Advanced Inference Testing Medical Records - Set 3

CASE 3: Adolescent with Incomplete Documentation and Conflicting Information

Patient: Rodriguez, Miguel
MRN: 7821-2025-933
DOB: 02/14/2009 (16 years old)
Date of Service: October 20, 2025

PAGE 1 - PEDIATRIC PRIMARY CARE NOTE

PROVIDER: Kim, Susan MD - Pediatrics
LOCATION: Westside Pediatric Clinic

CHIEF COMPLAINT: School physical and weight concerns

HPI:
Miguel here with mom for sports physical. Mom reports he wants to try out for football but she's worried about his weight. He's been a big kid since elementary school. Kids tease him at school. He's been eating more lately - growth spurt maybe? Mom tried to get him to diet but he just gets hungry. Eats a lot of fast food.

Patient quiet during visit, lets mom do most of talking. When asked directly, says he'd like to lose weight but "it's hard."

PMH:

- Has always been heavy "since he was little"
- Mom says doctor at previous clinic mentioned something about pre-diabetes couple years ago
- Asthma - uses inhaler sometimes with exercise
- Broke his arm skateboarding last year

MEDICATIONS:
Albuterol inhaler PRN

FAMILY HISTORY:
Mom has "sugar diabetes" - on insulin. Dad has high BP and had heart attack at age 42. Grandma on mom's side passed away from complications of diabetes. Uncle had gastric bypass surgery few years ago.

SOCIAL HISTORY:
10th grade. Lives with both parents and younger sister. Doesn't play sports currently. Spends time on video

games. Mom works two jobs, dad works nights, so family doesn't eat together much. Lot of takeout and frozen meals.

PHYSICAL EXAM:
VITALS:

- Height: 70 inches (5'10")
- Weight: 278 lbs
- BP: 138/86 (elevated - recheck 136/84)
- HR: 88
- RR: 18

GENERAL: Obese teenage male, cooperative
TANNER STAGING: Tanner IV (pubic hair, genitalia)
SKIN: Acanthosis nigricans noted on neck, axilla
HEENT: Normal
CARDIAC: RRR, no murmurs
LUNGS: Clear
ABD: Obese, soft, no tenderness
EXTREMITIES: Normal, old fracture scar right forearm

ASSESSMENT:

1. Obesity - severe by CDC charts
2. Elevated BP - likely related to weight
3. Acanthosis nigricans - concerning for insulin resistance
4. No clearance for contact sports due to weight and BP

PLAN:

- Mom declined labs today - says they're too expensive and he had some done "not that long ago" at clinic in another state before they moved here 8 months ago
- Discussed need for weight management
- Recommended reducing fast food, increasing activity
- Mom asked about "that surgery" her brother had - explained too young for that, need to try other things first
- RTC 1 month for BP recheck and weight check
- Will need labs if mom can arrange

PAGE 2 - FOLLOW-UP VISIT #1

DATE: November 18, 2025
PROVIDER: Kim, Susan MD

INTERVAL HISTORY:
Miguel back for f/u. Mom says he's been "trying" but hasn't lost weight. Actually up a few pounds. BP still elevated. Mom brought in some papers from previous doctor in Texas.

RECORDS FROM PREVIOUS PROVIDER (San Antonio Pediatrics - dated 03/2024): *Partial records only - mom says rest were lost in move*

Labs from 3/15/2024:

- Glucose random: 156 mg/dL
- Cholesterol: 201 mg/dL
- "Other tests done but mom doesn't have copies"

Note fragment: "...continue to monitor weight. Discussed dietary changes with family. Consider referral if no improvement..."

TODAY'S VISIT:

WEIGHT: 282 lbs (+4 lbs)
HEIGHT: 70.5 inches
BP: 142/88, repeat 138/86

Mom frustrated. Says she's working all the time, hard to control what he eats. Patient admits eating school lunch, then getting fast food after school with friends before going home.

ASSESSMENT/PLAN:

- Weight increasing rather than decreasing
- BP persistently elevated
- Need formal labs - gave mom lab slip, asked her to take him this week
- Referred to nutritionist - gave mom number to call
- Discussed need for structured program
- RTC 1 month

PAGE 3 - MISSED APPOINTMENTS LOG

Electronic Health Record - Appointment History

12/16/2025 - MISSED APPOINTMENT - No show, no call
Note: Front desk called home number, no answer, left message

01/20/2026 - MISSED APPOINTMENT - No show, no call
Note: Sent reminder letter to home address

PAGE 4 - EMERGENCY DEPARTMENT VISIT

DATE: February 3, 2026
TIME: 22:15
PROVIDER: Walsh, Kevin DO - Emergency Medicine

CHIEF COMPLAINT: Headache and feeling weird

HPI:
16yo M brought in by parents for severe headache and "not acting right." Parents report he's been complaining of headache on and off for a few days. Tonight was worse. Also saying his vision is blurry. Mom checked his BP at pharmacy yesterday and it was really high - that's why she brought him in. Denies trauma. No fever. No vomiting but has nausea.

Patient oriented but seems drowsy. Says head hurts bad, feels dizzy.

EXAM: VITALS:

- BP: 168/102 (!!!)
- HR: 94
- Temp: 98.6
- RR: 20
- O2: 97% RA
- Weight (ED scale): 292 lbs

GENERAL: Obese adolescent, lethargic but arousable
NEURO: A&Ox3, CN II-XII intact, no focal deficits, fundoscopic exam shows bilateral papilledema
CARDIAC: RRR
LUNGS: Clear
Other systems WNL for body habitus

LABS:

LABS:

- Glucose: 224 mg/dL [CRITICAL HIGH]
- BUN: 24
- Creatinine: 0.9
- Na: 138, K: 4.1
- UA: Glucose 3+, ketones trace, protein 1+

ASSESSMENT:
Hypertensive emergency in obese adolescent with hyperglycemia. Concern for malignant HTN with end-organ effects (papilledema). New diagnosis diabetes likely.

ED COURSE:
IV access. Cardiology consulted. Pediatric endocrinology consulted. Admitted for BP management and diabetes workup.

PAGE 5 - HOSPITAL ADMISSION - CARDIOLOGY CONSULT

DATE: February 4, 2026
PROVIDER: Lee, James MD - Pediatric Cardiology

REASON FOR CONSULT: Severe HTN in adolescent

ASSESSMENT:
16yo with severe obesity presenting with hypertensive emergency. BP 168/102 in ED, has come down to 148/90 with IV medications.

ECHO PERFORMED TODAY:

- Significant LVH (left ventricular hypertrophy) - wall thickness markedly increased
- LV systolic function preserved, EF 60%
- Mild diastolic dysfunction
- Tricuspid regurg velocity elevated suggesting pulmonary HTN

IMPRESSION:
End-organ damage from chronic hypertension. This didn't happen overnight - patient has had elevated BP for some time causing cardiac remodeling. Concerning in someone so young.

RECOMMENDATIONS:

- Amlodipine 5mg daily

- Lisinopril 10mg daily
- Close BP monitoring
- MUST address underlying obesity - major contributor to HTN
- F/u in cardiology clinic

PAGE 6 - HOSPITAL ADMISSION - ENDOCRINOLOGY CONSULT

DATE: February 4, 2026
PROVIDER: Patel, Neha MD - Pediatric Endocrinology

CONSULTED FOR: Hyperglycemia, obesity

HPI:
16yo M admitted with hypertensive emergency, found to have glucose 224. Mom reports he's always been heavy. Family history strongly positive for T2DM. Patient has acanthosis nigricans, severe obesity.

ADMISSION LABS:

- Glucose: 224 (random)
- A1C: 8.9% [HIGH - diagnostic for diabetes]
- Fasting glucose this AM: 186 mg/dL
- C-peptide: 4.2 ng/mL (elevated - indicates insulin resistance, not T1DM)
- Islet cell antibodies: Negative
- GAD antibodies: Negative

ADDITIONAL LABS I ORDERED:

- Lipid panel: Total chol 256, LDL 172, HDL 32, Trig 260
- ALT: 89 (elevated)
- AST: 76 (elevated)
- TSH: 3.2 (normal)

DIAGNOSIS:
Type 2 diabetes mellitus, new onset, uncontrolled

ASSESSMENT:
This patient has severe insulin resistance in setting of morbid obesity. His diabetes is already fairly advanced based on A1C of 8.9%. Combined with severe HTN causing end-organ damage, this is very concerning for someone his age.

someone his age.

PLAN:

- Start metformin 500mg BID, will increase
- Diabetes education
- STRONGLY recommend comprehensive weight management
- Consider bariatric surgery evaluation - I know he's young but this is severe disease

---

PAGE 7 - HOSPITAL DISCHARGE SUMMARY

ADMISSION DATE: February 3, 2026
DISCHARGE DATE: February 6, 2026
ATTENDING: Martinez, Sandra MD - Pediatric Hospitalist

PRINCIPAL DIAGNOSIS: Hypertensive emergency
SECONDARY DIAGNOSES:

- Type 2 diabetes mellitus, newly diagnosed
- Morbid obesity
- Left ventricular hypertrophy
- Probable pulmonary hypertension
- Hepatic steatosis (by imaging and elevated enzymes)

HOSPITAL COURSE:
16yo M admitted with severe HTN and hyperglycemia. Found to have end-organ damage including LVH and papilledema. BP controlled with medications. Diabetes confirmed with A1C 8.9%. Extensive education provided to family regarding severity of conditions. Multiple specialists involved.

DISCHARGE MEDICATIONS:

- Amlodipine 5mg daily
- Lisinopril 10mg daily
- Metformin 500mg BID with meals
- Atorvastatin 20mg daily

DISCHARGE WEIGHT: 289 lbs

DISCHARGE BP: 128/78 (on meds)

FOLLOW-UP:

- PCP (Dr. Kim) in 1 week
- Cardiology in 2 weeks
- Endocrinology in 2 weeks
- Nutrition referral given

CRITICAL ISSUE: Family MUST engage with weight management. Patient has severe obesity-related complications at young age. Discussed possibility of bariatric surgery evaluation with parents. Father seemed interested, mother hesitant. Social work involved - some financial concerns, transportation issues identified.

PAGE 8 - ENDOCRINOLOGY FOLLOW-UP

DATE: February 20, 2026
PROVIDER: Patel, Neha MD

INTERVAL HISTORY:
Miguel seen 2 weeks post-discharge. Mom and patient present. Taking medications "most of the time." Mom says metformin gives him stomach upset so he skips it sometimes. Checking blood sugars at home - running 160-220 range.

EXAM: Weight: 287 lbs (down 2 lbs from discharge)
BP: 134/82
Otherwise unremarkable

LABS TODAY:

- Fasting glucose: 172
- A1C: 8.7% (was 8.9% - minimal improvement)

ASSESSMENT:
Diabetes still poorly controlled. Need to optimize management.

LONG DISCUSSION WITH FAMILY:
Talked extensively about severity. Patient is 16 years old with complications usually seen in adults with decades of diabetes. At this rate, will have heart attack, kidney failure, blindness by age 30-40.

Discussed surgical options. Mom very nervous about surgery. Says "he's just a kid." Explained that sometimes surgery is necessary to prevent worse outcomes. Dad seems more open to it. Patient quiet, hard to read his feelings.

PLAN:

PLAN:

- Increase metformin to 1000mg BID
- Continue other meds
- Referred to comprehensive weight management program at Children's Hospital
- Gave information about adolescent bariatric surgery program
- RTC 6 weeks

PAGE 9 - CONFLICTING DOCUMENTATION - SCHOOL NURSE NOTE

DATE: March 5, 2026
FROM: Lincoln High School Health Office
NURSE: Thompson, Mary RN

RE: Miguel Rodriguez - Health Concerns

TO: Dr. Kim

Dear Dr. Kim,

I wanted to reach out regarding Miguel. He's been coming to health office frequently complaining of not feeling well. I've checked his BP a few times and it's been ranging 138-152 systolic. I know he was hospitalized recently.

I'm concerned because I've observed him in cafeteria eating large portions and he told me his parents "don't really care" what he eats. He seems depressed. Other students have made comments about his weight in my presence.

His gym teacher reports he sits out of activities frequently, says he can't breathe. When I asked about his inhaler, he said he doesn't have it at school.

I encouraged him to follow up with you. He said his mom keeps canceling appointments because she has to work.

Please let me know if there's anything I can do to support his health at school.

Regards,
Mary Thompson, RN

PAGE 10 - BARIATRIC SURGERY CONSULTATION (Finally!)

DATE: August 15, 2026

DATE: August 19, 2026
PROVIDER: Richardson, Thomas MD - Bariatric Surgery
LOCATION: Children's Hospital Adolescent Bariatric Program

CHIEF COMPLAINT: Evaluation for weight loss surgery

HPI:
17yo M (DOB 2/14/2009) referred by endocrinology for bariatric surgery evaluation. Complex history - has had severe obesity "his whole life" per family. Recently diagnosed with T2DM and severe HTN with end-organ complications (LVH, papilledema). Multiple other obesity-related conditions.

GROWTH/DEVELOPMENT: Height: 71 inches (5'11")
Weight today: 294 lbs
BMI: 41.0 (>99th percentile for age)

Tanner Stage: Now Tanner V per exam (mature)

Bone age X-ray (done last month): 16.5 years - appropriate for chronological age. Endocrinology notes growth plates nearly fused, at final adult height.

WEIGHT HISTORY - PIECED TOGETHER FROM RECORDS:

- Age 14 (2023, Texas records): 245 lbs
- Age 16 (10/2025, Dr. Kim): 278 lbs
- Age 16 (2/2026, hospital discharge): 289 lbs
- Age 17 (today, 8/2026): 294 lbs

Steady upward trajectory despite multiple interventions.

CURRENT MEDICAL CONDITIONS:

1. T2DM - A1C last month 8.2% (still not controlled despite max dose metformin)
2. Hypertension - on 2 meds, BP today 136/84
3. LVH with diastolic dysfunction
4. Probable pulmonary HTN
5. Dyslipidemia - on statin
6. Fatty liver with elevated enzymes
7. Insulin resistance - severe
8. Likely OSA - family reports snoring, witnessed apneas (sleep study pending - scheduled next week)
9. Orthopedic issues - knee pain, limits mobility

10. Depression - started on sertraline 2 months ago by PCP

MEDICATIONS:

- Metformin 1000mg BID
- Amlodipine 10mg daily (increased from 5mg)
- Lisinopril 20mg daily (increased from 10mg)
- Atorvastatin 20mg daily
- Sertraline 50mg daily
- Albuterol PRN (rarely uses)

WEIGHT MANAGEMENT ATTEMPTS:

This is where it gets complicated…

Per mom: "We've tried so many things over the years"

- Multiple diet attempts on own - no documentation
- Saw nutritionist "a few times" in Texas - limited records, not recent
- After hospitalization (2/2026), referred to Children's Hospital weight management program
- **Program participation:**
  - Started 3/2026
  - Initial visits in March, April - attended
  - Missed May appointment
  - Came to June appointment
  - No-show July
  - Mom states: "It's hard to get there, I work two jobs, it's downtown, parking is expensive"

I called program coordinator - they confirm sporadic attendance. When he does come, family seems engaged, but follow-through is inconsistent. Patient has not been adherent to dietary recommendations based on food logs. Only 5 months in program with inconsistent participation.

PSYCHOLOGICAL EVALUATION (completed last week by Dr. Santos):

Psychological testing shows:

- Mild-moderate depression (now on medication)
- Low self-esteem related to weight and bullying
- Some family dysfunction - parents have marital stress

- Patient has mixed feelings about surgery - says he wants it but also scared
- Developmental assessment: Appropriate for age
- Cognitive function: Normal
- Eating patterns: Some binge eating episodes, emotional eating

Psychologist impression: "Patient has some psychological readiness but family engagement is concerning. Mother seems ambivalent about surgery. Father more supportive but works nights, less involved in care. Inconsistent medical follow-up is red flag. Would benefit from more intensive psychological support before proceeding."

SOCIAL WORK ASSESSMENT:

Social worker met with family. Identified barriers:

- Financial stress - both parents working multiple jobs
- Transportation issues - no car, use public transit
- Language barriers - parents more comfortable in Spanish, all documents in English
- Mother's health literacy lower - doesn't fully understand son's conditions
- Family eats out frequently due to work schedules, convenience

TODAY'S VISIT:

Patient seems mature, articulate. Says he understands surgery is "serious" and will "change everything." When I press on specifics of post-op diet, vitamin requirements, seems less clear. Mom doing a lot of talking for him.

Dad came today (took day off work). Very concerned about son's health. Says "I don't want him to die young like my father." More supportive of surgery than mom.

PAGE 11 - MULTIDISCIPLINARY TEAM CONFERENCE NOTE

DATE: August 16, 2026
ATTENDEES: Dr. Richardson (surgeon), Dr. Patel (endocrinology), Dr. Lee (cardiology), Dr. Santos (psychology), Social worker, Dietitian

CASE DISCUSSION: Miguel Rodriguez - 17yo male with severe obesity, T2DM, HTN

DEBATE/CONCERNS RAISED:

PRO-SURGERY ARGUMENTS (Dr. Patel, Dr. Lee):

- Severe disease at young age - already has end-organ damage

- BMI >40 (41.0, which is >99th percentile)
- Multiple major comorbidities: T2DM poorly controlled despite meds, HTN requiring 2 drugs with LVH, dyslipidemia, fatty liver
- Disease progression rapid despite medical management
- Skeletal maturity documented
- Surgery may be only way to prevent early death/disability

CONCERNS (Psychology, Social Work, Nutrition):

- Inconsistent engagement with weight management program - only 5 months, multiple no-shows
- Hasn't truly "failed" comprehensive program due to attendance issues
- Psychological readiness questionable
- Family dysfunction and ambivalence
- Concern about post-op compliance
- Social barriers (finances, transportation) that affect follow-up

SURGEON'S PERSPECTIVE (Dr. Richardson): "I'm conflicted. Medically, he's a strong candidate - severe disease, complications, skeletal maturity. But the program participation is problematic. Policy requires 6 months minimum, and we need consistent engagement, not sporadic attendance. I'm also concerned about post-op follow-up given current pattern."

TEAM CONSENSUS:

- Patient is NOT ready for surgery at this time
- Need to address barriers to care first
- Extend weight management program with better support systems
- Re-evaluate in 3-4 months with better documentation

PAGE 12 - SURGEON'S ASSESSMENT AND PLAN

DATE: August 15, 2026
PROVIDER: Richardson, Thomas MD

ASSESSMENT:

17yo male with severe obesity (BMI 41.0, >99th percentile) and multiple serious comorbidities including:

- Type 2 diabetes, poorly controlled (A1C 8.2%)

- Hypertension with end-organ damage (LVH)
- Dyslipidemia
- Probable OSA (study pending)
- Hepatic steatosis
- Depression

Skeletal maturity confirmed (Tanner V, bone age appropriate, at final height).

MEDICAL NECESSITY CONSIDERATIONS:

MEETS CRITERIA:
✓ Age appropriate (17, skeletal maturity confirmed)
✓ BMI >35 with major comorbidities (actually >40)
✓ Severe comorbidities (T2DM with poor control, HTN with LVH)
✓ Failed dietary management (weight increasing despite efforts)
✓ Psychological evaluation completed
✓ Multidisciplinary team involved

DOES NOT MEET CRITERIA:
✗ Inadequate documentation of comprehensive weight management program

- Only 5 months participation (need 6 minimum)
- Inconsistent attendance (multiple no-shows)
- Poor adherence to recommendations ✗ Psychological concerns about family engagement and compliance ✗ Social barriers not adequately addressed

DISCUSSION WITH FAMILY:

Had lengthy conversation. Explained that medically, Miguel is very sick and surgery could help. However, surgery requires lifelong commitment. Need to see better engagement with medical care before proceeding.

Discussed barriers:

- Arranged for appointments at satellite clinic closer to home
- Connected family with financial counselor for assistance with transportation
- Arranged Spanish-speaking care coordinator
- Referred to more intensive psychological support

PLAN:

1. NOT approving for surgery at this time
2. Continue/restart comprehensive weight management program with better support
3. Address barriers to care
4. Need minimum 6 months CONSISTENT participation with documentation
5. Psychological counseling for patient and family
6. Will re-evaluate in 4-6 months

Explained to family: "Miguel needs this surgery medically, but we need to make sure he can be successful with it. That means being able to come to appointments, follow the program, and commit to changes. Let's work on making that possible."

Family disappointed but understanding. Dad especially frustrated - says "you're telling me he's sick enough to need it but you won't do it." Explained it's not punitive, it's ensuring best outcomes.

IMPRESSION:
Defer bariatric surgery evaluation pending completion of adequate pre-operative preparation and documentation of program adherence.

INFERENCE CHALLENGES IN THIS CASE:

1. **Incomplete/scattered weight history** - reconstruct from multiple sources over 3+ years
2. **BMI percentiles for adolescents** vs. adult BMI calculations
3. **Growth/development markers:**
   - Tanner staging progression (IV → V)
   - Bone age interpretation
   - "Near final height" requires inference from multiple notes
4. **Conflicting information:**
   - Mother vs. father support
   - School nurse observations vs. family reports
   - Attendance records vs. verbal claims
5. **Inadequate documentation:**
   - Lost records from Texas
   - Missed appointments creating gaps
   - Incomplete weight management program participation

6. **Comorbidity terminology requiring inference:**
    - "Sugar problems" → prediabetes → T2DM (progression over time)
    - "Feeling weird" + papilledema = hypertensive emergency
    - LVH + diastolic dysfunction = cardiac complications
    - Elevated liver enzymes + ultrasound = fatty liver/NAFLD
7. **Time calculations:**
    - Program participation: 3/2026-8/2026 with gaps
    - Is 5 months with multiple no-shows sufficient?
8. **Psychosocial factors** affecting medical necessity determination
9. **Must infer DENIAL** despite meeting medical criteria due to inadequate documentation
10. **Special consideration** for adolescent - different criteria than adults

This case tests whether AI can recognize that clinical severity ALONE doesn't guarantee approval - documentation quality and compliance matter.