

**The use of video vignettes to measure health worker knowledge.
Evidence from Burkina Faso**

Sheheryar Banuri, PhD, Lecturer, University of East Anglia

Damien de Walque, PhD, Senior Economist, Development Research Group, The World Bank

Philip Keefer, PhD, Principal Economic Advisor, Institutions for Development Department, Inter-American Development Bank

Haidara Ousmane Diadie, MD, Senior Health Specialist, Health Nutrition and Population, The World Bank

Paul Jacob Robyn, PhD, Senior Health Specialist, Health Nutrition and Population, The World Bank

Maurice Ye, MD, MPH, Centre de Recherche en Santé de Nouna, Burkina Faso

English version of the script of the video vignettes, together with the answer keys.

Please note that the entire experiment was conducted in French. The English version of the videos, scripts and answer keys are provided as a courtesy for readers not familiar with French: they are not professional translations, please excuse any mistakes or imperfections.

Note:

Each answer set had one correct response (marked X below), two nearly correct responses (marked Y below), and two wholly incorrect responses, yielding additional variation. “Wholly incorrect” responses would be inconsistent with the symptoms and data provided in the case while “nearly correct” responses would be consistent with most (but not all) of the symptoms provided to the health professional.

Clinical Case S 2

Hello Doctor. I am here because I do not feel very well. If you recall, I have visited your health center before for my prenatal visits. I was here last week and your colleague, estimated that I had been pregnant for 32 weeks.

Currently I have fluid discharge in my private parts, and I feel that these fluids might also contain blood. Last night, I started having lower abdominal pains, but they are not too painful. The fluid discharge is not very frequent, but occurs without any warning or other signs. I have already received a vaccine that pregnant women receive. During my second and third prenatal visit, I was given medication to prevent malaria. This is what your colleague, told me.

Vital signs

- Temperature : 37°6 C
- Blood pressure: 110/80 mmhg
- Conjunctiva : normal coloring
- Fetal heart rate : 130 beats/mn
- Absence of edema of the lower limbs

Additional signs

- Gynaecological examination shows evident discharge mixed with blood and cervix dilated at 1 cm.
- No objective signs of vaginal infection
- Woman at first pregnancy
-

Q1_What is the most probable diagnosis?

	Plausible diagnoses	Mark the correct response
A	Ruptured uterus	[__]
B	Premature membranes ruptured	[_Y_]
C	Eclampsia	[__]
D	Preterm labour	[_X_]
E	Vaginal candidiasis	[_Y_]

Q2_What is the most appropriate treatment for the diagnosis?

	Recommended treatment	Mark the correct response
A	Magnesium sulphate IV	<input type="checkbox"/>
B	Tocolysis with Salbutamol IV	<input checked="" type="checkbox"/>
C	Nystatine tablets	<input type="checkbox"/>
D	Amoxicillin tablets	<input type="checkbox"/>
E	Caesarean-section	<input type="checkbox"/>

Q3_ When should the patient be seen again after the initial treatment?

	Recommended follow-up schedule	Mark the correct response
A	4 days	<input type="checkbox"/>
B	7 days	<input checked="" type="checkbox"/>
C	10 days	<input type="checkbox"/>
D	30 days	<input type="checkbox"/>
E	A follow-up visit is not necessary	<input type="checkbox"/>

Q4_ What is likely to be the best alternative treatment for the patient (for example, if the patient's condition does not improve)?

	Alternative treatment	Mark the correct response
A	Refer to emergency unit	<input type="checkbox"/>
B	Deliver the woman	<input checked="" type="checkbox"/>
C	Amphotericin B tablets	<input type="checkbox"/>
D	Blood transfusion	<input type="checkbox"/>
E	Close surveillance	<input type="checkbox"/>

Clinical Case C 7

Hello Doctor. My husband and I come from a village far from here. It is beyond the hill, just after the area with the thorny bushes. We had to walk for more than two hours in order to get your help for our child. He is 6 months old, and does not feel well at all. He has been coughing for more than 5 days. He has a runny nose and his body is very hot. My poor child, we can feel that he is suffering a lot. When he coughs, we can hear from a distance whistling sounds. My child is very tired and he is not breastfeeding as usual. Last night I did not sleep at all, because his breathing was heavy and fast. But it did not prevent my husband from snoring as usual. But it didn't stop my husband from snoring as usual. This morning, my baby seems a bit agitated; he cries incessantly, and his face is paler than usual. Help us Doctor. Save our child.

Vital signs

- Temperature: 38°C
- Respiratory rate: 55 breaths/mn
- Pulse: 115/mn
- Moderate conjunctival pallor

Additional notes

- Lower chest wall in drawing
- increased spleen
- Crackling groan
- Lower legs oedema
- White blood cells count: 15000 cells/ μ l

Q1_ Quel est le diagnostic probable pour cet enfant ?

	Probable diagnosis	Mark the correct response
A	Whooping cough	<input type="checkbox"/>
B	Asthma	<input type="checkbox"/>
C	Allergic rhinitis	<input type="checkbox"/>
D	Flu	<input type="checkbox"/>
E	Pneumonia	<input checked="" type="checkbox"/>

Q2_ Which treatment do you recommend for that child?

	Recommended treatment	Mark the correct response
--	-----------------------	---------------------------

A	Aminophylin IV	<input type="checkbox"/> Y
B	Amoxicilline syrup	<input checked="" type="checkbox"/> X
C	Chlorpheniramine syrup	<input type="checkbox"/>
D	Paracetamol syrup	<input type="checkbox"/> Y
E	Erythromycin	<input type="checkbox"/>

Q3_ When should you see the child again?

	Recommended follow-up schedule	Mark the correct response
A	2 days	<input checked="" type="checkbox"/> X
B	7 days	<input type="checkbox"/>
C	14 days	<input type="checkbox"/>
D	30 days	<input type="checkbox"/>
E	Follow-up visit is not necessary	<input type="checkbox"/>

Q4_ What is likely to be the best alternative treatment for the child (for example, if the patient's condition does not improve)?

	Course of action to undertake	Mark the correct response
A	Hydrocortisone IV	<input type="checkbox"/> Y
B	Refer to hospital	<input type="checkbox"/> Y
C	Intensive Oxygen at hospital	<input type="checkbox"/>
D	Amoxicilline+Acid clavulanique	<input checked="" type="checkbox"/> X
E	There is no alternative treatment	<input type="checkbox"/>

Clinical Case S 10

Hello Doctor. I gave birth in your health center approximately one month ago. I'm back with another concern. Three weeks after my delivery, I started having pains in my right breast. My baby sucks a lot, it's too much. He nurses so much that I cannot close my eyes at night.

From time to time, I get very hot. I have a fever and headaches; especially at night. Sometimes it gives me insomnia. I thus came to ask for your help in relieving my pain.

Vital signs

- Temperature: 37.9°C,
- Pulse: 110 /mn,
- Blood pressure: 120/80 mmhg

Additional notes

- Breast pain and tenderness in the right breast
- Reddened, wedge-shaped area on the breast
- exacerbated pain by breast palpation

Q1_What is the most probable diagnosis for that woman?

	Probable diagnosis	Mark the correct response
A	Breast engorgement	<input type="checkbox"/> Y <input type="checkbox"/> N
B	Breast abscess	<input type="checkbox"/> Y <input type="checkbox"/> N
C	Mastitis	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
D	Breast cancer	<input type="checkbox"/> Y <input type="checkbox"/> N
E	Gastritis	<input type="checkbox"/> Y <input type="checkbox"/> N

Q2_Which treatment do you recommend for that woman?

	Recommended treatment	Mark the correct response
A	Apply cold compress to the breast	<input type="checkbox"/> Y <input type="checkbox"/> N
B	Drain the abscess	<input type="checkbox"/> Y <input type="checkbox"/> N

C	Cloxacillin tablet	<input checked="" type="checkbox"/>
D	Chemotherapy	<input type="checkbox"/>
E	Hydroxyd Aluminium	<input type="checkbox"/>

Q3_When should you see the woman again?

	Recommended follow-up schedule	Mark the correct response
A	3 days	<input checked="" type="checkbox"/>
B	7 days	<input type="checkbox"/>
C	14 days	<input type="checkbox"/>
D	30 days	<input type="checkbox"/>
E	Follow-up visit is not necessary	<input type="checkbox"/>

Q4_What is likely to be the best alternative treatment for the woman (for example, if the patient's condition does not improve)?

	Course of action to undertake	Mark the correct response
A	Amoxicilline+ Acid clavulanique	<input checked="" type="checkbox"/>
B	Paracetamol	<input type="checkbox"/>
C	Gentamicin IV	<input type="checkbox"/>
D	Mastectomy	<input type="checkbox"/>
E	Cimetidine tablet	<input type="checkbox"/>

Clinical Case C 19

Hello Doctor. I am with my three year old sick child. He has been suffering for twenty-one days. He also has a cough that has lasted two weeks. He has often a high temperature despite the traditional treatment provided by my husband. My husband is a specialist of traditional medicine; some people come from very far away to consult him.

For a few days now, my child has had a runny nose. He has trouble swallowing. His eyes are very red, and are very sensitive to light. He also has some mouth wounds and some lesions on his skin. My neighbor does not touch him anymore, she used to play with him all the time.

Since the beginning of his sickness, my child has had diarrhea and has lost weight. Yesterday, my younger sister told me that some of his friends that usually play with him have fallen sick, just like him, and have even been brought to the hospital. If at least we had known this sooner, were we going to let our children out? Wouldn't we? Doctor?

Vital signs

- Temperature : 40°C
- Respiratory frequency: 42 breaths/mn
- Inflamed eyes
- Tiny white spots inside the mouth
- generalized rash

Additional signs

- The skinfold fades quickly when pinched
- Bilateral otitis
- Discrete oedema in the lower extremities

Biological exams

- Haemoglobin rate : 8g/dl
- White blood cells count : 16000cells/ μ l

Q1_What is the most probable diagnosis for that child?

Plausible diagnosis	Mark the correct response
---------------------	---------------------------

A	Cholera	<input type="checkbox"/>
B	Pharyngitis	<input type="checkbox"/>
C	Chicken pox	<input checked="" type="checkbox"/>
D	Uncomplicated malaria	<input checked="" type="checkbox"/>
E	Measles	<input checked="" type="checkbox"/>

Q2_What is the most suitable treatment for that child?

	Treatment recommended	Mark the correct response
A	Intravenous hydration	<input type="checkbox"/>
B	Penicillin tablets	<input type="checkbox"/>
C	Ibuprofen	<input checked="" type="checkbox"/>
D	Artemisinin combined therapy tablet	<input checked="" type="checkbox"/>
E	Vitamin A	<input checked="" type="checkbox"/>

Q3_When do you see the patient again?

	Recommended follow-up schedule	Mark the correct response
A	3 days	<input type="checkbox"/>
B	7 days	<input checked="" type="checkbox"/>
C	14 days	<input type="checkbox"/>
D	30 days	<input type="checkbox"/>
E	Follow-up visit is not necessary	<input type="checkbox"/>

Q4_What is likely to be the best alternative treatment for the child (for example, if the patient's condition does not improve)?

	Course of action to undertake	Mark the correct response
A	Tetracycline	[]
B	Benzathin penicillin IM	[]
C	Amoxicillin	[_Y_]
D	Arthemeter IM	[_Y_]
E	Refer at hospital	[_X_]