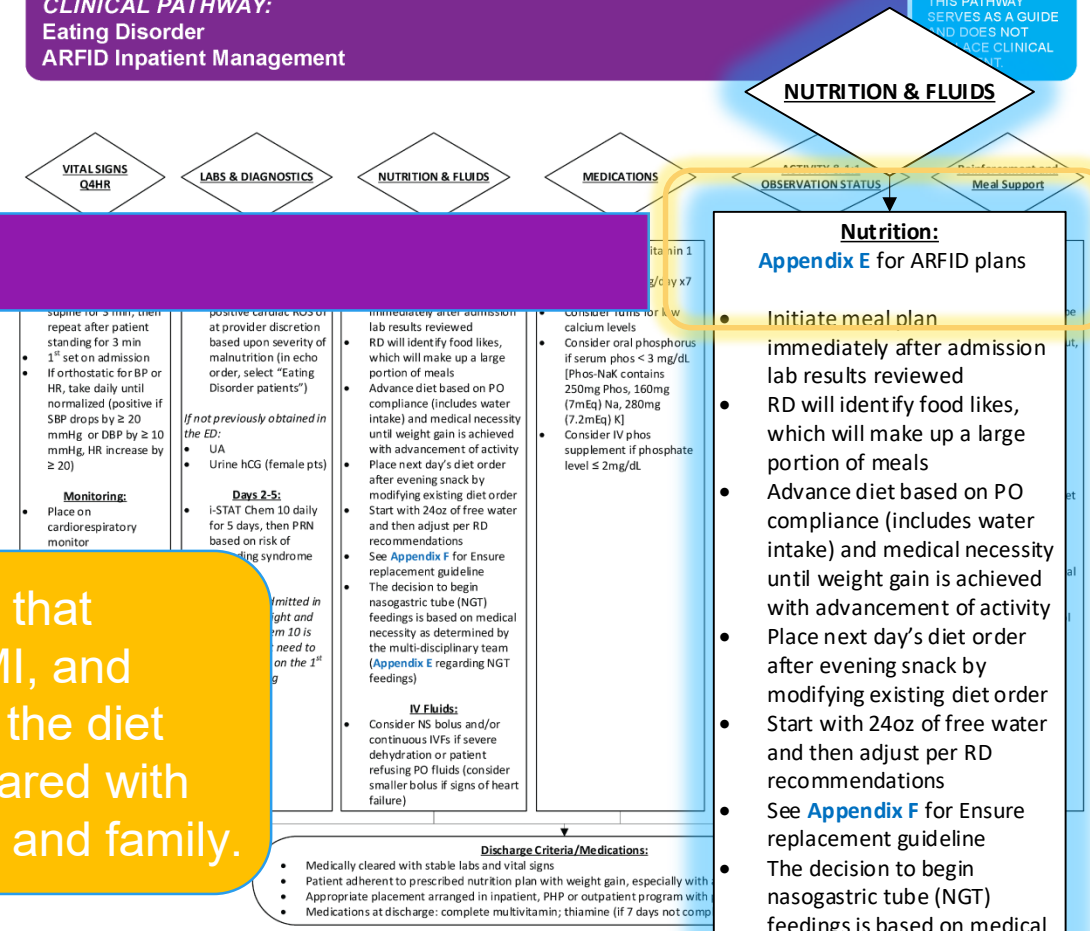

It is critical that weight, BMI, and calories of the diet are **not** shared with the patient and family.

Nutrition:
Appendix E for ARFID plans

- Initiate meal plan immediately after admission lab results reviewed
- RD will identify food likes, which will make up a large portion of meals
- Advance diet based on PO compliance (includes water intake) and medical necessity until weight gain is achieved with advancement of activity
- Place next day's diet order after evening snack by modifying existing diet order
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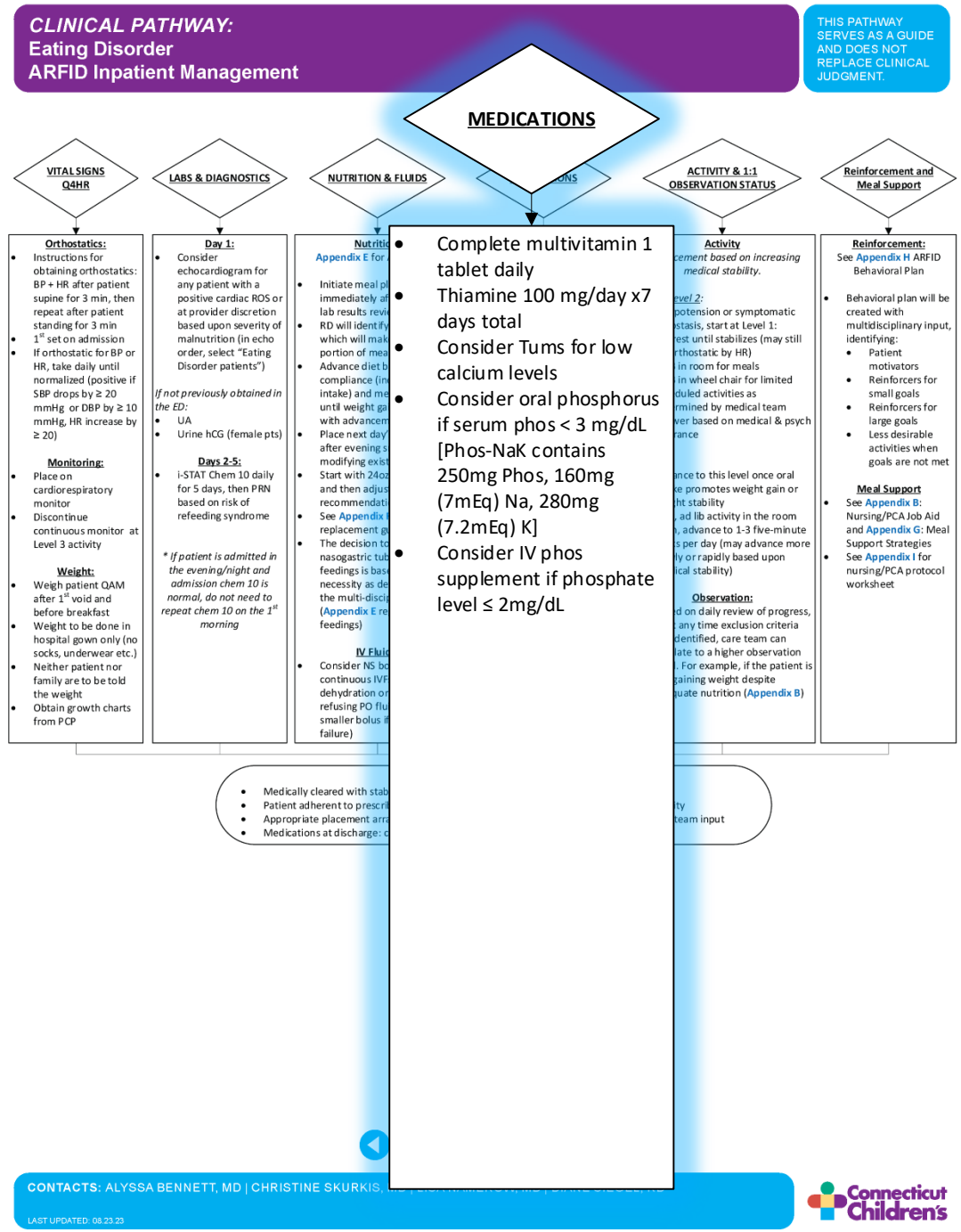
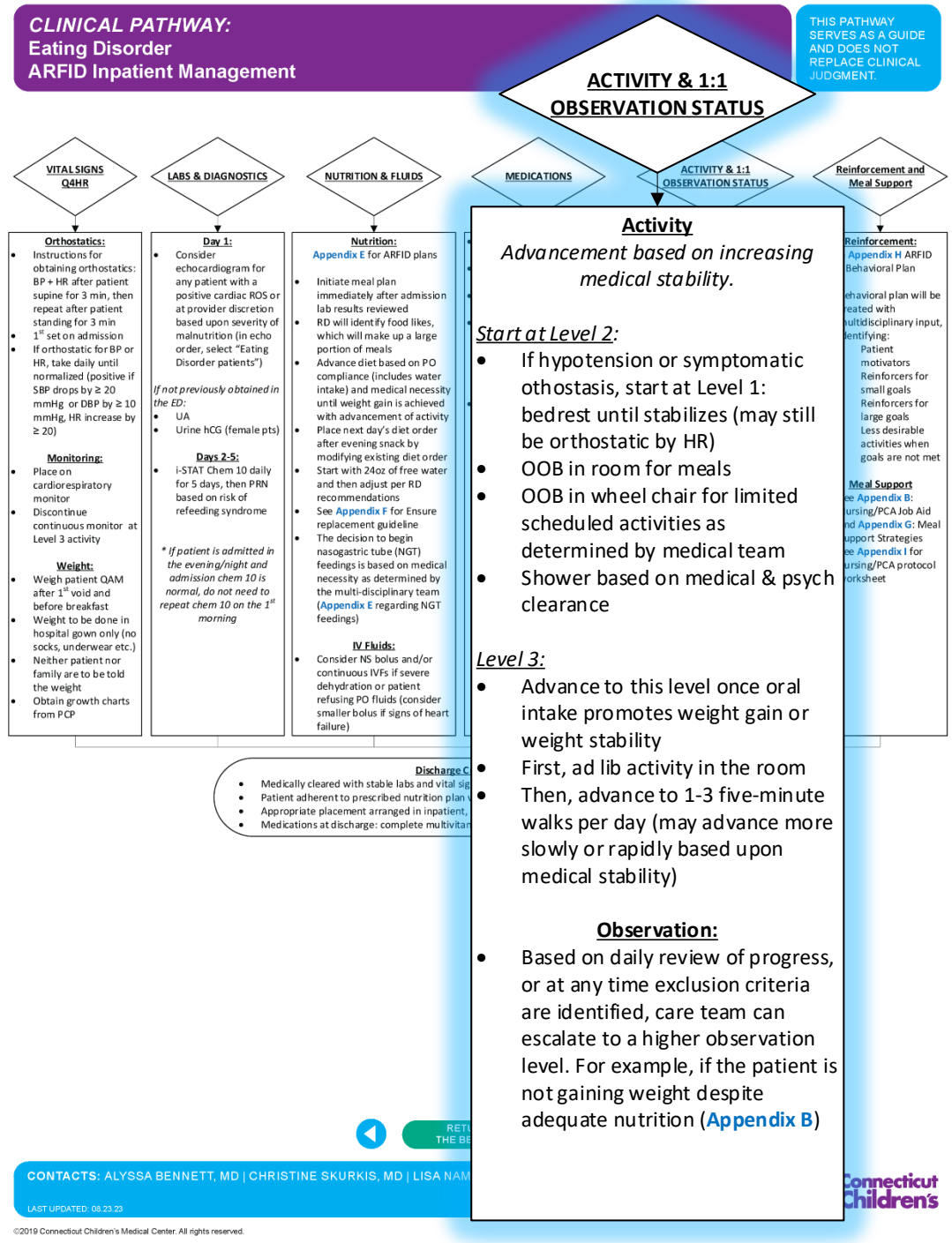
Medications:

- All patients with ARFID also need:
  - Complete multivitamin
  - Thiamine
- May also vary based on lab results and underlying nutritional deficiencies.



Activity Status:

- Initially all patients are on Level 2 activity (as opposed to level one activity for those with anorexia or bulimia) unless medically unstable.
- Activity level is advanced in a stepwise fashion based on medical stability
  - Of note, may advance once BP and orthostatics stabilize (still might be orthostatic by HR which can take much longer to resolve)



Patient Name: _____ Date: _____

Reinforcers:

Tablet | Coloring pages | Arts/Crafts | Games

TV/Movies | Wheelchair rides | Visits with friends | Visits with family

Other:

Small Goals:

Touch a new food | Take ____ bite(s) of a new food | Eat _____% of a new food

Taste a new food | Eat _____% of a familiar food | Drink _____ medicine cups of a drink

Other:

Reinforcer for small goal (ex. 15 minutes of tablet)

_____

Large Goals:

Eat _____% of the meal | Eat 100% of a familiar food | Drink a cup of a drink

Other:

Reinforcer for Large Goal (ex. 2 hours arts/crafts with sister)

_____

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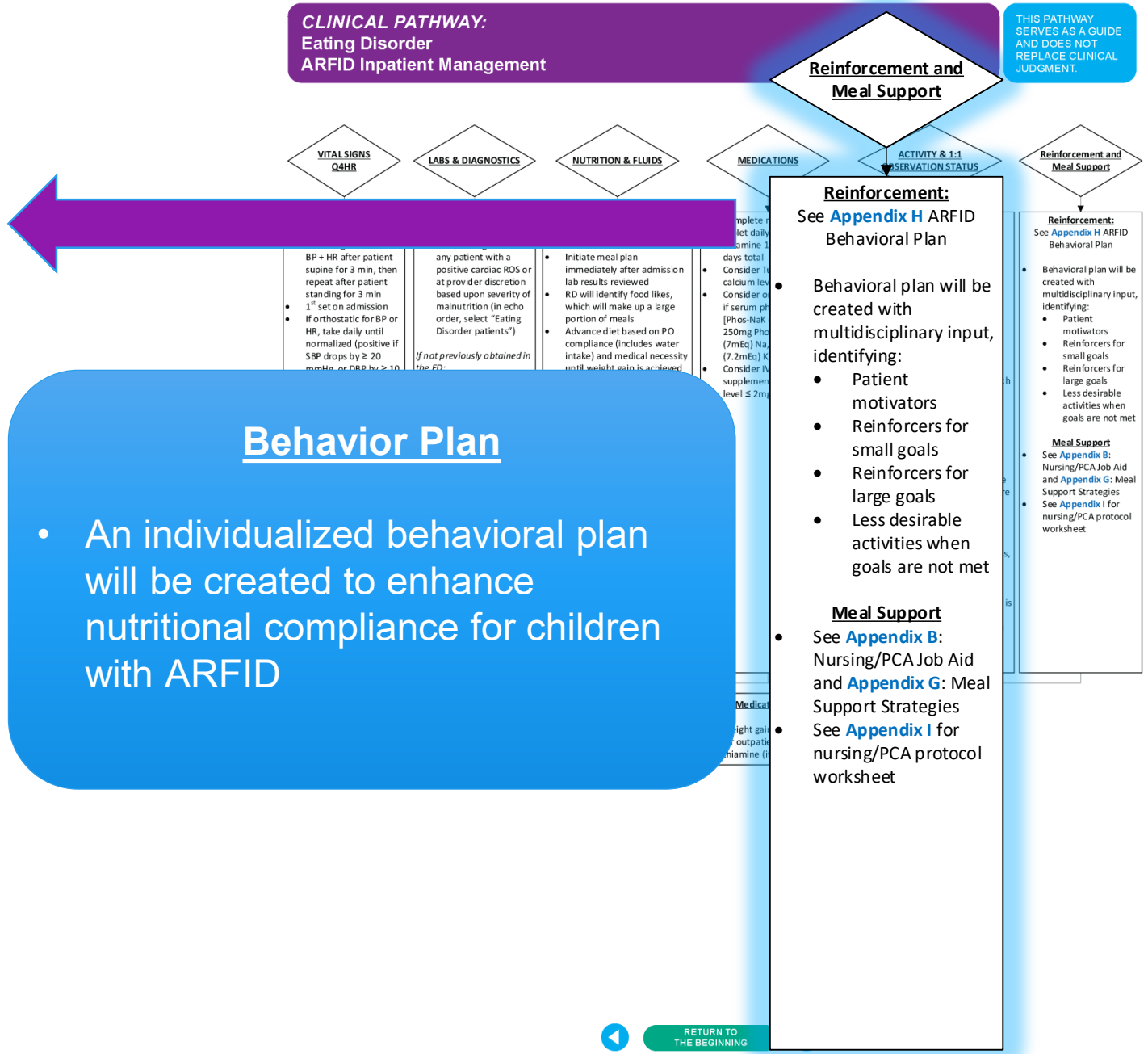

Behavior Plan

- An individualized behavioral plan will be created to enhance nutritional compliance for children with ARFID

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Strategies and Games that can help during meals

Get the patient's and family's input

- What strategies have worked in the past?
- Would you like to talk about something while you're eating?
- Would you like to listen to me while eating?
- Get to know the patient's interests

Distraction – Engage in conversation about topics unrelated to food

- Categories – pick a topic (animals, items found at the mall, places…) take turns coming out with items in chosen category beginning with the letters of the alphabet in order
- Going to the beach, on a picnic, or going shopping – Starting in alphabetical order take turns saying something that you would find or take with you. (A- ant, B-ball…)
- 20 questions – one person thinks of something (person, place, or object) the other person has to correctly identify and name it by asking "yes" or "no" questions. Then switch rolls (thinker becomes the question asker)
- Mad libs

For Young Children with ARFID

Be a food scientist

- What do you see? (shape, color, size)
- What does it feel like? (hard, soft, bumpy, smooth, fuzzy, wet, slippery, dry)
- What does it smell like? (sweet, sour, spicy, mild, strong)
- What does it taste like? (sweet, salty, tart, fruity, spicy)
- What does it sound like? (loud, quiet, crunchy, no sound)

Hokey Pokey: (you put the broccoli in, you take the broccoli out, you put the broccoli in and you move it all about)

Eat around the plate – use at least 3 foods (1. something always eaten, 2. something occasional eaten 3. something USED TO eat or something never eaten)

- First, use all preferred foods to teach protocol and reduce anxiety
- Use a divided plate or small bowls - have child place 2-3 preferred foods into each section
- Teach rules of even rotation (1 bite from each section of plate/bowl)
  Alternate difficult foods and easy foods - begin with reinforcing each bite of new food, progress to reinforcing following full sequence completion
  - Difficult food may first be an occasionally eaten food or a food with a slight change to taste, texture or brand
  - Gradually progress to a never eaten food
  - If unable to actually eat food, reward any attempts to move up food hierarchy (touch, kiss, lick bite)

***** You can play a game while following the above "eat around the plate" progression – such as candy land, chutes and ladders, trouble, UNO *****

- Assign a food to each color OR assign a food to each number
- Take turns playing the game, taking bites of the assigned foods

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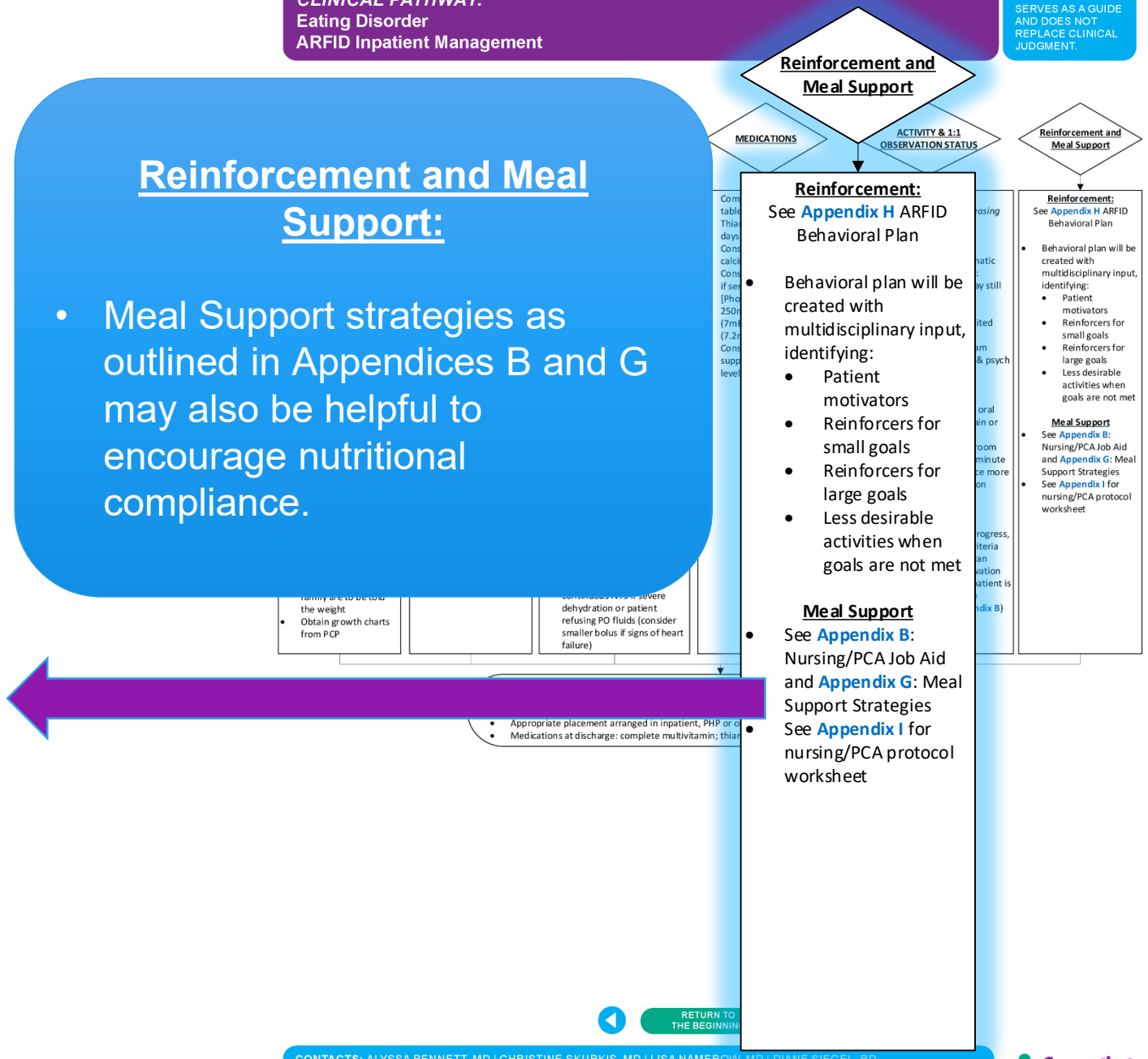
Reinforcement and Meal Support:

- Meal Support strategies as outlined in Appendices B and G may also be helpful to encourage nutritional compliance.



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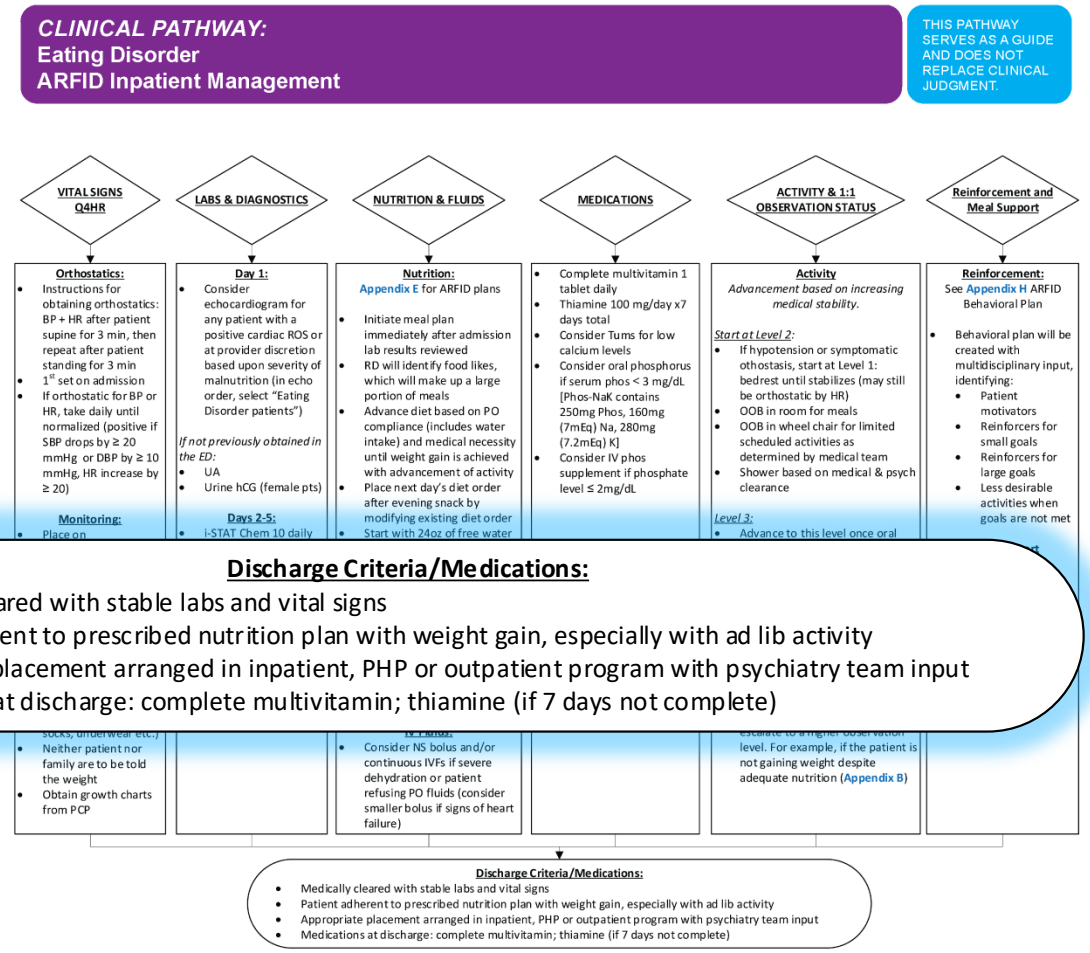
Discharge Criteria/Medications

- Discharge criteria and medications for ARFID are the same as Anorexia/Bulimia



Quality Metrics

- % Patients with pathway order set (ARFID/NON-ARFID)
- AVG time (minutes) from hospital admission to pathway order set (ARFID/NON-ARFID)
- % Patients who require NG placement (ARFID/NON-ARFID)
- % Patients with 1 NG tube placement (ARFID/NON-ARFID)
- % Patients with 2 NG tube placements (ARFID/NON-ARFID)
- % Patients with > 2 NG tube placements (ARFID/NON-ARFID)
- % Patients with Hypophosphatemia who receive phosphorus supplement (ARFID/NON-ARFID)
- AVG time (days) from hospital admission to Order Activity 3 (ARFID/NON-ARFID)
- # Patients readmitted (ARFID/NON-ARFID)
- ALOS (Days) (ARFID/NON-ARFID)

Pathway Contacts

- Christine Skurkis, MD
  - Pediatric Hospital Medicine
- Lisa Namerow, MD
  - Pediatric Psychiatry
- Alyssa Bennett, MD
  - Adolescent Medicine
- Diane Siegel, RD
  - Department of Clinical Nutrition

References

- Golden NH, Katzman DK, Rome ES, Gaete V, Nagata JM, Ornestein RM, Garber AK, Starr T, Kohn M, Sawyer SM. Position Paper from The Society for Adolescent Health and Medicine. Medical Management of Restrictive Eating Disorders in Adolescents and Young Adults. Journal of Adolescent Health. 2022 71:648-654
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Thank You!

About Connecticut Children's Pathways Program

Clinical pathways guide the management of patients to optimize consistent use of evidence-based practice. Clinical pathways have been shown to improve guideline adherence and quality outcomes, while decreasing length of stay and cost. Here at Connecticut Children's, our Clinical Pathways Program aims to deliver evidence-based, high value care to the greatest number of children in a diversity of patient settings. These pathways serve as a guide for providers and do not replace clinical judgment.