

Appendix 1

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The scenario simulation teaching method in the General Practice

During the epidemic of the Coronavirus Disease 2019(COVID-19), the department of General Practice conducted a simulation teaching on the history taking of the COVID-19 and the technique of identifying the COVID-19 by symptoms for GPs (general practitioners). And step by step, different conditions are given different treatments; make use of the SOAP general practice inquiry principle, identify suspected missed patients through doctor-patient communication skills and to be an eligible health gatekeeper.

Section 1. Scenario simulation case

Case Name	suspected fever patients with the COVID-19
keyword	Fever; Respiratory symptoms; Community GPs; screening
Case overview	In the middle of February, 2020, the COVID-19 was found to be able to spread from human to human, and has the characteristics of strong infectivity, rapid diffusivity, susceptibility to infection, rapid progress and more serious patients. As the gatekeeper of community health, GPs should think about how to strengthen their own medical level, improve their ability to identify and screen the epidemics, and provide effective doctor-patient communication while maintaining their own safety during an outbreaks epidemic.
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Teaching and learning objectives	
Teaching objectives	Since the high-risk population cannot be excluded, it is necessary for GPs to have a good insight on how to avoid the missed diagnosis of suspected cases resulting in a wider spread of the population when visiting a patient with fever during the epidemic period and GPs should be provided level 2 protections against the COVID-19.
learning objectives	Patients with fever will be treated by general practitioners who have been specially trained.
Medicine and team resource management	During the fever inquiry, the epidemiological investigation must be followed up with language communication skills while patients complete the questionnaire. Fever clinic and general clinic should pay attention to standardized referral for patients with the COVID-19. The medical staff shall carry out level 2 protections, and operate in a standardized manner when taking off the protective clothing to avoid their own infection.
Infection prevention and control objectives	Measures to prevent the COVID-19 infection are shown in the Guideline on the Novel Coronavirus Infected Pneumonia Diagnosis and Treatment. People should wear masks, keep their hands clean, pay attention to 1 meter distance with others, ensure ventilation and personal hygiene. Our control goal is to hope for zero infection of medical staffs.

Trainee, training places and lecturers

Target Trainee	<input checked="" type="checkbox"/> General Practice Trainees	<input checked="" type="checkbox"/> Outpatient nurse	<input checked="" type="checkbox"/> General Attending Doctor
	General practitioner	Public Health Doctor	Community nurse
Other students: Infectious disease prevention and control team, such as hospital infection specialist			
Training places	<input type="checkbox"/> Teaching Center	<input checked="" type="checkbox"/> Scenario simulation	<input type="checkbox"/> other
Suggestions on teaching manpower requirements			
Simulation instructor: 1			
SP patients: 1			
Simulation GPs: 3			

Situation Support Team

Situation Writing Time	February 20, 2020
Situation writer	General Practice teaching secretary
Department	General Practice Teaching and Research Office

Section2A. Initial Patient Information

SP (standardized patient) medical record

Patient: Mr. Chen	Age: 42	Sex: Male	Occupation: Teacher
Chief complaint: 2 days of low fever with dry cough and fatigue.			
Body temperature: 37.7 °C	Heart rate: 85bpm	Blood pressure: 120/80mmHg	Respiratory rate: 18/min
Mean oxygen saturation: 96% Oxygen concentration: anaerobic therapy			

Peripheral blood glucose: 6.3 mmol/l

Medical records: Mr. Chen, a 42-year-old man, developed a sore throat and runny nose after getting cold for 1 week and took medication (Paracetamol, Radix Isatidis granules) by himself, symptoms relieved. In the past 2 days, he developed dry cough, low fever and fatigue, self-measured body temperature of 37.7 degrees without dyspnea, expectoration, hemoptysis, asthma, and no chest pain, no muscle soreness, no palpitations, no abdominal pain, no diarrhea. So he came to the community General Clinic for treatment. The patient has been driving back to Shanghai from Wuhan, Hubei province for nearly 3 days without going out. Three members of the family live together and work in Shanghai for a long time. During the Chinese New Year in Wuhan, his parents were healthy without fever and respiratory symptoms. And he has a past history of chronic allergic rhinitis and a history of seasonal attacks.

Allergic history: He was allergic to penicillin

Past history: No history of hypertension, diabetes, asthma; no smoking and drinking habits; married with 1 healthy girl; no history of surgery; intellectual family, and long-term residence in Shanghai.

Current medication: (Paracetamol, Aminophenazole, etc) (Banlangen granules)

Section 2B. Additional patient information

A. Other past history

Including other past histories not asked during the medical history collection, where patient information is provided only during simulated general practitioners inquiries and provided by the SP script (e.g. by a Simulator Dialogue, Assistant Actor, SP Patient or others)

The patient's past history can provide infectious history, past medical history, and General Practice medical history.

Medical history collection skills require doctor-patient communication and skills. During the epidemic, patients have a fear of getting helpless, a sense of unwillingness to be isolated and lose their freedom, and a sense of incomprehension about the medical profession.

B. Physical examination

Here are physical examination results: temperature; heart rate; breathing; lung; respiratory tract examination results

General condition: Active position, Walkable	Circulatory system: Heart rate, blood pressure, chest pain
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Respiratory system: Respiratory rate; Bilateral percussion sound of respiratory; Respiratory-related symptoms	Abdomen: pain
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Skeletal system/ Muscle system/Skin: painful muscle, flushing of the skin	Neural system: Consciousness, mood, strength
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Others

Section 3. Technical support and site layout requirements

A. SP patient

Simulator: Adult

Standardized patient: SP

Skill Model

Hybrid simulation

B. Required equipment

Negative pressure/isolated ward

All trainees should wear personal protective equipment (level 2 protection)

Protective Equipment Access Area / Front Chamber—Use tape to isolate the simulated front area on the floor.

C. Required medicines

Common drugs for fever and cold treatment after excluding infectious diseases, such as Paracetamol, Banlangen granules, etc.

D. make up

The COVID-19 pattern can be applied to prominent locations on the human body to indicate suspicious infection

SP can show anxious expression through makeup

E. General site setting of fever clinic for training

Patient temperature measurement, showing a body temperature of 37.7 degrees; terminal oxygen 96%

Patient's lung examination reveals normal sounds

Stethoscope, thermometer, terminal oxygen saturation meter (optional), mask, disposable sanitizer, flashlight

F. Patient response and physical examination

List the symptoms of SP here: ABCD format available

A— Upper respiratory infection, runny nose, sore throat, dry cough

B—Breath sounds voice are conduction no were normal, the heart rate is slightly faster, and no edema in both legs.

C— body temperature 37.7 degrees, anxiety, worried about getting sick

D — Free movement, sore throat, runny nose, relief from medication, and some concerns about low fever and fatigue.

Section 4. Assistant and standardized patient

Acting and standardizing patient roles, script lines

Roles	List the roles, the behaviors of the expected role performance, the key timings that need to be involved or reminded, and the script lines that need to cooperate with the performance (including: if the SP cannot cope, who is responsible for assisting in delivering the information of the SP patient)
Standardizing patient	(If a standardized patient is used as the patient): When the patient arrives at the fever clinic, the patient shows fatigue, runny nose, cough and anxiety, and does not wear a mask. SP performance: fatigue and anxiety When entering the history collection stage, if the simulated GPs asks the SP can't cope, the assistant performance can help answer, otherwise it can't speak.

Section 5. Respiratory infection with fever excludes the COVID-19 case procedures

Triggers of situation state, adjustment, and entering the next state of the situation

Patient's physiological status / vital signs	Patient's physiological status	Adjust or trigger to the next situation according to the students' actions	Trainer Record
Triage T 37.7 °C P 85/min, normal Bp 120/80mmHg R 18/min SO ₂ 96% anxiety	He was breathing normally, had low fever, runny nose, no chest tightness, and had a history of rhinitis. He was a teacher. He did not contact the students during the winter vacation. He drove back to Shanghai by driving from Wuhan, Hubei in the past 3 days, and did not go out afterwards.	Expect students to take action <input type="checkbox"/> Measure vital signs <input type="checkbox"/> Further collection of medical history <input type="checkbox"/> Good doctor-patient communication, gaining the trust of patients <input type="checkbox"/> Promote the knowledge of the new crown and inform the harm of infectious diseases. <input type="checkbox"/> What to do if suspicious patients	Adjustment Changing the patient's situation based on the student's behavior Trigger Go to the next state -The patient cannot be ruled out as a suspicious COVID-19 patient, and further examination.

Triggers of situation state, adjustment, and entering the next state of the situation

Patient's physiological status / vital signs	Patient's physiological status	Adjust or trigger to the next situation according to the students' actions	Trainer Record
2. Initial assessment R 18/min SO ₂ 96%	Blood routine: WBC 9.03×10 ⁹ /L Hb 148g/L NEUT% 68 LY% 12.0,↓ MONO%, 17.6,↑; CRP ,4.80MG/DL; NEUT#: 6.14×10 ⁹ /L MONO#: 1.59×10 ⁹ /L Flu A-Ag (-) Flu B-Ag (-) The chest X-ray showed mild inflammation in the right middle lobe.	<p>Expect students to take action</p> <p><input type="checkbox"/>Conduct inquiry by SOAP model, conduct an epidemiological inquiry on patients with fever and respiratory symptoms, and take a medical history within fourteen days such as: cases from Wuhan; contacts from patients with the COVID-19; Peripheral or case reports of fever or respiratory symptoms in the community; cluster history, 2 or more cases of fever or respiratory symptoms in a small area within 2 weeks.</p> <p><input type="checkbox"/>Physical examination: Chest auscultation</p> <p><input type="checkbox"/>Examination of CRP and chest radiograph.</p> <p><input type="checkbox"/>Communicate with patients and inform them of the COVID-19 is rapidly progressing and the harm of the disease, and get the patient's understanding.</p>	
Transfers Patient has epidemiological history Low WBC, LY Chest radiograph abnormality fever	The current situation of the patient combined with the seventh edition of the Guidelines on the New Coronavirus Infected Pneumonia Diagnosis and Treatment: Any one of the epidemiological history and any two of the clinical manifestations. If there is no clear epidemiological history, it meets 3 of the clinical manifestations.	<p>Expect students to take action</p> <p><input type="checkbox"/>Inform the superior doctor of the suspected case, and ask the expert group in the hospital for consultation. If the case is suspected, complete the online report within 2 hours and contact the CDC in Shanghai, Changning District for sampling.</p> <p><input type="checkbox"/>Contact a designated person in the designated hospital to inform them of the patient's situation.</p>	<p>Adjustment</p> <p>Trigger item</p> <p>— Successful referral</p>

Triggers of situation state, adjustment, and entering the next state of the situation

Patient's physiological status / vital signs	Patient's physiological status	Adjust or trigger to the next situation according to the students' actions	Trainer Record
4. General precautions and exposure management	Follow-up of patients after referral. If the case is confirmed, investigation of close contacts is needed, which will be completed by the Centers for Disease Prevention and Control	<input type="checkbox"/> The epidemiological investigation and close contact investigation and treatment of confirmed cases are conducted by CDC. <input type="checkbox"/> Direct online reporting and contact the CDC of Changning District <input type="checkbox"/> The special case contact car is arranged by the Changning District CDC Emergency Office, phone number 962120	Adjustment Trigger item — Complete all disposal actions