



## **Introduction:**

Welcome to CUGH's bi-weekly clinical case-series, "Reasoning without Resources," by Prof. Gerald Paccione of the Albert Einstein College of Medicine. These teaching cases are based on Prof. Paccione's decades of teaching experience on the medical wards of Kisoro District Hospital in Uganda. They are designed for those practicing in low resource settings, Medicine and Family Medicine residents, and senior medical students interested in clinical global health. Each case is presented in two parts. First comes a case vignette (presenting symptoms, history, basic lab and physical exam findings) along with 6-10 discussion questions that direct clinical reasoning and/or highlight diagnostic issues. Two weeks later CUGH will post detailed instructor notes for the case along with a new case vignette. For a more detailed overview to this case-series and the teaching philosophy behind it, see [Introduction to "Reasoning without Resources"](#). Comments or question may be sent to Prof. Paccione at: [gpaccion@montefiore.org](mailto:gpaccion@montefiore.org)

**Note:** If you would like to be notified when a new case is posted (along with instructor notes for the previous one), send your e-mail to Katherine Unger at [kunger@CUGH.org](mailto:kunger@CUGH.org).

## **About the Author:**

Dr. Gerald Paccione is a Professor of Clinical Medicine at the Albert Einstein College of Medicine in the Bronx, New York. His career has centered on medical education for the past 35 years – as a residency Program Director in Primary Care and Social Internal Medicine at Montefiore Hospital, and director of the Global Health Education Alliance at the school. He has served on the Boards of Directors of Doctors for Global Health, Doctors of the World USA, and the Global Health Education Consortium. Dr. Paccione spends about 3 months a year in Uganda working on the Medicine wards of Kisoro District Hospital where he draws examples for the case studies.

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## CASE 54 – Who Else Is There

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A 28 woman, HIV (+) diagnosed during a bout of community-acquired pneumonia 5 years ago (along with her asymptomatic husband) presents to KDH after her Village Health Worker, making routine home visits, found her at home “breathing fast” and coughing. Although she was prescribed ARVs 2 years ago (in 2010, when ARVs were prescribed for those with CD4 counts less than 200), she has been generally non-adherent to therapy and follow-up. Her present CD4 count is not known. She is the mother of 3 children, aged 2, 4, and 9, all of whom were delivered at home without ante-natal care.

On admission, she describes generalized weakness, fevers, chills, and a cough productive of white sputum all beginning about 1 week ago. She has had no shortness of breath, obvious weight loss, anorexia, hemoptysis, sick contacts, or travel outside of Kisoro.

She comes to the hospital with her three young children. From the moment you first meet, she is anxious to go home stating she has no caretaker or money for food.

### **Physical Exam** (on admission)

General: Thin woman, appearing tired, though not acutely ill. Cough productive of white sputum throughout exam. Surrounded by her 3 children all of whom appear malnourished; the 4 year old has a junky cough, audible while examining her mother.

BP 75/49, HR 118, BP standing undetectable, pulse thready at 140;

Temp. 102.6 F axillary, RR 28 unlabored;

Pulse ox: 90-92% on room air without further decrease on exertion;

HEENT: no icterus, no oral thrush, no cervical LAD; no JVP visible *lying supine*; no HJR

Lungs: shallow breaths, tachypneic, faint crackles at left lower lung field with dullness;

Heart: tachycardic, regular, no murmurs

Abdomen: soft, non-tender, no hepato-splenomegaly

Extremities: warm, no edema

Neurologic: normal mental status; normal motor, sensory, reflexes, cerebellar, gait;

-CD4 count unavailable – machine not working

-AFB negative x 2

### **Hospital Course:**

The patient’s blood pressure responded to a fluid challenge of 500cc of normal saline given rapidly over 15 minutes - rising to 95/75 with a drop on heart rate to 110. IV fluids were continued.

She was started empirically on ceftriaxone for community-acquired pneumonia.

Over next four days, she consistently spiked fevers of 102 – 104F (oral), was persistently tachypnic to 20-30s, and the O2 saturation did not change at rest or with exertion i.e. there was no change in her exam or her clinical status: she neither improved nor deteriorated.

The patient's 4 year old child was examined and found to be in no respiratory distress but with a dry cough, febrile to 102F orally, with tubular breath sounds left lower lung field.

**1. What is the *clinical* implication of the “iatrotropic stimulus” – the reason the patient came to the hospital – and of her reaction to being admitted?**

**What are the implications of the social history on diagnosis and management?**

**2. What is the diagnostic significance of the *physical exam* on admission (comment on 3-4 findings), and the response to fluids?**

**3. a) Why was ceftriaxone administered? What are the diagnostic implications of her response to antibiotic therapy?**

**b) What are the diagnostic implications *for the patient* of her daughter's physical exam? Explain.**

**c) What's the next (“bedside”) diagnostic step?**

**4. What are the next 2 “tests” (available in an African district hospital) indicated in this case?**

The Chest X-ray revealed bilateral diffuse mottled opacities scattered throughout both lung fields, left greater than right; without obvious cavities or pleural effusions;

The patient and her 4 year old child were started empirically on RIPE treatment for tuberculosis. On day 2 of treatment, the patient felt stronger with an improved appetite; by day 4 of treatment both she and her child were afebrile for the first time in over a week in the hospital.

**5. Who else should have which additional tests performed?**

- 6. a) How many people on average does one patient with active disease infect, and of those how many get the disease?**  
**b) What are the key risk factors for transmission of this disease in Africa?**  
**c) Who is most at risk of acquiring the disease in Africa?**

**7. What are some *differences in disease transmission between developed countries and Africa* that are relevant to public health *preventive measures* for this disease in each setting?**

**8. What screening tools are available for this disease in Africa and how successful are they?**

**9. How should our patient's family be treated?**