



## **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 Jillian Morgan at [jmorgan@CUGH.org](mailto:jmorgan@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 1 – FEVER

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A 16 year old boy presents to the hospital after four days of fever and increasing lethargy.

Living in the cool highlands of Kisoro, Uganda, he's been generally well and never hospitalized before. As a child, he had only had occasional bouts of fever treated as "malaria". Now in the rainy season, because the past 10 days have been unusually dry, he and his family have taken advantage of the weather by "digging" in their field well past dusk.

He was well until 4 days ago when he began to feel weak, tired and feverish while digging. He returned home early, with nausea, headache and no appetite. The next day he felt "hot", and his headache intensified accompanied by diffuse muscle aches and pain in his knees bilaterally. He took (unknown) medication for malaria that his mother had purchased in the town pharmacy some time back and that had cured his brother. Despite 2 days of the medication, on the day prior to admission he felt worse - "hotter", with increased headache, body pain and abdominal discomfort. On the day of admission he felt extremely weak and tired, and began having diarrhea - loose-watery, without blood, about 3-4 times. His family brought him to the hospital.

**PE:** Looks ill, weak, propped up in bed by his mother.

T 102.7 axillary R 22 BP 100/50 HR 125

skin: no rash or petechiae

Eyes: conjunctiva, slight pallor, mild icterus;

fundi: without hemorrhages or papilledema

neck: supple, no lymphadenopathy >1 cm.

lungs: clear to auscultation and percussion



- **What is the relevance of this patient's age, geographic locale, and season of the year to the likelihood of malaria as the diagnosis? Explain each.**
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4. **What is your presumptive diagnosis, and why?  
What is the likelihood that you are right (pretest probability) and what drives your estimate?**
  
  5. **If available, what tests can be used to confirm your diagnosis, and what are their performance measures and principle drawbacks?**
  
  6. **What treatment would you begin in this patient?**