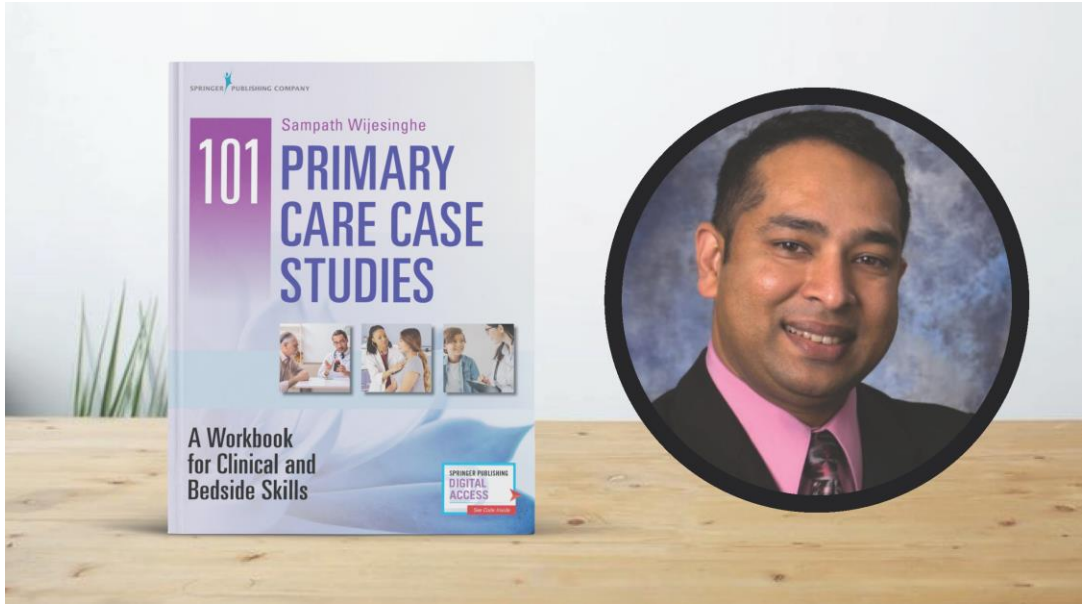
SPRINGER PUBLISHING WEBINAR SERIES

Integrating Case Studies into Your Online and In-Person Courses

A Webinar for Physician Assistant, Nurse Practitioner, and Other Medical Faculty



PRESENTED BY: Dr. Sampath (Sam) Wijesinghe, Dr. Surani Hayre-Kwan, Dr. Susan Lelacheur, Dr. David Malebranche

Speakers

Sam Wijesinghe DHSC, PA-C – Principal Faculty at MSPA program at Stanford School of Medicine. Primary care and HIV medicine, Adventist Health Central Valley Network, California.

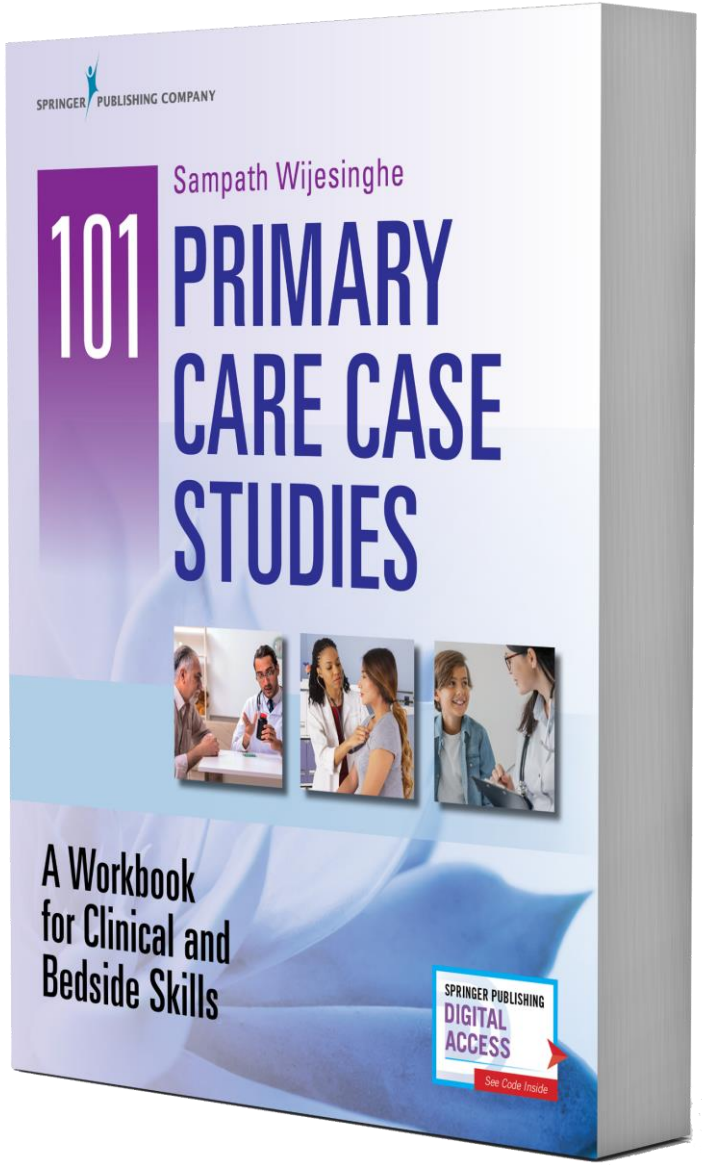
Surani Hayre-Kwan DNP, MBA – Director Professional Practice & Nursing Excellence, Sutter Health, Sacramento, CA; Nurse Practitioner, Russian River Health Center, Guerneville, CA.

Susan LeLacheur DrPH, PA-C –Professor, Department of PA Studies at the George Washington University School of Medicine and Health Sciences. AAPA Distinguished Fellow.

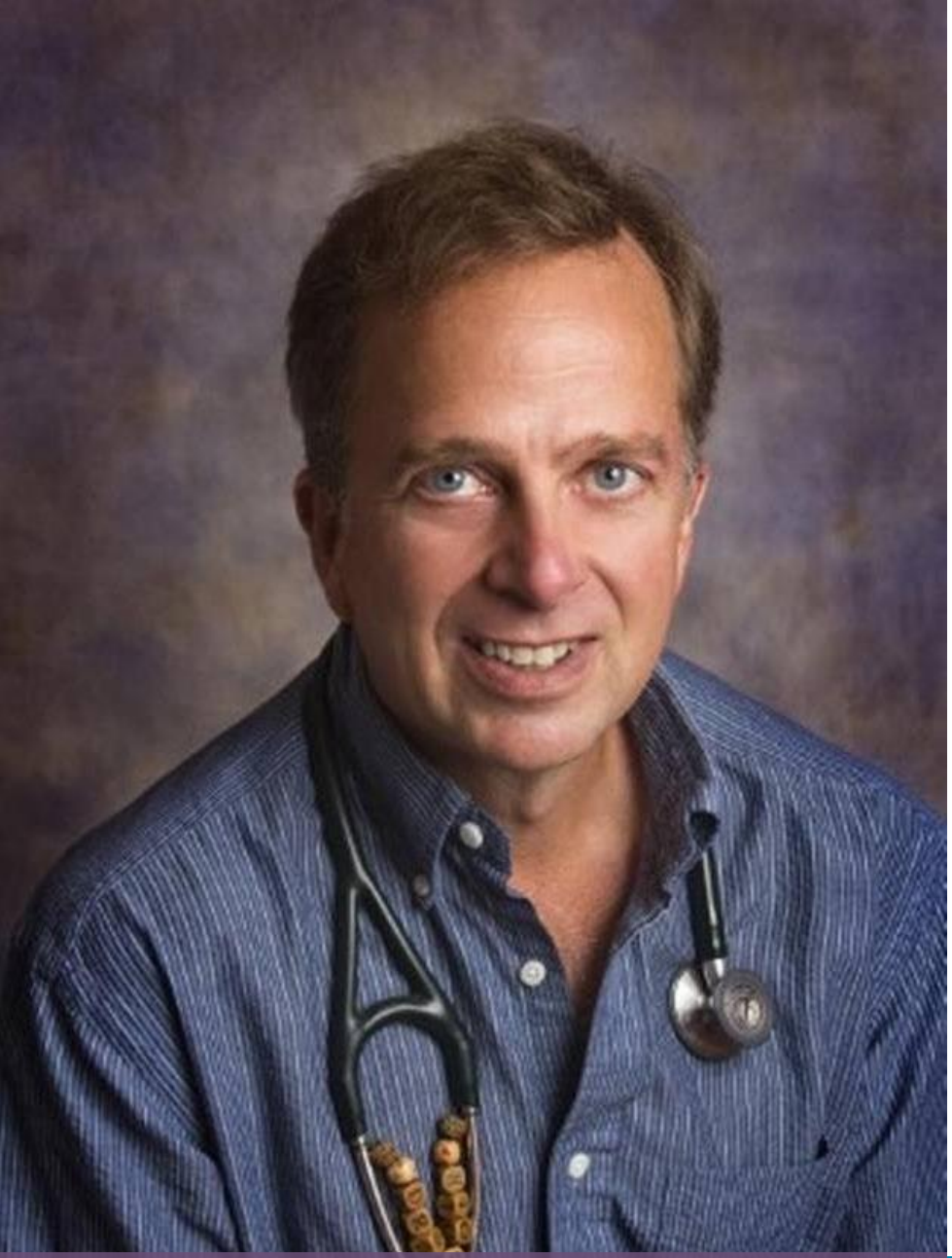
David Malebranche MD, MPH – Internal medicine physician, former Associate Professor of Medicine at Morehouse School of Medicine and Emory University School of Medicine.

Agenda

- Introduction
- About the Book:
  Origin, Focus, & Authorship
- Case Study Discussion
- Applications:
  For Students & Programs
- Group Discussion
- Conclusion & Questions



SPRINGER PUBLISHING



Alex Moir, MD

1962- 2015

Origin

101 Primary Care Case Studies

- Experience as a PA student
- Experience as a PA educator
- Help students acquire competent/clinical skills
- Meeting Alex Moir, MD

SPRINGER PUBLISHING

Focus

101 Primary Care Case Studies

- Clinical & compassion skills
- Primary care medicine foundation
- Opportunity to learn independently or as a group
- Collaboration: PAs, NPs, Physicians

Team

101 Primary Care Case Studies

A diverse team of professionals who are passionate about sharing my vision –

promoting clinical and bedside skills through real patient cases

- PA/NP/physician team
  - 50+ contributors
  - 30+ reviewers

TEACHING TIP!

#1: Provide opportunities for students to learn the value of interprofessional collaboration.

SPRINGER PUBLISHING

Simulating the Primary Care Clinic

- Chief Compliant
- History of Present Illness
- Review of Systems
- Relevant History- Medical, Social, & Family
- Allergies
- Medications
- Physical Examination: Vitals & Organ Systems

Clinical Discussion Questions

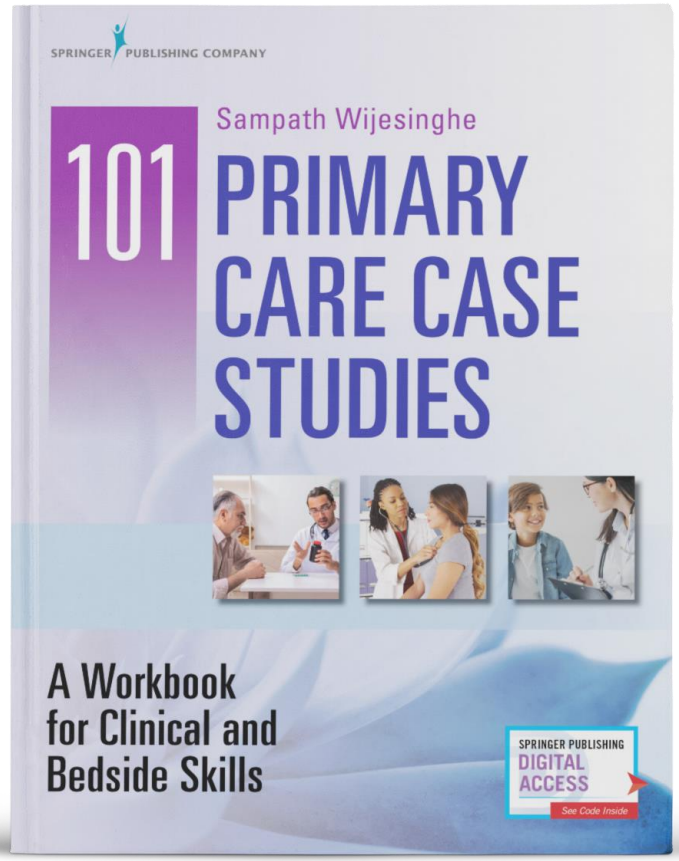
What is the differential diagnosis?

What is the most likely diagnosis? Why?

Pathophysiology of the most likely diagnosis?

Should tests/imaging studies be ordered? Which ones? Why?

What is the next appropriate step in management?



TEACHING TIP!

#2: Have students independently research the cases' differentials to later present on why a particular differential did or did not fit the patient presentation.

Clinical Discussion Questions

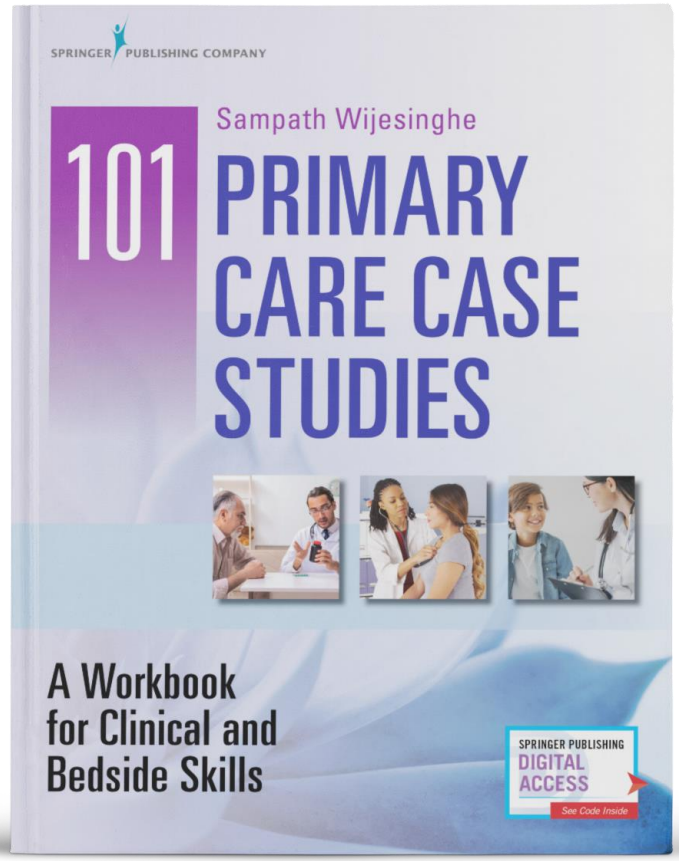
Discuss prevalence, contributing factors, and benefits of exercise with this condition? Provide references for your answers.

ICD-10 & CPT (E/M) codes for this visit? Rationale?

Appropriate patient education topics for this case?

If not managed appropriately, what is/are the medical/legal concern(s) that may arise?

Think about interprofessional collaboration for this case. Provide a list of specialties or other disciplines & indicate what contribution these professionals make managing the patient?



SPRINGER PUBLISHING

Bedside Skill Related Questions

- **What would your communication style/approach be with this patient?**

- **If a patient and parent are distressed by a diagnosis, what might offer reassurance?**

CLINICAL DISCUSSION QUESTIONS

1. What is the differential diagnosis?

2. What is the most likely diagnosis? Why?

3. Demonstrate your understanding about the pathophysiology in regard to the most likely diagnosis.

4. Should tests/imaging studies be ordered? Which ones? Why? Think about tests/imaging beyond the primary care setting as well.

5. What are the next appropriate steps in management?

6. Review a recent and credible research article about the key factors (causes, risks, diagnostic testing, and treatment selection) of this diagnosis. Provide references for your response.

7. What are the pertinent ICD-10 and CPT (E/M) codes for this visit? Provide a short rationale.

8. What is the appropriate patient education for this case?

9. If not managed appropriately, what is/are the medical/legal concern(s) that may arise?

10. Think about interprofessional collaboration for this case. Provide a list of specialties or other disciplines and indicate what contribution these professionals might make to managing the patient.

Answers Online: Springer Publishing Connect

WHY ONLINE?

CLINICAL EDUCATOR SURVEY

CRITICAL THINKING AND REASONING SKILLS

Sample Case

Sample Case

Chief Complaint: "Fever and back pain"

History of Present Illness:

A 78-year-old woman presents to her PCP with a **2-day history of fatigue, malaise, and fever.** She awoke this morning with a **dull ache in her right mid-back and some nausea.** She came to the office because she is concerned about the pain and her **worsening symptoms**. She has been **resting and taking acetaminophen** (650 mg every 4-6 hours) that helped some with the fever and aches, but her symptoms return as it wears off. She is unsure of how high her fever has gotten. She states the **pain is a 3 or 4 out of 10** but the fatigue, malaise, and nausea have kept her from her daily activities and caused her to stay in bed most of yesterday and today. She believes she might have "the flu" though she **received flu vaccine 3 weeks ago**. She is most concerned because she **lives alone** and is **afraid of becoming seriously ill and having no way to call for help**.

TEACHING TIP!

#3: If a student is worried about asking the wrong question during a history, remind them to refocus on the patient who will tell them what they need to know.

Sample Case
(Continued)

- **Review of Systems:** ROS positive for occasional knee pain. Negative for weakness, weight loss, focal pain except in the right flank, difficulty with memory or concentration, recent illness, or injury.

- **Relevant History:** The patient's history is significant for hypertension and osteoporosis. She has a family history of CAD. Her daughter lives nearby and is available to stay with her if needed.

- **Allergies:** No medication, environmental or food allergies.

- **Medications:** Lisinopril/hydrochlorothiazide 10/12.5 mg daily for hypertension, alendronate 70 mg weekly for osteoporosis, OTC calcium citrate 1000 mg with 600 IU vitamin D3 daily for osteoporosis

Sample Case *(continued)*

Physical Examination

- **Vitals:** **T 38.8 °C (101.8 °F),** P 96, R 14, BP 106/68, and BMI 20.2
- **General:** **Appears ill and uncomfortable but non-toxic and without acute distress**
- **Psychiatric**: Alert and oriented to person, place and time, coherent conversation
- **Skin, Nails**: **Skin pale and slightly flushed,** no rash or lesion. Nails are smooth without hemorrhage
- **HEENT**: Eyes without retinal lesions, Oral mucosa moist without lesion.
- **Chest**: Symmetric excursion with no accessory muscle use
- **Lungs**: resonant with vesicular breath sounds all fields, no wheezes, rales or rhonchi
- **Breasts**: No mass or lesion bilaterally
- **Heart**: Quiet precordium, RSR, no murmur, rub, or gallop
- **Abdomen**: Flat, normoactive bowel sounds all quadrants, no mass. **There is mild right CVA tenderness. Mild suprapubic discomfort but no tenderness.**
- **Genital/Rectal**: **Vaginal and introital mucosa show atrophy.** The uterus is small and smooth. No mass or lesion detected in the adnexa or cul de sac
- **Musculoskeletal**: No point tenderness detected on the vertebral processes.

Sample Case: **Answer Key**

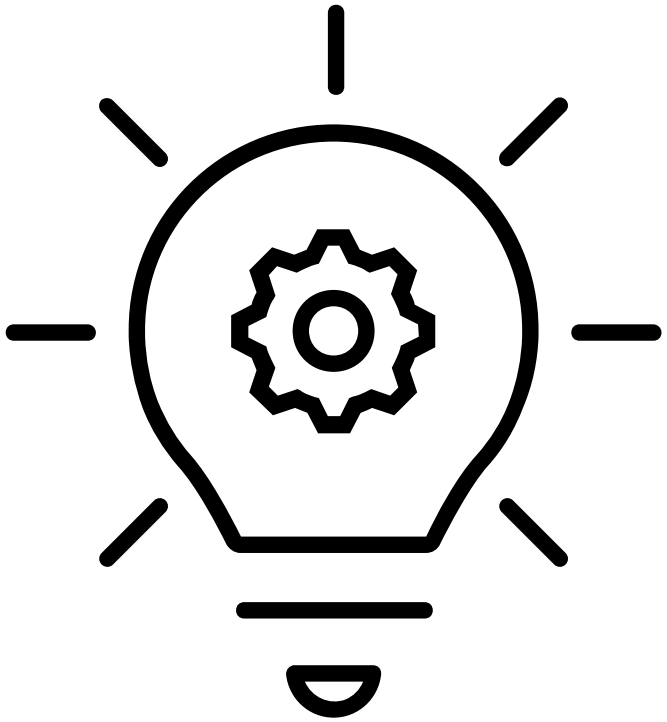
Differential Diagnosis

A. Influenza
B. Pyelonephritis
C. Osteomyelitis
D. Metastatic cancer
E. Endocarditis

Poll Time!

What is the most likely diagnosis?

- Influenza
- Pyelonephritis
- Osteomyelitis
- Metastatic cancer
- Endocarditis



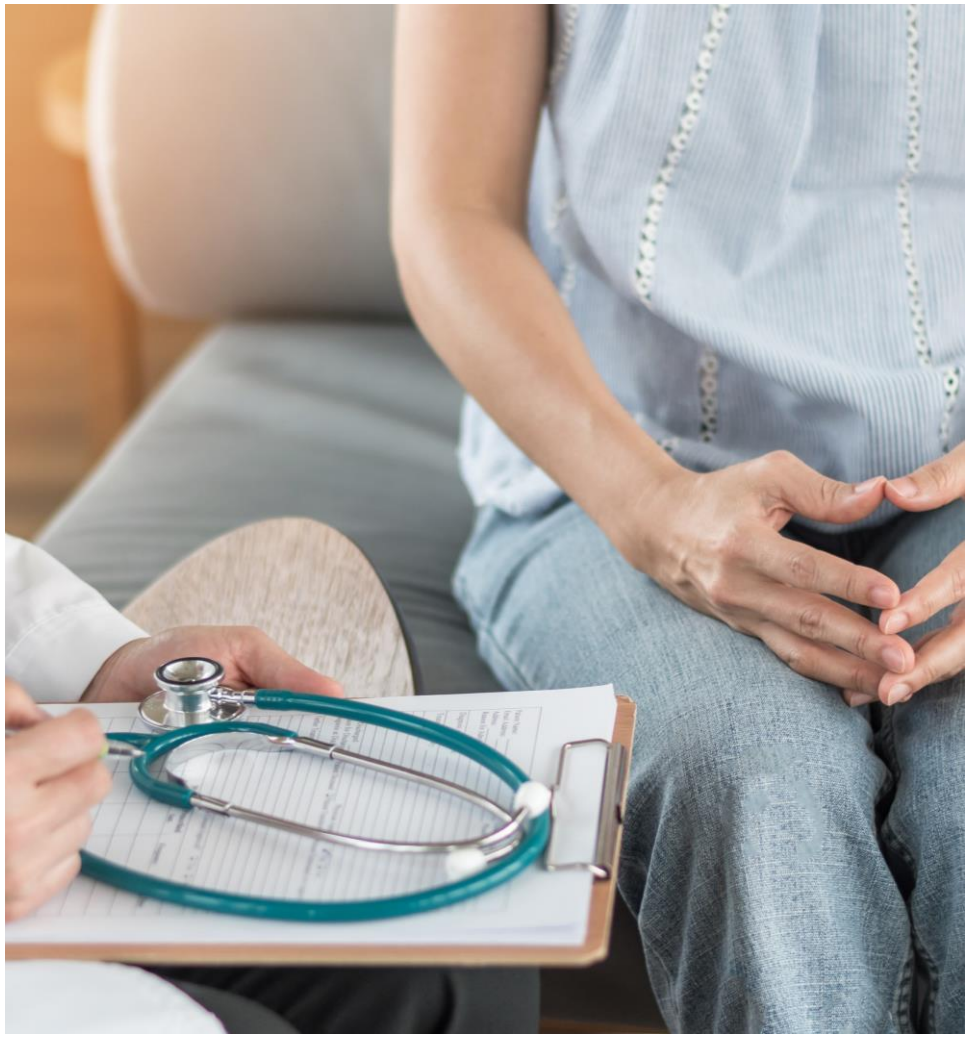
Sample Case: Most Likely Diagnosis

Online Answer Key

Differential Diagnosis

- **Influenza** is certainly a consideration in a patient with fever and myalgia. The patient notes influenza vaccination 3 weeks ago, which is normally sufficient time to mount a response, but immunogenicity of vaccines is reduced with age, and it is possible that the vaccine does not fully cover the strain that a patient encounters.
- **Pyelonephritis** is high on the differential list for this patient. She admits to some urinary frequency and urgency, and although she is not complaining of dysuria there is some discomfort over the bladder as well as right CVA tenderness.
- **Osteomyelitis** generally presents with back pain and fever but the patient displays no tenderness of her spine, making this diagnosis unlikely.
- **Metastatic cancer** is a possible etiology in an older patient. Breast, renal and lung cancer are all common cancers that might metastasize to the spine as well as cause fever and malaise. Her stable weight makes this less likely but does not take the possibility off our list.
- **Endocarditis** may present without specific symptoms or signs beyond fever and fatigue. Septic emboli may lodge in various organs including bone. The lack of a heart murmur makes this a far less likely possibility

SPRINGER PUBLISHING



Sample Case: More Answers

Tests/Imaging

- UA showed leukocytes, trace blood, & positive nitrite.
- Urine sent for culture & sensitivity

Next Steps

- RX empiric antimicrobial therapy (Ciprofloxacin 500mg BID for 7 days) and monitor the patient closely over the next day or two.
- Call patient next day to assess. Patient stated it's getting worse including fever and nausea.
- Because the patient lived alone and was showing worsening symptoms suggestive of impending sepsis (nausea) she was hospitalized.

Sample Case: More Answers

Outcome

- Admitted to hospital/started on IV ciprofloxacin.
- Fever increased and blood pressure dropped – potential onset of sepsis.
- Symptoms began to resolve within 24 hours.
- UA culture showed *E. coli* susceptible to trimethoprim-sulfamethoxazole that was continued for a week after discharge.

Insight from the PCP

- Treating the whole person (not just the illness)
- Recovered from pyelonephritis without complication.
- She was very nervous during the acute illness and thereafter.
- Rx vaginal estrogen tablets as her breast cancer risk was low.
- Acknowledging patient's immediate and underlying concern.
- A local agency assisted her and her daughter to set up a regular monitoring system.
- Became more involved with her church giving her another point of contact and helped allay her concerns.

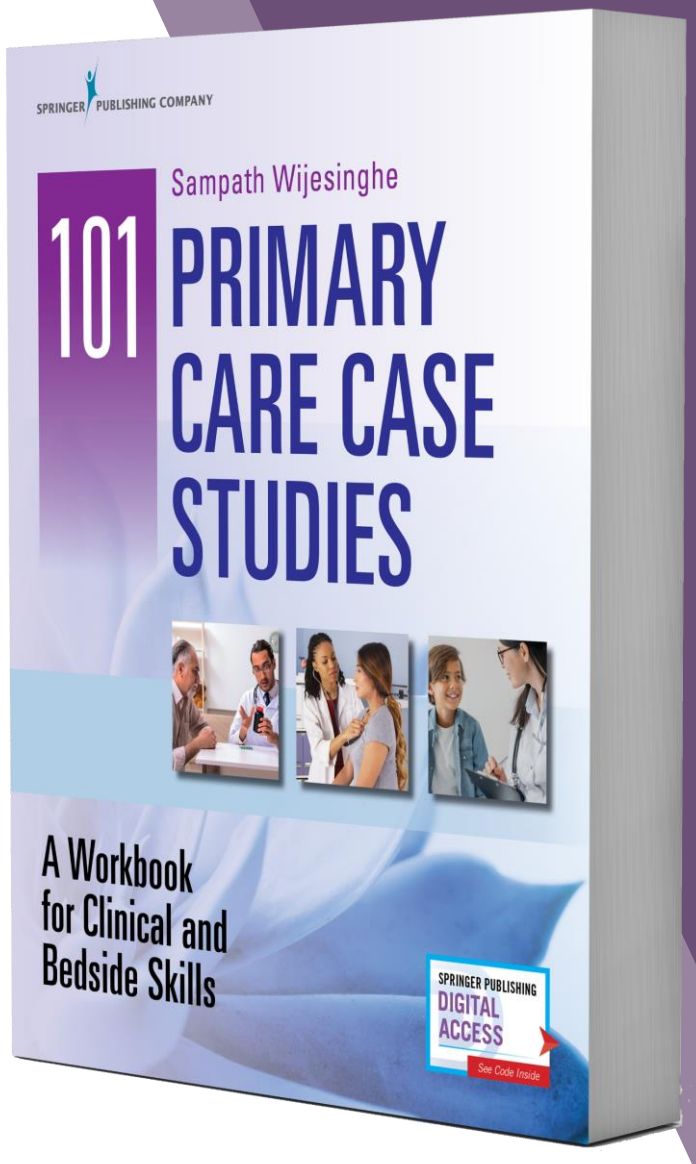
TEACHING TIP!

#4: Assessment of social supports is particularly critical for the very young and very old but should not be skipped over in any patient.

Case	Complaint	Diagnosis	System	Patient Population	Gender
1	Ankle and Calf Pain	Achilles Tendon Rupture	Musculoskeletal	Adult	Male
2	Fatigue and Weakness	Anemia	Hematology	Adult	Female
3	Abdominal Pain	Appendicitis	Gastrointestinal	Adolescent	Male
4	Left Hip Pain	Avascular Necrosis	Musculoskeletal	Adult	Female
5	Vaginal Bleeding	Ectopic Pregnancy	Reproductive	Adult	Female
6	Numbness in Hands and Legs	Guillain Barré Syndrome	Neurology	Geriatric	Male
7	Painful Rash	Herpes Zoster	Infectious Disease	Geriatric	Male
8	Fever and Body Aches	Human Immunodeficiency Virus	Infectious Disease	Adult	Male
9	Fever and Rash	Measles	Infectious Disease	Pediatric	Male
10	Blurry Vision	Multiple Sclerosis	Neurology	Adult	Female
11	Doesn't Follow Directions	Attention Deficit/Hyperactivity Disorder	Behavioral Medicine	Pediatric	Male
12	Crusty, Irritated Left Eye	Acute Bacterial Conjunctivitis	Eyes, Ears, Nose, and Throat	Pediatric	Male
13	Frequent Urination	Type 2 Diabetes	Endocrine	Adult	Male
14	Vomiting	Type 1 Diabetes	Endocrine	Pediatric	Male
	Difficulty Relating to Others	Autism	Behavioral Medicine	Pediatric	Male
	ial Numbness	Bell's Palsy	Neurology	Adult	M
	injury	Child Abuse	Behavioral Medicine	Pediatric	

Case Study Teaching Strategies: **Organization**

- Randomly organized by chief complaint
- Filterable table of contents for **instructors**
  - By chief complaint
  - By diagnosis
  - By system
  - By patient population (e.g., pediatrics, geriatrics, etc.)
  - By gender



Case Study Teaching Strategies

- Versatile and adaptable
- Use in NP, PA, and medicine program
- Traditional classroom and/or *online*
- Didactic or clinical phases
- Independent or group learning

Assignment Ideas

Assignment (a case) for a student or a small group - this can be graded or ungraded assignment

Individual

Small Group

Online – breakout method

TEACHING TIP!

#5: Critical thinking doesn't happen in a vacuum. Encourage students to work in a small group to solve case studies.

- **SOAP** Notes Preparation- assign a case and have student complete SOAP note prior to begin clerkship.

Assignment Ideas
(continued)

OSCE– Practical way to test student's knowledge and preparation during the didactic phase, prior to clerkship, and during clinical. Challenge the student by assigning a random case.

1. Assign the same case for every student
2. Notify students to be prepared to present any case from the entire book
3. Notify students to prepare for a set list of 10-20 cases and then assign a case from the list
4. Notify students to prepare for a set list 5 cases and then assign a case from that list

Assignment Ideas
(continued)

- **OSCE Suggestions**
  - Students, paid actors, or instructors can act as the patient
  - Debriefing immediately after the session
  - Debriefing later – after recording sessions
- **Synchronous and/or Asynchronous Learning**
  - Student works on a case and presents to the class – others watch live (synchronous) or later (asynchronous).
  - Student (clinician) and instructor/actor (patient) work on a case – instructor evaluates synchronous or asynchronous

Online/Interactive Learning

Interactive learning

- Student work on a case and post to discussions
- Others reply to the post – provide feedback (asynchronous)
- Small groups presentation to the class – live or asynchronous
- Stimulate discussions regarding differential and most likely diagnosis etc. - live or discussion board environment

Virtual preceptor – practical way to train students instead of clinical rotations

TEACHING TIP!

#6: Use case studies to help remediate struggling students.

Resource for Preceptors During Clinical Rotations

SPRINGER PUBLISHING

Collaboration: Highlights from the Authors

Dr. Hayre-Kwan –
Nurse Practitioner

Dr. LeLacheur –
Physician Assistant

Dr. Malebranche – Physician

SPRINGER PUBLISHING

To Summarize…

- PCPs have the opportunity to provide:
  - Competent care (evidence-based medicine)
  - Compassionate care (art of medicine)

Questions

Dr. Wijesinghe: samwije@stanford.edu

Interested in Adopting?

View sample content and product information here:

www.springerpub.com/101cases

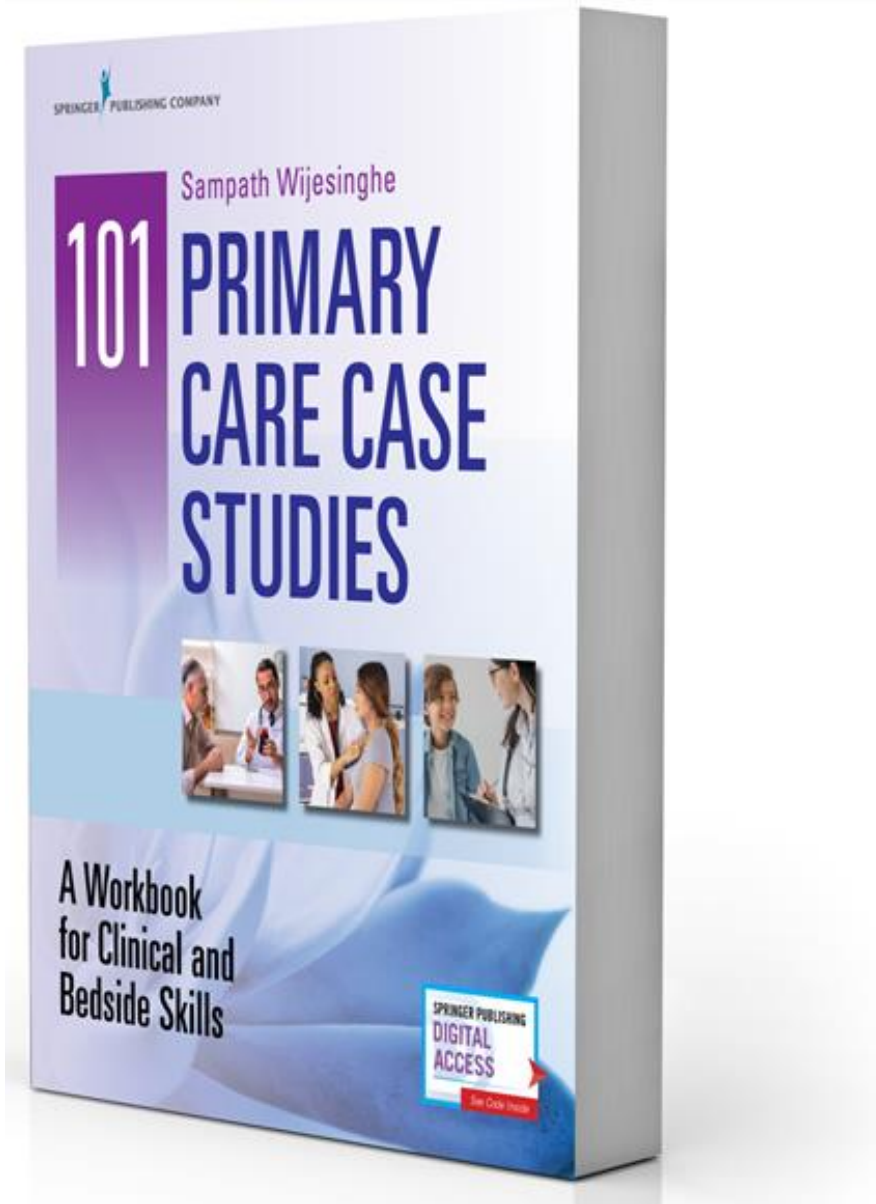
Find your sales rep here:

www.springerpub.com/educators

Interested in Buying?

Preorder today on Amazon.com

Publishes November 2020



SPRINGER PUBLISHING

Thank you for watching!
Be safe and we will see you soon!

Additional questions may be sent to
marketing@springerpub.com

SPRINGER PUBLISHING