



# Clinical Safety & Effectiveness Cohort # 16

## Impacting Childhood Obesity



# The Team

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# Project Milestones

- Team Created Jan 2015
- AIM statement created 3/6/2015
- Team Meetings 1/7, 2/4, 3/4, 4/1 2015
- Background Data 3/6/2015
- Brainstorm Sessions 2/4-3/4 2015
- Workflow and Fishbone Analyses 2/9/2015
- Interventions Implemented 3/23-5/1/2015
- Data Analysis 5/14/2015
- CS&E Presentation 6/5/2015

The Target Population :  
Overweight children BMI 85%-95%  
Obese children  
BMI >95%

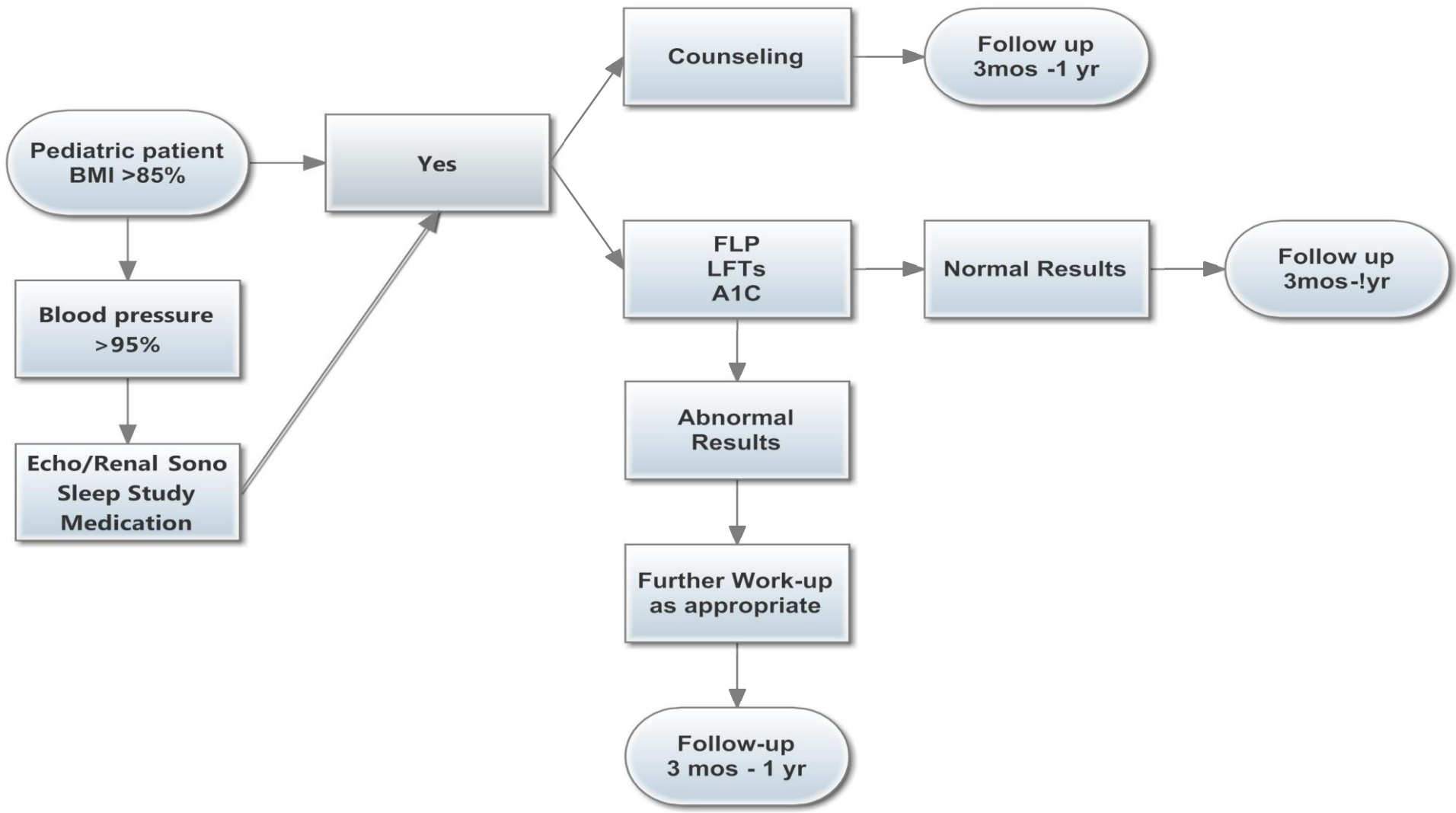
12.5 million children are obese

During audit periods 20%-30%  
of our patient population in  
well child clinic had a BMI  
>85%

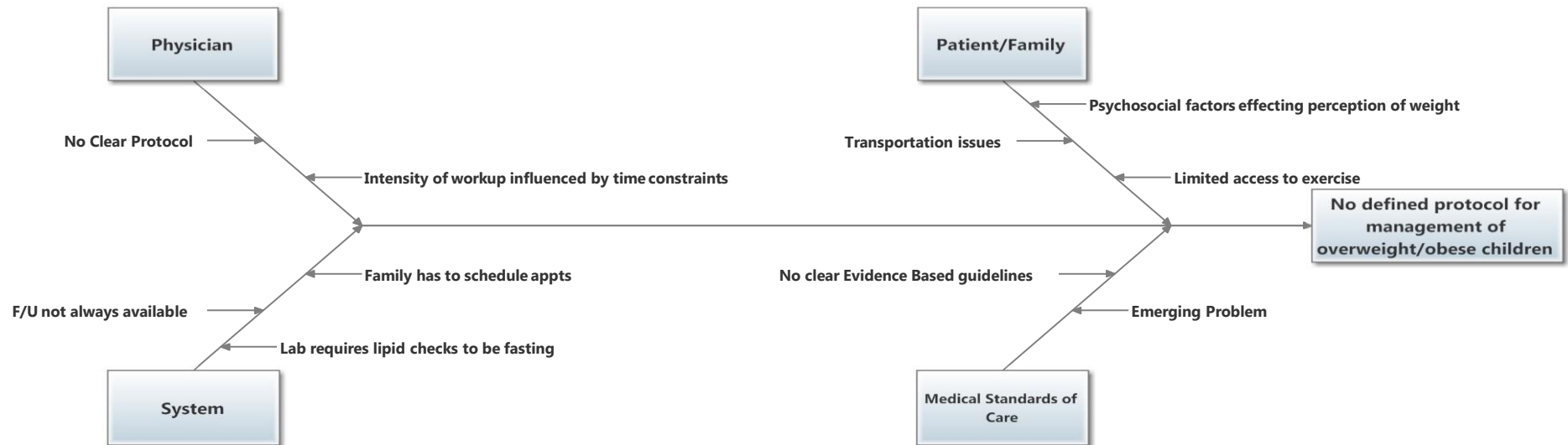
# Background

- Inconsistent care to overweight children in the UTHSCSA Family Health Center
- Inconsistent follow up and accessing resources
- Multiple attendings and residents rotating through well child clinic
- Time constraints on many days
- Cultural barriers due to a multicultural clinic
- Communication barriers due to literacy, non-English speaking, educational levels and extensive psychosocial confounding factors

# Perceived Process Flow in Ideal Conditions

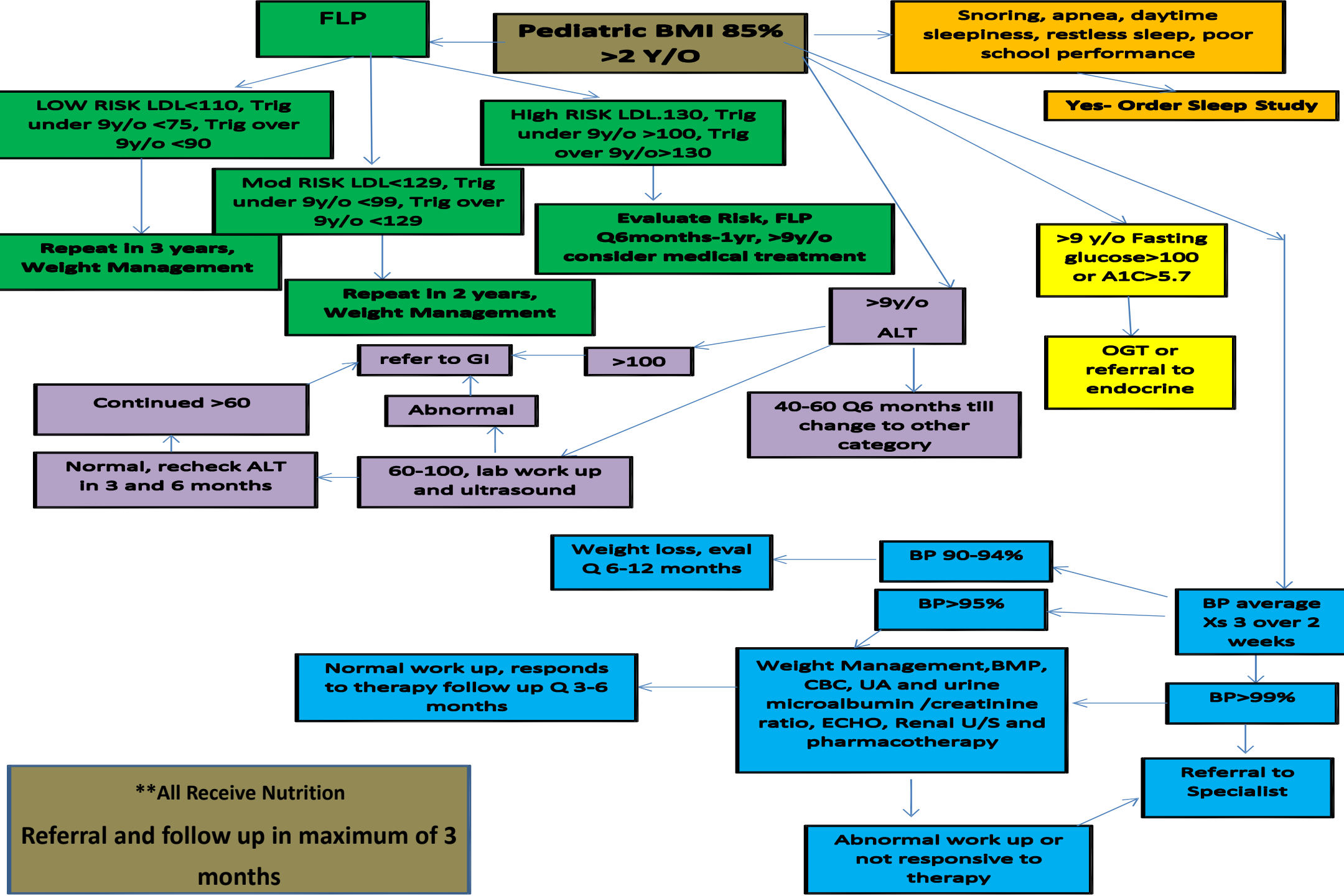


# Fishbone Diagram of Factors Influencing Care of Children with a BMI>85% in the UTHSCSA Family Health Center





A collaboration of 25 US pediatric obesity centers, used a combination of the best available evidence and collective clinical experience to develop consensus statements for pediatric obesity-related comorbidities in 2014.



**FLP**

**Pediatric BMI 85% >2 Y/O**

**Snoring, apnea, daytime sleepiness, restless sleep, poor school performance**

**LOW RISK LDL<110, Trig under 9y/o <75, Trig over 9y/o <90**

**High RISK LDL.130, Trig under 9y/o >100, Trig over 9y/o>130**

**Yes- Order Sleep Study**

**Mod RISK LDL<129, Trig under 9y/o <99, Trig over 9y/o <129**

**Evaluate Risk, FLP Q6months-1yr, >9y/o consider medical treatment**

**Repeat In 3 years, Weight Management**

**Repeat In 2 years, Weight Management**

**>9 y/o Fasting glucose>100 or A1C>5.7**

**OGT or referral to endocrine**

**>9y/o ALT**

**>100**

**40-60 Q6 months till change to other category**

**Continued >60**

**Abnormal**

**Normal, recheck ALT in 3 and 6 months**

**60-100, lab work up and ultrasound**

**Weight loss, eval Q 6-12 months**

**BP 90-94%**

**BP >95%**

**BP average Xs 3 over 2 weeks**

**Normal work up, responds to therapy follow up Q 3-6 months**

**Weight Management, BMP, CBC, UA and urine microalbumin /creatinine ratio, ECHO, Renal U/S and pharmacotherapy**

**BP >99%**

**Referral to Specialist**

**Abnormal work up or not responsive to therapy**

**\*\*All Receive Nutrition Referral and follow up in maximum of 3 months**

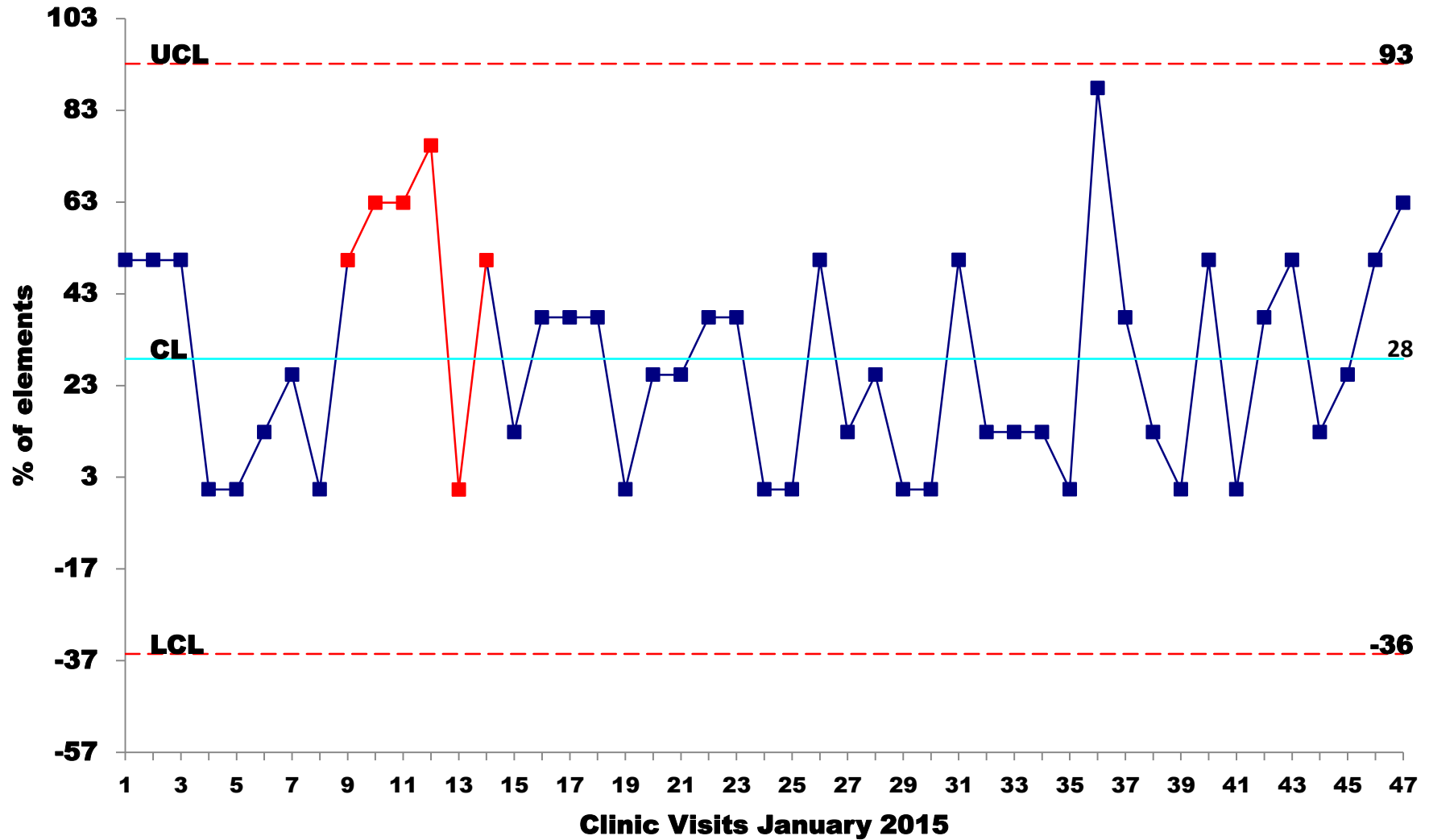
# Protocol Markers for Data Assessment

- BP assessment if >95%
- Lipid assessment ordered and completed if indicated
- Diabetes screening ordered and completed if indicated
- Fatty liver assessment ordered and completed if indicated
- Counselling ordered
- Counselling completed
- Follow up scheduled
- If indicated was a sleep study completed

# FHC Protocol for Overweight/Obese Child Management

## % of elements documented

### Pre Intervention



# **PLAN: Intervention**

Educate faculty and residents on protocol

Implement in all Well Child clinic sessions

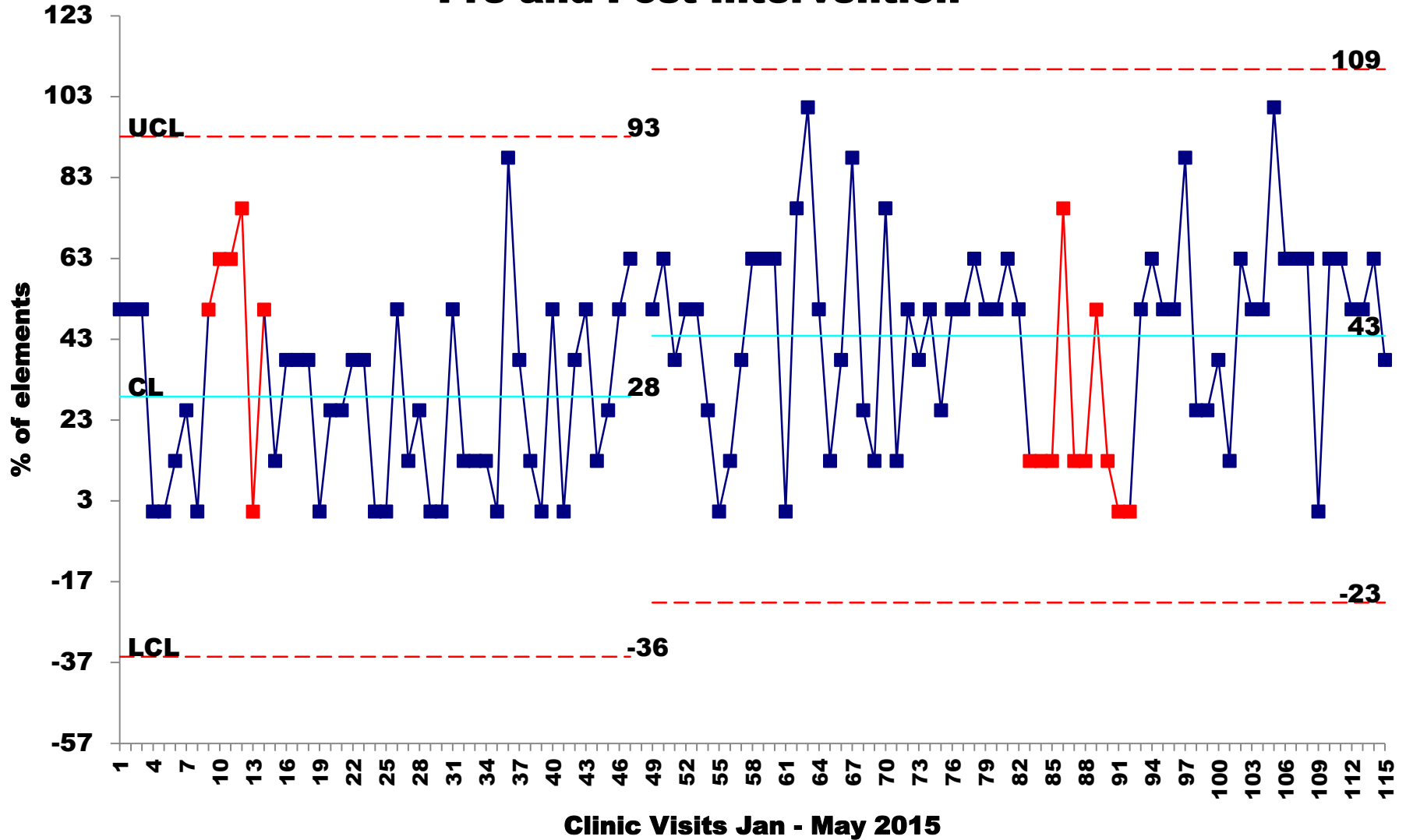
Encourage compliance and feedback

# Implementing the Change

The protocol was distributed by electronic means to all faculty and residents. The protocol was posted in the orange well child module. All nursing staff, faculty and residents were informed and had the opportunity to provide feedback. The change was implemented from 3/23/2015- 5/1/2015.

# FHC Protocol for Overweight/Obese Child Management

## % elements Documented Pre and Post Intervention



# Sustaining the Results

Resident education will be incorporated into the well child clinic for the protocol.

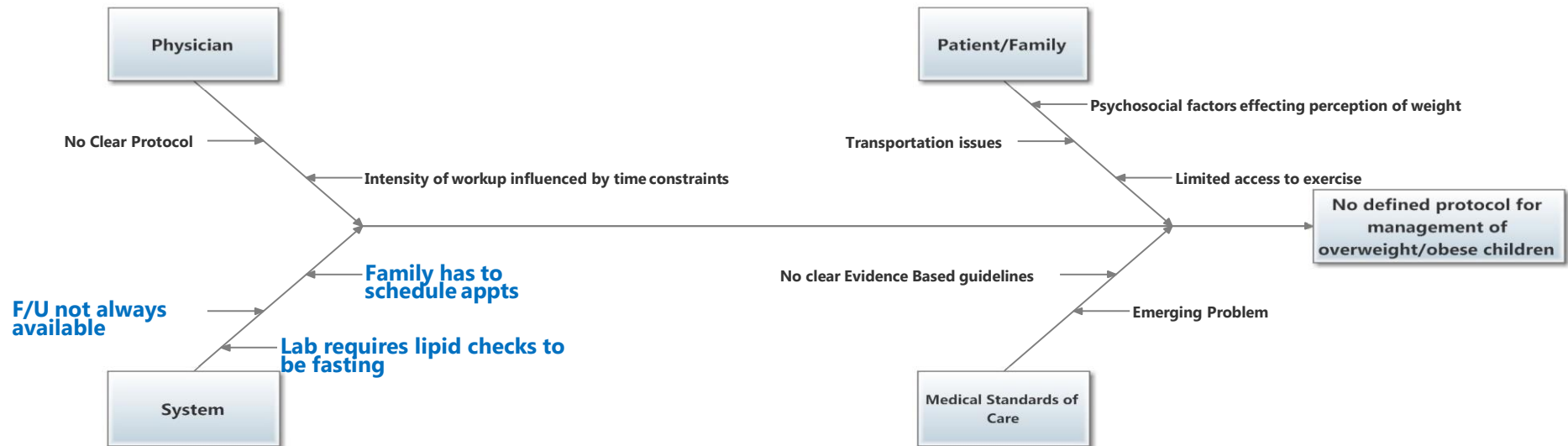
The protocol will be pivotal and used in other childhood obesity projects.

We are improving scheduling of follow ups for targeted population by opening well child clinics out farther than other FHC clinics.

Lipid assessments are not required to be fasting to improve compliance with laboratory assessment in the protocol.



# Fishbone Diagram of Factors Influencing Care of Children with a BMI>85%



# Conclusion

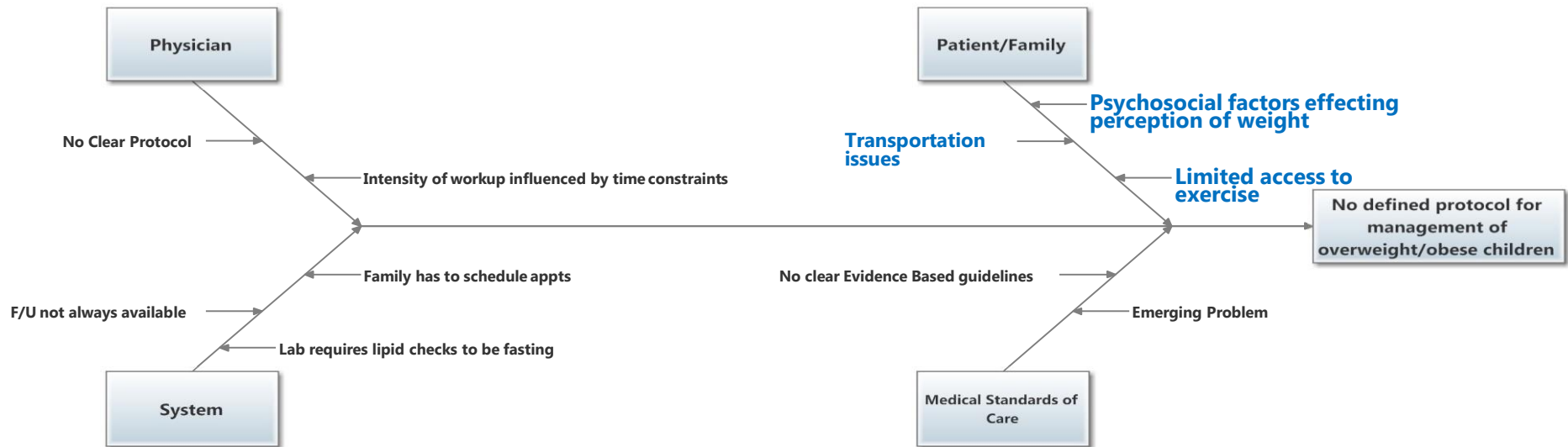
The protocol was received well and helped assist clinic decisions when there was time constraints.

Challenges remain for patient compliance and actual meaningful interventions.

This is a beginning step to standardize a process for multiple possible future interventions.

The consistent medical protocol will help support a TAFP funded family based educational intervention.

# Fishbone Diagram of Factors Influencing Care of Children with a BMI>85%



# Return on Investment

FLP	\$30
A1C	\$35
LFTs	\$25
Initial nutrition consult	\$100
Reimbursement for FM visits	\$70
Yearly medical \$ for obesity in US	\$150 billion
DM yearly costs for individual	\$8000
Final return on investment	Potentially Priceless

**Thank you!**





Child Obes. 2014 Aug 1; 10(4): 304–317.  
PMCID: PMC4120655

## **Children's Hospital Association Consensus Statements for Comorbidities of Childhood Obesity**

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