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**TAME**

**Training Against Medical Error**

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# D 3.2 New cases identified and created

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## 1. Introduction

Deliverable 3.2 aims to report the process of writing case study and creating new cases in Partner Country Universities. Kazakhstan, Ukraine and Vietnam Universities identified area/field for new case, identified place in current curriculum and modified to implement cases into teaching and learning. Ready cases peer reviewed and modified in response to feedback.

## 2. Identification of learning outcomes for new cases in each country

According to the project proposal, each PCU is initially expected to modernize curriculum in each country. In the second phase of the project. PCUs' identified area/field of new VP case, identfied learning outcomes and medical errors for further creation and implementation into appropriate year.

### 2.1 Astana Medical University (AMU), Kazakhstan

In order to start case writing, AMU team conducted an analysis of the GP field and defined the directions for writing. New cases were planned to be writtten for GP in cardiology, GP in pulmonology, GP in endocrinology, GP in obstetrics and gynaecology, GP in children's diseases, GP in hematology. The structure of each case should have have medical errors. Learning outcomes for new 6 VP cases given below:

**VP case #1 "Pneumonia (cough)".**

Learning outcome for VP case #1: clinical manifestations of pneumonia, pecularities in elderly patients, treatment, specific investigations, clinical signs of infection toxic shock, differential diagnosis of cough, according to national guidelines.

Medical error: Poor triage, Fixation, Ignorance, poor communications and bravado

**VP Case #2 "headache (hypertension)".**

Learning outcomes for VP case #2: Definition of hypertension, classification hypertension due to of levels of BP, Types of headache, differential diagnosis, clinical presentation, Physical examination, some clinical features, Laboratory and instrumental check-up, Hypertension management, patient education, treatment according to local guidelines.

Medical error: Lack of skill. Miss-triage. System error

**VP case # 3 " Thirsty (diabetes mellitus).**

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Learning outcomes for VP case: Clinical manifestations of diabetes mellitus and its complications, diagnosis and differential diagnosis of diabetes mellitus according to protocol, laboratory diagnosis of diabetes mellitus, risk of death from diabetes mellitus, treatment of type 1 diabetes mellitus, therapeutic tactics of managing patients with ketoacidosis according to the protocol.

Medical error: " Ignorance, Team-working, poor communication, bravado, sloth, fixation, lack of skills and knowledge.

**VP case #4 "Anemia".**

Learning outcomes for VP case # 4: Deepening and expanding knowledge of the causes of anemia during pregnancy. Development of the ability to assess and analyze the situation with the development of anemia in pregnant women. Skills and skills in choosing tactics, diagnosis, emergency care, rational transportation and post-hospital rehabilitation in anemia in pregnant women at the primary level.

Medical error: playing the odds, poor triage,fixation,ignorance

**VP case #5 "Hemorrage (obsetrics-gynecology)".**

Learning outcomes for VP case #5: indications for hospitalization differential diagnosis principles of management features of patients with bleeding complications of bleeding mortality rate of bleeding Ignorance.

Medical error: Team-working, Playing the odds, poor communication, bravado.

**VP case #6**

VP case #6 "Difficult to breath (Child disease),"Etiopathogenesis of stenosis".

Learning outcomes for VP case #6: Clinical picture, complications and differential diagnosis of stenosis, Laboratory diagnostics of laryngotraheitis, Treatment and prevention of laryngotraheitis.

Medical error: Poor communication, Ignorance, Poor triage, Bravado, Playing the odds, System error.

Please see Annex 1 (1.1) for full information.

**2.2 Karaganda State Medical University (KSMU), Kazakhstan**

Before starting case writing, KSMU carefully analysed field/area for new VP cases with medical error. As General Practice field is broad area, cases was written specifically for GP in Cardiology, GP in Pulmonology, GP in gastroenterology, GP in endocrinology, GP in obstetrics and gynaecology, GP in Children Disease. According to case structure each

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case needed to have medical errors. Learning outcomes for new 6 VP cases presented below :

**VP case #1 “Chest pain (myocardial infarction)”:**

Learning outcome for VP case #1 : Atypical forms of myocardial infarction, Interpretation of ECG, Differential diagnosis of abdominal pain, Stages of treatment and rehabilitation of patients with myocardial infarction according to the clinical protocol.

Medical error: Playing the odds, Poor triage, Fixation, Ignorance

**VP Case #2 “Breathlessness (bronchial asthma)”:**

Learning outcomes for VP case #2: Ethiology, pathogenesis of bronchial asthma, Clinical presentation and differential diagnosis of bronchial asthma, Rational therapy of bronchial asthma.

Medical error: Ignorance, Bravado, Insufficient skills

**VP case # 3 “Bleeding (gastric ulcer)”:**

Learning outcomes for VP case: Intoxication (acute rheumatic fever), Ethiology, pathogenesis of rheumatoid arthritis, Clinical presentation and differential diagnosis of rheumatoid arthritis, Rational therapy of rheumatoid arthritis, Features of conducting patients with rheumatoid arthritis.

Medical error: "Fixation, Sloth, System error, Ignorance

**VP case #4 “Intoxication (acute rheumatic fever)”:**

Learning outcomes for VP case # 4: Ethiology, pathogenesis of rheumatoid arthritis, Clinical presentation and differential diagnosis of rheumatoid arthritis, Rational therapy of rheumatoid arthritis, Features of conducting patients with rheumatoid arthritis.

Medical error: Ignorance, Insufficient skills, System error, Bravado, Timidity

**VP case #5 “Acute abdomen (ectopic pregnancy)”:**

Learning outcomes for VP case #5: Differential diagnosis of acute pain in the abdomen, The problem of ectopic pregnancy in adolescents, Complications of ectopic pregnancy, Treatment and rehabilitation of women with ectopic, pregnancy

Medical error for VP case #5: Poor communication, Ignorance, Bravado, Playing odds, System error

**VP case #6 “Diarrhea (acute enteric infection)” Etiopathogenesis of dysentery”:**

Learning objective for VP case #6: Clinical picture, complications and differential diagnosis of dysentery, Laboratory diagnostics of dysentery, Treatment and prevention of dysentery.

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Medical error: "Poor communication, Ignorance, Poor triage, Bravado, «Playing the odds», System error".

Please see Annex 1(1.2) for full information.

**2.3 Zaporozhye State Medical University (ZSMU), Ukraine**

Before starting case writing, ZSMU carefully analysed field/area for new VP cases with medical error. As surgery field is broad area, cases was written According to case structure each case needed to have medical errors. Learning outcomes for new 6 VP cases presented below :

**VP case #1 "Acute abdominal syndrome (acute appendicitis)":**

Learning outcome for VP case #1 : Causes of acute abdominal syndrome development, Appendicitis: clinical implications, Atypical forms of appendicitis, Differential diagnostics acute abdominal syndrome, Tactics of appendicitis treatment.

Medical error: Fixation Ignorance Team-working Playing the odds

**VP case #2 "Mesenterial thrombosis":**

Learning outcome for VP case #2 : Definition of mesentric trombosis. Aetiology and pathogenesis, Typical and atypical clinical aspects of the disease, Differential diagnostics of mesenterial thrombosis, Principles of non - and surgical treatment, Pecularities of pre-operational preparation.

Medical error: Fixation Sloth Playing the odds.

**VP case #3 "Acute intestinal obstruction":**

Learning outcome for VP case #3 : Definition of mesentric trombosis. Definition of the term. Aetiology and pathogenesis, Typical clinical aspects of Acute intestinal obstruction. Classification. Differential diagnostics, Differential diagnostics of acute intestinal obstruction, Pecularities of examining of patient with acute intestinal obstruction, Modern diagnostic methods, Principles of non surgical treatment, Operation management in case of acute intestinal obstruction.

Medical error: Fixation Ignorance Sloth System error

**VP case #4 "Acute abdominal syndrome (perforative ulcer)":**

Learning outcome for VP case #4: Abdominal pain. Aetiology and pathogenesis of perforated gastroduodenal ulcers, Clinical aspects of typical and atypical perforated gastroduodenal ulcer, Diagnostics and differential diagnostics of typical and atypical perforated gastroduodenal ulcer, Disease management in case of perforated

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gastroduodenal ulcer, Non-surgical treatment during post-operational period, Ways of prevention of ulcer.

Medical error: Fixation Ignorance Communication Miss triadge Team working

**VP case #5 "Bacterial complications after surgery":**

Learning outcome for VP case #5: Definition of the term: surgical sepsis, Systemic Inflammation Response Syndrome, Causes of infection generalization in the affected area, Causes of sepsis, Diagnostics of sepsis, Treatment methods of sepsis, Regulations for antibiotic treatment for prevention and treatment of sepsis.

Medical error: Fixation Ignorance Lack of skill Team working

**VP case #6 "Pulmonary embolism":**

Learning outcome for VP case #6: Embolism issue (of pulmonary artery), Causes of development, diagnostics and differential diagnostics, Modern possibilities of non-surgery treatment, Surgical indications, Ways of prevention of embolism of pulmonary artery.

Medical error: Fixation Playing the odds Lack of skills Bravado Miss-triadge

Please see Annex 1 (1.3) for full information.

**2.4 Bukovinian State Medical University (BSMU), Ukraine**

BSMU has created 6 new cases of internal medicine. Each case include some medical errors. Learning outcomes for new 6 VP cases presented below :

**VP case #1 Cough (Bronchial asthma):**

Leading clinical symptoms and syndromes in bronchial asthma. Peculiarities of asthma depending on the severity and level control. Laboratory and instrumental investigations in asthma. Differential diagnosis of asthma and bronchial obstruction syndrome. Clinical management of patients with different clinical variants course of bronchial obstruction syndrome and its complications. Providing emergency assistance in a fit of breathlessness and asthma status.

Medical error: Ignorance, poor team working, fixation, poor triage.

**VP case #2 Fever and rash (Systemic lupus erythematosis):**

The syndrome of fever of unknown origin, infectious rash, clinical manifestations. Leading clinical symptoms and syndromes in systemic lupus erythematosus. Clinical course and complications variants. Laboratory and instrumental datas. Differential diagnosis of systemic connective tissue diseases. Treatment and clinical management of patients. Preventing complications.

Medical error: Insuffience skills, bravado, poor team working, playing the odds.

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**VP case #3. Diarrhea (Acute enteric infection).**

Leading clinical symptoms and syndromes. Differential diagnosis of acute intestinal infections. Differential diagnosis of AEI among themselves and with diseases of the gastrointestinal tract infectious origin. Clinical management of patients with AEI. Anti-epidemic measures in the foci of infection. Emergency conditions in acute intestinal infections.

Medical error: Fixation, playing the odds, bravado, poor communication.

**VP case # 4. Pallor of skin (Anemia).**

Leading clinical symptoms and syndromes. Differential diagnosis of anemia and previous clinical diagnosis, Laboratory and instrumental datas, Treatment and clinical management of patients.

Medical error: Fixation, system error, playing the odds.

**VP case #5. Cardialgia (Infarction of myocardium).**

Leading clinical symptoms and syndromes myocardial infarction. Differential diagnosis of infarction of myocardium and previous clinical diagnosis. Laboratory and instrumental datas of myocardial infarction. Clinical management of patient. Treatment and emergency for complications of myocardial infarction. Preventing complications.

Medical error: Ignorance, poor triage, poor communication

**VP case # 6. Polyuria (Diabetes mellitus).**

Differential diagnosis of the syndrome of hyperglycemia. Leading clinical symptoms and syndromes in diabetes. Differential diagnosis of acute and chronic complications of diabetes. Leading clinical symptoms and syndromes in coma. Providing emergency assistance in a coma. Diagnosis and tactics of children with chronic complications of diabetes. Prevention coma and chronic complications of diabetes.

Medical error: Sloth, ignorance, fixation.

Please see Annex 1 (1.4) for full information.

**2.5 Hanoi Medical University (HMU), Vietnam**

Before starting case writing, HMU was carefully analysed field for new virtaul patient cases with medical error. According to the issue of communicable diseases in Vietnam. HMU was decided to write new cases in Infectious. As General Practice field is broad area, cases was written specifically for GP in HIV/AIDS, Dengue hemorrhagic fever, viral hepatitis, tetanus, typhoid and meningitis and endophthalmitis caused by Streptococus.

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According to case structure each case needed to have medical errors. Learning outcomes for new 6 VP cases presented below :

**VP case #1 Viral hepatitis**:

Learning outcome : Viral hepatitis causal agents and transmission routes, Clinical manifestation of acute viral hepatitis, Laboratory tests for acute viral hepatitis: diagnostic test, hepatic function test, Viral hepatitis B markers, Acute viral hepatitis treatment principle and consultancy, Viral hepatitis prevention.

Medical error: Playing the odds, Poor triage, Fixation, Ignorance

**VP case #2 HIV/AIDS**:

Learning outcomes: HIV transmission route, Pathogenesis relating to HIV prevention and treatment, HIV diagnostic test for adult and children, Diagnosis, treatment and prophylaxis for common OIs, ART: treatment criteria and principles, HIV/AIDS prevention.

Medical error: Fixation, Ignorance, Poor communication, Miss triadge

**VP case #3 Streptococcus suis infection**

Learning outcomes for VP case: Epidemiological characteristics: causal agent, transmission route, Clinical manifestation, Confirmative and differential diagnosis, Treatment for meningitis and sepsis cases, Prevention

Medical error: Insuffiecint skills, Ignorance, Miss Triadge, Poor communication

**VP case #4 Tetanu**s

Learning outcomes: Epidemiological characteristics: causal agent, transmission route , Clinical manifestation, Complication, Laboratory test, Treatment and prevention

Medical error: Bravado, Fixation, Ignorance, Insufficient skills, Miss triadge

**VP case #5 Dengue hemorrhagic fever**

Learning outcomes: Epidemiological characteristics: causal agent, transmission route, Clinical manifestation and laboratory test, Confirmative and differential diagnosis, Treatment and prevention.

Medical error: Bravado, Fixation, Ignorance, Insufficient skills, Miss triadge, Poor communication, Playing the odds

**VP case #6 Typhoid fever**

Learning objective: Epidemiological characteristics: causal agent, transmission route , Clinical manifestation, Complication, Laboratory test, Treatment and prevention

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Medical error: Team-working, Ignorance, Miss triadge, Insufficient skills, Poor communication

Please see Annex 1 (1.5) for full information.

### 2.6 Hue University of Medicine and Pharmacy (HUMP), Vietnam

Before starting writing new virtual patient cases, Hue UMP organized a training course on writing VP cases. The training course helped tutors classifying and applying 10 medical errors: Sloth, fixation, communication, team working, playing the odds, bravado, ignorance, mis-triage, lack of skill, and system error. The course also instructs tutors to create VP cases on the Open Labyrinth software. Project manager assigned tutors to writing 6 new VP cases including: 2 Internal medicine cases , 2 surgery cases, and 2 OBGYN cases.

To write new cases, the case writers identified the specific learning outcomes and types of errors inteded to be taught in the cases. The outline diagram of the case was then drawn to help guiding the writing process. The details of 6 new virtual cases are summarized as below:

**VP case #1 “Abdominal pain, jaundice”.**

Learning outcomes: List the pathologies that may present clinical abdominal pain, jaundice. Diagnosis of patients with specific abdominal pain. Evaluation of treatment response, drug side effects.

Medical errors: Insufficient knowledge and skills, ignorance, fixation/loss of perspective, system error.

**VP case #2 “Headache - subarachnoid hemorrhage”.**

Learning outcomes: Identify a secondary headache, potentially life-threatening. Indicated of clinical cases, exploration for patients with an acute headache. Know the common causes of subarachnoid hemorrhage.

Medical errors: Insufficient skills, fixation, ignorance, system error.

**VP case #3 “Acute appendicitis”**

Learning outcomes: List the causes of acute appendicitis and the course of the disease. Understand the role of clinical symptoms as well as laboratory tests to help diagnose acute appendicitis. Demonstrate differential diagnosis of acute appendicitis. Describe the treatment attitude of acute appendicitis.

Medical errors: Insufficient skills, poor team working, poor triage.

**VP case #4 “Gastrointestinal perforation”**

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Learning outcomes: Diagnosing gastrointestinal perforation. Notes on the late perforation cases. Notes on the treatment and monitoring of gastrointestinal perforation.
Medical errors: Insufficient knowledge and skills, ignorance, fixation/loss of perspective, system error.

**VP case #5 "Postpartum hemorrhage"**

Learning outcomes: List the risk factors for postpartum hemorrhage. Diagnosis and handling of postpartum haemorrhage.

Medical errors: Ignorance, insufficient skills, poor team working.

**VP case #6 "Pre-eclampsia"**

Learning outcomes: Identification of risk factors for pre-eclampsia. List the criteria for pre-eclampsia diagnosis and the severity of pre-eclampsia. Diagnose the difference between pre-eclampsia and hypertension in other pregnancies. Treatment of pre-eclampsia.

Medical errors: Ignorance, insufficient skills, poor team working.

Please see Annex 1 (1.6) for full information.

## 3. Creation of new cases according to identified learning outcomes:

New case studies are written based on the identified learning outcomes. Each partner country university has different case studies consistence with health-related circumstances of each country. Prior to the creation of new cases activity, several meetings and workshops has been conducted with the aim of training the tutors and discussing within working group about writing the new cases. Afterward, new case studies are constructed.

### 3.1 Agreeing a process for writing new cases and team construction

#### 3.1.1 Astana Medical University (AMU), Kazakhstan

AMU created working group for writing new clinical cases. Clinical cases based on medical errors were written according to educational programme. Two AMU tutors Nurpeissova R. and Suleimenova D. were trained at Saint Georges University of London, UK for case writing on the 5-6th of December 2017. Afterwards above-mentioned trainers organized local training "How to write clinical cases based on medical errors" for 6 tutors in the University. During the local training tutors were given hand-outs which include general information about clinical cases, medical errors, some rules for writing cases, how many errors should be implemented. Working group had regular meetings for discussion VP case writing at the beginning twice per month, later once per month. Each tutor wrote 1

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clinical case. Approximately each tutor spent 102 hours for writing of one case. Case writers: Nurpeissova R. – #1 case., Bekbergenova Zh. #2 case, Shneide K. - #3 case, Zhakupbekova M.- #4 case, Tyan V.- #5case, Aigerim.- #6case.

### 3.1.2 Karaganda State Medical University(KSMU), Kazakhstan

KSMU created working group consisted of clinicians, medical teachers of GP Department and administrative staff. Total 10 clinicians participated at creation of new cases. Working group had regular meetings for discussion VP case writing at the beginning stage twice per month, later stages 1 per month.

K. Dobler, key tutor from KSMU was trainied at Saint Georges University of London, UK for case writing 5-6th of December 2017. 9 KSMU medical teachers were trained for writing new case locally by K. Dobler.

Each medical teacher worked on more than 1 case. Average each 1 case writer spent 108 hours per case. Working group identified responsible staff for each new VP case as below:

Case authors: #1 K. Dobler; #2 A. Beysenaeva, A. Ibysheva, A. Sersauletova; #3: K. Amangeldieva, K. Dobler; #4 A. Beysenaeva, A. Ibysheva, A. Sersauletova; #5 M.Serikova, B.Otynshiev, Zh. Kalbekov; # 6 A. Dyusembaeva, G. Alshinbekova.

### 3.1.3 Zaporozhye State Medical University (ZSMU), Ukraine

After the trainings on VP cases with medical errors creation (December 05-06, 2016 in London – participants from ZSMU – Kostrovskyi O.M. and Bilyi A. K., and local trainings on 08.12.16, 20.12.16 и 22.12.2016) the working group on surgical VP cases with medical errors was formed:

Voloshyn O. M., Assistant Professor of the department of hospital surgery;

Kapshytar O. O., Assistant Professor of the department of general surgery and care of patients;

Bilai A. I., Assistant Professor of Faculty Surgery department.

Kostrovskyi O.M., Associate Professor of the Otorhinolaryngology Department, was a responsible person for the process of the cases creation in ZSMU.

The working group started their work on 10 of January 2017. Every week local meetings concerning the peculiarities of VP cases creation, as well as control over the process of creation, were organized.

The coordinator from ZSMU, responsible for VP surgical cases creation and technical support, surgeons and the manager were present on the meetings. The

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surgeons were working directly in the OpenLab. ZSMU team has finished the 6 surgical cases writing till

### 3.1.4 Bukovinian State Medical University (BSMU), Ukraine

The feedback was provided by students after 6 VP cases from various fields of internal medicine. The BSMU team assessed the need for modification of cases from feedback and introduced these changes to 6 cases of VP, improved diagnostic and therapeutic search according to the initial symptom and fixed diagnosis. Then cases were considered by the appropriate narrow specialists again for accuracy.

### 3.1.5 Hanoi Medical University (HMU), Vietnam

HMU created working group consisted of clinicians, medical teachers of Infectiuos Department and administrative staff. Total 8 clinicians participated at creation of new cases. Working group had regular meetings for discussion writing new cases first step everywek.

Dr. Nguyen Kim Thu, key tutor from the Department of Infectious Diseases, Hanoi Medical University, was trainied at Saint Georges University of London, UK for case writing 5-6th of December 2017. 06 HMU medical teachers were trained for writing new case locally by Dr. Nguyen Kim Thu.

Working group identified responsible staff for each new VP case as below:

Case authors:

| | | | |
|---|---|---|---|
| **HIV/AIDS** | Dr. Vu Quoc Dat | **Streptococcus suis infection** | Dr. Le Thi Hoa |
| **Viral hepatitis** | Dr. Nguyen Kim Thu | **Dengue hemorrhagic fever** | Dr. Nguyen Manh Truong |
| **Tetanus** | Dr. Nguyen Van Duyet | **Typhoid fever** | Dr. Nguyen Thi Lien Ha |

### 3.1.6 Hue University of Medicine and Pharmacy (HUMP), Vietnam

Total 5 lecturers in Hue UMP participated in the creation of new VP cases. A working group consisted of key tutor, technician, and secretary has been created to support lecturers in writing new cases.

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Dr. Le Van Chi and A/Prof. Ton Nu Van Anh, key tutors from Hue UMP who were trained at Saint Georges University of London, UK for case writing on 5-6th of December 2016. Five lecturers were trained for writing new case locally by Dr. Chi and A/Prof. Anh.

Each lecturer is responsible for 1 case or 2 cases. In average, writer spent 108 hours per case. Project management identified responsible staff for each new VP case as below:

Case authors:

- Internal medicine cases: VP case #1 Le Minh Tan, VP case #2 Tran Thi Phuoc Yen
- Surgery cases: VP case #3 Phan Dinh Tuan Dung, VP case #4 Nguyen Doan Van Phu
- Obstetric cases: VP case #5 and VP case #6 Nguyen Hoang Long

After drafting the cases, there were 3 rounds of meeting among project management, key tutors and case writers were organized to discuss about the case. The first meeting was to discuss about the case's diagram, decision points, and medical knowledge according to the case's requirements. The second meeting was to review the case improvement based on the agreement of the first meeting. The last meeting was to finalize the case before delivering to students for their feedbacks.

## 3.2 New case structure

### 3.2.1 Astana Medical University (AMU), Kazakhstan

**Case author: BekbergenovaZh.,Headache (hyperpiesis)**

Outpatient care

You are a resident doctor, practice at the GP department in the city polyclinic No. 4. Because of the absence of a doctor on the site, you were sent to a call to the patient's house.

Patient Alma, a teacher of 60 years, complains about pains in the occipital region, dizziness, noise in the ears, flashing of flies before his eyes, nausea. Deterioration is associated with emotional stress. The patient is registered with D-accounting for arterial hypertension, basic therapy does not take regularly. From her words she drank a tablet of nifedipine and enalapril 10 mg. before your arrival (about half an hour). You are measuring blood pressure. The blood pressure on the right and left arm is 200/120 mm Hg.

Your further tactics:

• Give a tablet of captopril and recommend sleeping

• Observe the patient and give a tablet of nifedipine

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• Hospitalize the patient in an urgent way to the hospital

**Case author: Nurpeissova R.; Cough (Pneumonia)**

Family-outpatient clinic

You are a GP doctor in the family –outpatient clinic, the patient SerikBaizhanov came to you, 68 years old, complained of a fever of 39.5C, a cough with hard-to-recover sputum, a headache, dizziness, general weakness, shortness of breath and palpitations, and chest pains.

Anamnesis of the disease: from the patients words he is sick within a week when appeared the increase of the temperature to 39.0 C, a cough with hardly detachable sputum, the patient connects with hypothermia. Independently he was treated at home: plentiful drink, teraflju, ambro, salbutamol, bisoprolol. According to the daughter's words his condition went worse today, when the cough increased, joined dyspnea, body temperature rose to 39.5 C, chest pain.

Three years ago, there was an operation on the heart; the patient does not remember the name of the surgical intervention, he is on a dispensary record with a cardiologist, the diagnosis: Ischemic heart disease, angina pectoris, 2 FC. Harmful habits: smokes for 35 years, deep vein thrombosis of the leg.

Your actions:

- take a general blood test, send to a pulmonologist
- give an antibiotic and send the patient home
- do a chest x-ray, do re-examination

**Case author: Shnaider K., General Weakness (Anemia)**.

You are a resident doctor of a city polyclinic; a pregnant woman of 20 years came to you, a gestation period of 28 weeks from the patient's words there is an increased fatigue, weakness, dizziness, daytime drowsiness and sleeplessness at night, decreased performance, irritability, tearfulness.

The anamnesis: diseases in the past - ARVI , a chronic pyelonephritis, mensis from 13 years, 1 marriage , pregnancy - 2, no allergy, without bad habits. There was no contact with infectious patients. There were no blood transfusions. Injuries, surgeries denied. On the D account of pregnancy is not registered.

Physical examination: Skin pale, light yellowness of the hands and nasolabial triangle. Consciousness is clear. Temperature: 37.0. The heart rate is 78-88 beats / min, the BP 90/60 mm Hg on the left arm and 90/60 mm Hg on the right arm, with auscultation of the

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heart - systolic murmur at the apex of the heart and at the point of the projection of the pulmonary artery, the deafness of the heart sounds. There is shortness of breath during physical activity, auscultatory - there are no changes in lungs. The abdomen is soft, increased due to pregnancy. A uterus with clear contours, tone is elevated, there are no local pains. The position of the fetus is longitudinal, there is a head. Palpitation of the fetus 140 beats per minute, rhythmic.

Your actions:

• let go home, recommend to register for pregnancy

• consultation with a gynecologist

• ask the patient to come for a examination in a clinic

**Case author: Zhakupbekova.M, Thirst (Diabetes mellitus)**

Emergency room

In the waiting room at 22.00 p.m. MarchenkoDmitrij, 19, comes with an ambulance, with complaints of abdominal pain, nausea, repeated vomiting. Deterioration during the day after taking two bottles of Dizi.

Objectively: The patient is somewhat drowsy, answers the questions with a hitch. The skin is pale, dry to the touch. Height 170, weight 64 kg BMI = 22 kg / m2. In the lungs, breath is vesicular, there is no wheezing. BH 20 per min. Heart rhythmic activity, clear tones, blood pressure 100/80 mmHg, HRC 116 per min. The abdomen is soft, painful in epigastrium. The liver is palpated at the edge of the costal arch.

The patient arrived accompanied by his mother. What are your actions at this stage?

- make a C.B.C and call for a surgeon's consultation.
- rinse the stomach and perform rehydration therapy
- collect additional history.
- make the fiberoptic gastroduodenoscopy and hospitalize in the therapeutics department;

**Case author: Zhuzzhasarova A. Difficult breathing (Bronchial asthma).**

You are a doctor of an infectious hospital.

You are a doctor of a children's infectious hospital. Three children are admitted to your department simultaneously:

1. Child- Asem, age 5 years. T-37.1C. Complaints about: runny nose, cough, loss of appetite, weakness.

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2. Child -Askar, age 2 year T38.5 C. Complaints about: anxiety, shortness of noisy breathing, hoarseness of voice, rough barking cough, shortness of breath.

3. Child Marat, age 7 years. T-36.5C. Complaints about double vomiting, anxiety, lethargy. The liquid drinks well, the appetite is reduced.

Which child most requires attention?

- Child with subfebrile temperature.
- Child with difficult noisy breathing
- Child with a single vomiting

**Case author Tyan V.. Bleeding (abruption of placenta).**

Emergency room.

You are a doctor in the emergency room. During your duty LuizaAkhmetova 34 years, is taken by the ambulance brigade. The patient complaints of regular contractions. She was examined by an ambulance doctor who noted the full opening of the uterine throat. From anamnesis: pregnancy - 6, 2 abortions (the last abortion was complicated by metroendometritis), childbirth - 4, miscarriage - 1.

3 minutes after admission, at the reception room, the birth began and a boy was born with a weight of 3250, the score for Apgar was 7-8. The neonatologist was urgently invited to the emergency room. 15 minutes after the birth of the afterburn, a heavy bleeding started, which could not be stopped. The blood loss was 600 ml.

**Your tactic:**

- carry out an objective examination and examination of the placenta
- mobilization of free staff
- collect anamnesis and start the administration of oxytocin

The case structure (case maps) is performed in Annex 2 (2.1).

### 3.2.2 Karaganda State Medical University (KSMU), Kazakhstan

*Case 1. Askar Yussupov. Diarrhea (acute enteric infection). Patient presentation for case:*

Askar comes to the doctor. Askar is ill by dysentery. The onset of the disease in Askar with a fever of 39.3C, severe weakness, severe headache, dizziness, nausea, the urge to vomit, a feeling of "fluid transfusion" in the intestine.

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*Case 2. Nurbol Assanov. Breathlessness (bronchial asthma). Patient presentation for case:*

Nurbol Assanov is 18 years old are visiting intern of 2 Year training. Medical doctor visited Nurbol 4 days ago at home. He had temperature - 38 ° C, runny nose, ыore throat and a painful dry cough. These symptoms disturbed Nurbol for 6 days.

*Case 3. Viktoria Lavrova. Intoxication (acute rheumatic fever). Patient presentation for case:*

Viktoria Lavrova, 24 years old patient, visited GP, complaining of weakness and fatigue, raising her body temperature to 37.7 ° C.

*Case 4. Serik Nurzhanov. Bleeding (gastric ulcer). Patient presentation for case:*

Nurzhanov Serik, 40 years old have complains to weakness, palpitation, dizziness, headaches, cough with scant sputum, abdominal pain.

*Case 5. Yermek Kunayev. Chest pain (myocardial infarction). Patient presentation for case:*

Yermek Kunayev, a 53-year-old man with severe pain in the epigastric region, nausea, vomiting, periodic belching.

*Case 6. Marzhan Akhmetova. Acute abdomen (ectopic pregnancy).*

Marzhan Akhmetova, complaints in the abdomen, temperature, vomiting, menstruation ...

The case structure (case maps) is performed in Annex 2 (2.2).

### 3.2.3. Zaporozhye State Medical University (ZSMU), Ukraine

During the period of 5 months, ZSMU has created 6 VP cases for trainings in the frames of “Medical errors in surgery”. All cases go live in the OpenLab platform and screenshots of maps are put in Annex 2 (2.3).

Below you can see the summary of the VP cases:

**Case 1. Mykola Savin (Acute appendicitis). Author: Andrii Bilai**

**Choices are denoted Excellent (E)/Good (G)/Poor (P)**

**Case outline**

You are a doctor of the admission department.
Your new patient is a 55 year old man, Mykola Savin.
He was delivered to the Regional Clinical Hospital on 13.11.13, at 5:20 with complaints of aching lumbar pains behind the sternum, a feeling of numbness in the fingers of the left arm, heaviness in the right Iliac region, vomiting, loose stools. Deterioration of health at 01:00, when the lumbar pains behind the sternum appeared, gradually increasing in intensity, the pains made the patient awaiken, there was a feeling of numbness in the

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fingers of the left hand. Also, the patient noted pain in the epigastric region and heaviness in the lumbar region on the right, cramps when urinating. In the evening before the admission he drank 150-160 ml of vodka, and 2 days before admission there were the following manifestations: nausea, a single vomiting of dark color, loose stool up to 3 times a day.
According to his wife's story, Mykola has been working at Zaporizhstal for the last 36 years. During the last medical occupational examinations, a high blood pressure was diagnosed, and a planned hospitalization was recommended, which is still only in the plans.
During the last examination, the ultrasonography was made, and calculus was found, he was recommended to visit the urologist, but has not consulted the doctor at the polyclinic yet.

**From the anamnesis of life:** HIV, hepatitis denies, surgical interventions were not made.
On examination: T 36.9 ° C, BP 190 and 120 mm. Hg; Art., Heart rate = Ps 60 per min. Heart sounds are muffled, rhythmic. Respiratory rate is 18 sighs per minute. In the lungs, breathing is hard, inhaling: exhalation 1: 1. The abdomen is soft, slightly painful, the peristalsis is audible. Costovertebral angle tenderness is weakly positive on the right. The stool is liquid - 3-fold. Diuresis – cramps while urination.
The antihypertensive therapy was delivered to the patient. Results of examination 6:00: AD 150 and 100 mm. Hg; Art.

**Choices are denoted Excellent (E)/Good (G)/Poor (P)**

**Choice 1** Consultation of the surgeon (E) / Consultation of a gastroenterologist (P) / ECG, laboratory tests, ECHO-CS / urological consultation (G)
On examination: T 36.9 ° C, ABP 190 and 120 mm. Hg. St., Heart rate = Ps 60 per min. Respiratory rate is 18 sighs per minute. The patient's condition is of moderate severity. Skin and visible mucous are pale pink. Heart sounds are muffled, rhythmic. In the lungs, breathing is hard, inhaling: exhalation 1: 1. The abdomen is soft, slightly painful in epimesogastrium, peristalsis is audible. Costovertebral angle tenderness is weakly positive on the right.

**Choice 2** Computer Tomography of the abdominal cavity / Ultrasound examination of the urinary track system (G) / Laparoscopy (E) / dynamic observation (P)
The Laparoscopy was performed, and inflammatory changes of the appendix were found.

**Choice 3** Sils-appendectomy (P) / Appendectomy of the laparotomy access appendix (G) / Laparoscopic appendectomy and abdominal drainage (E)

**Learning Objectives**
Anatomico-physiological data.
Causes of development of acute abdominal syndrome.
Appendicitis: Clinical manifestations, diagnostics and differential diagnostics, complications, therapeutic tactics.
**Errors covered**

Fixation and Playing the odds
Poor teamworking

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Insufficient skills
Bravado/Timidity

**Case 2. V. Sahan (Pain in stomach (Mesenterial thrombosis)) Author: Oleksandr Voloshyn**

**Case outline**
The patient of 64 years old comes to the general practitioner with complains of severe pain in the stomach, with nausea and urge to vomiting, loose stools, asthenia and distress.

**From the anamnesis of disease:**
Over a long period of time the patient has been followed-up by the gastroenterologist with a chronic gastroduodenitis, associated with HelicobacterPylori, 2 years ago Eradication therapy for Helicobacter pylori infection was received. 40 minutes before the reference to a doctor deterioration occurred, and the abovementioned complaints occurred.

**From the anamnesis of life:**
The patient denies tuberculosis, diabetes, skin and venereal diseases, diabetes.
It's known that the patient has been engaged in archeology for 30 years, is still working at the present moment, labour conditions are not satisfactory, nutrition is not regular, regularly goes abroad, the last business trip was 1,5 month ago to the Middle Eastern countries. The patient remembered several cases of acute enteric infection among his colleagues.
He is also followed-up by the private cardiologist with the diagnosis Coronary heart disease: ischaemic heart disease, postinfarction cardiosclerosis (heart attack in 2009), postinfarction aneurysm of the left heart ventricle. 6 years ago coronary artery bypass grafting in the basin of the right coronary artery, of the left circumflex coronary artery and Dor plastics of the left ventricle were done.
After the heart surgery the patient noted occasional rhythm disruptions, and 2 years later Frederick Syndrome developed. The patient is a heavy smoker and suffers from chronic obstructive pulmonary disease (the diagnose was made 8 years ago) and chronic cor pulmonale with heart failure 2A II ФК. The patient also complains on increase in arterial blood pressure, the patient regulates it with permanent taking of Lisinopril and bisopronol.
At the age of 18 he had an appendectomy, and at the age of 40 the patient was operated because of peritoneal adhesions and mechanical intestinal obstruction.
In 2015 a procedure of stenting of the left common iliac artery was made because of the atherosclerotic vascular disease of the lower extremities with the clinical manifestations of intermittent lameness while walking less than 70m. Stenosis of the left renal artery up to 65 % was found during the angiography, the patient has refused to receive endovascular correction.

**Choice 1**. Send the patient to the general surgeon (G) (2 hours and 30 min) / anaesthetize, make antispasmodic injection and transfer the patient to the surgical department (G) / multislice computed tomography of the abdominal cavity organs (G) (5 hours) / Diagnostic laparoscopy (G) / Urgent laparotomy, attempt to conduct thrombectomy from the superior mesenteric artery (G)

**Choice 2**. Continue diagnostics and start conservative treatment (P) (6 hours) / anaesthetize, transfer the patient to the surgical department (G).

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**Choice 3**. Stop the physical examination and send the patient to the inpatient surgery department (E) / conduct angiography of the aorta abdominal region and all its branches (E) (1 hour and 20 min) / selective thrombolysis Actilise 100 mg (E).

**Learning Objectives**
Anatomical and physiological peculiarities of the aorta and its visceral branches;
Mesenterial thrombosis: ethiology and risk factors;
Aspects, diagnostics and differential diagnostics of the Mesenterial thrombosis
Peculiarities of surgical treatment and thrombotic therapy in patients with thrombosis

**Errors covered**
Fixation
Poor teamworking
Playing the odds

**Case 3 Prokhir Shaliapin (Acute intestinal obstruction). Author: Oleksii Kapshytar**
**Case outline**
You are an ambulance doctor.
On 14.02.2017 at 15.00 the ambulance team came after the call made to the Central substation at 14:50 to the patient Prokhir Shaliapin, born in 1943 (74 years old). During the examination it was discovered that the patient has been suffering from ischemic heart disease for a long time: exertional angina, hypertensive disease of the 2$^{nd}$ type. The patient had appendectomy in the past. The patient suffers from periodical epigastric burnings (he stops the manifestations with baking soda). Prokhir has been smoking since 14. Dysuric manifestations has been disturbing the last 8 years.
The last meal was at 12:00 (smoked sausage with bread), the severe acute and squeezing pain in epigastric region appeared, nausea, repeated vomiting with gastric material, liquid stool as well.

**Results of an examination**: the condition is satisfactory, conscious, mentally competent. The skin is pale pink, Arterial blood pressure - 160/90 mm. Hg; St., Heart rate = Ps 92 per 1 min. The respiratory rate is 20 sighs per min. The tongue is moist, the abdomen is not swollen and soft, slightly painful in the epigastrium, there are no peritoneal signs, peristalsis audible. Costovertebral angle tenderness is slightly positive on the right, urinary difficulty.
**Choice 1** – Surgeon consultation (E) / Introduction of antispasmodic agent/ electrocardiogram (P) / Consultation of Infectious Disease Physician (G).
The condition is satisfactory, conscious, mentally competent. The skin is pale pink, AP - 160/90 mm. Hg; St., Heart rate = Ps 92 per 1 min. The respiratory rate is 20 sighs per min. The tongue is moist, the abdomen is not swollen and soft, slightly painful in the epigastrium, there are no peritoneal signs, peristalsis audible. Costovertebral angle tenderness is slightly positive on the right, urinary difficulty.

**Choice 2** – Consultation of cardiologist / echocardioskopy, multislice computed tomography / refusal of hospitalization (P) / explanation about necessity of consultation / abdominal x-ray / abdominal ultrasound examination (G) / examination by the responsible surgeon (E)
You are a duty medical officer invited to the hospital admissions – define the diagnostic tactics and treatment.

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**Choice 3** – continue the treatment prescribed by the cardiologist/ Infectious Disease Physician / troponin test (P) / abdominal ultrasound examination (G) / hospitalization to the surgical department / the Schwartz Test / diagnostic videolaparoscopy (E)
The Schwartz test was made: taking into account the presence of the scar on the anterior abdominal wall (result of the appendectomy). The patient received barium with the following control of its passage along the intestinal canal. The condition is with negative dynamics, the abdomen is slightly swollen, tachycardia increased.
Dyagnostic videolaparoscopy: small intestine loops are of cherry colour, they are swollen, hemorrhagic effusion in the abdominal cavity, mesentery is oedematous with blood effusion areas. Acute intestinal obstruction is suspected. Diagnostic examination was stopped due to intense swelling of the intestine and high probability of gut wall hurt.

**Choice 4** – continue the treatment prescribed by the cardiologist / of the Infectious Disease Physician / angiography of the coronary arteries (P) / consultation of a general practitioner / control of tests results (G) / consultation of surgeon/ surgical intervention (E).
During examination a commissure was found at a root of mesentery. This commissure goes from a head of blind colon to the root of mesentery and caused the 180° intestinal loop malrotation. Enteropathy is subtotal. After the commissure dissection and procaine block of the root of mesentery the intestinal peristalsis, pulse of vessels and abdominal membrane glaze were recovered. Intestinal tract is considered to be viable. After 14 days the patient was discharged from the hospital in satisfactory health condition.

**Learning Objectives**
Anatomico-physiological data;
Reasons of the acute intestinal obstruction development;
Classification, stages of the acute intestinal obstruction;
Acute intestinal obstruction: clinical manifestations, diagnostics and differential diagnostics, complications, surgical tactics.

**Errors covered**
Fixation, Bravado, Ignorance;
Playing the odds, Insufficient skills;
Sloth;
Poor teamworking.

**Case 4. Eduard Ivanov (Perforated Ulcer). (Author: Andrii Bilai)**

**Case outline**
You are an ambulance doctor.
Patient: Male 47 years old, Eduard Ivanov.
20.01.17 at 3:40 an ambulance was called.
The patient notes complaints of persistent pain in the right upper quadrant with irradiation in the right shoulder blade and lower back, vomiting with an admixture of bile. Deterioration of health at 01:00, when the pain in the right hypochondrium, nausea, the urge to vomit from which the patient woke up appeared, there was a feeling of bitterness and burning in the mouth. The day before in the evening, he ate fatty foods and oriental dishes, and 2 days before the arrival he suffered from heartburn, weakness, heaviness in epigastrium.

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According to his wife, Edward has been working in a restaurant of Japanese food for 15 years. During the last occupational examination, Edward was diagnosed with concussions of the gallbladder on ultrasound, he was recommended an observation by a gastroenterologist, but he has not consulted a doctor at the polyclinic yet. Periodically, he noted pain attacks in the right hypochondrium, which were stopped by taking antispasmodics and following a diet: Table №5.

**From the anamnesis of disease**: repeatedly passed a course of ulcer therapy in occasion of a chronic ulcer 12 p.c. However, he has not followed the recommendations for taking acid-lowering medications (Pantoprazole, De-nol) and the corresponding diet. Drugs were taken from time to time, when he noticed the appearance of the discomfort in the epigastrium and the appearance of heartburn.
He also had a history of inpatient treatment for ischemic heart disease: diffuse cardio sclerosis, atrial fibrillation.
**From the anamnesis of life**: the patient denies tuberculosis, hepatitis, venereal diseases, diabetes mellitus denies, no allergies to medications. Accepts iron preparations because iron deficiency anemia.
Surgical interventions: 20 years ago, hernia repair was performed with the plastics of its own tissues.
He is followed by the urologist at the place of residence concerning the ICD. There is a stone in the right kidney.
On examination: T 37.7 ° C, ABP 140 and 80 mm. Gt; The heart rate is PS 92 beats per minute. Heart sounds are clear, rhythmic. The respiratory rate is 18 per minute. In the lungs, breath is vesicular, inhaling: exhalation 1: 1. The abdomen is mild, moderately painful in all parts, more in the right upper quadrant, the peristalsis audible. Costovertebral angle tenderness is weakly positive.
**Choice 1** – Anesthetize and transport to the university clinic (E) / anesthetize and leave under the supervision of relatives / send the patient to the clinic for gastroenterologist's examination (P) / anesthetize and transport to the therapeutic department (G)
You are a doctor in the hospital.
At the admission department, an objective examination was conducted.
On examination: T 37.8 ° C, AP 150 and 90 mm. Hg. The heart rate equal to PS 102 beats per minute. Heart sounds are muffled, rhythmic. The respiratory rate is 22 per minute. In the lungs, the breath is vesicular. The abdomen is mild, moderately painful in all parts, mostly in the right parts, irradiuret in the lower back, peristalsis is audible. The patient is injected with an antispasmodic, some improvement is visible.

**Choice 2** – Laboratory tests (P) / additional physical examination (G) / instrumental examination methods (E)
You are a doctor in the hospital. Select the instrumental survey.

**Choice 3** – Ultrasound of the abdominal cavity organs and the urinary track system (P) / fiberoptic esophagogastroduodenoscopy (G) / roentgenoscopy of the thoracic organs and the abdominal cavity organs (E)
Roentgenoscopy of the thoracic organs and the abdominal cavity organs was performed.
Lungs without focal and infiltrative darkening. The hypostasis is on both sides of the diaphragm is. The roots are rectangular. The diaphragm is mobile. In the sinus on the right and above the diaphragm, under the interlobar fissure, the effusion is found. The heart is widened to the left by the left ventricle, the aorta is sclerosed, unfolded.

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In the abdominal cavity there is an expressed increase of pneumatisation of the intestine on the right in the epi-mesogastric region, and the stomach is distended with a liquid level.

**Choice 4** – Consultation of the therapist (P) / Gastroenterologist consultation (G) / Surgeon consultation (E)
The patient was examined by the surgeon of the department, data on complaints, anamnesis of life and the disease were collected, a physical examination of the patient was conducted, instrumental studies were prescribed.
On examination: T 37.7 ° C, AP 140 and 90 mm. Hg; St., Heart rate = Ps 92 per 1 min. Heart sounds are muffled, rhythmic. The respiratory rate is 22 per minute. In the lungs, the breath is vesicular. The abdomen is mild, moderately painful in all parts, predominantly in the right divisions, radiates into the lower back, peristalsis audible.
Laparoscopy of the abdominal cavity is recommended. However, at the moment, the laparoscopic stand is busy because of an urgent surgery for an acute gangrenous cholecystitis.

**Choice 5** – Ultrasound of the abdominal cavity organs and the urinary track system (P) / abdominal ultrasound examination and puncture of fluid clusters (G) / Laparocentesis (E)
Exudate was obtained from the abdominal cavity.
**Choice 6 –** Conservative therapy with endoscopic injection of hemostatic drugs (P) / Neymark test (G) / Laparotomy (E)
When examining the abdominal organs in the right upper quadrant, a small amount of serous effusion with fibrin is found. The loops of the small intestine are swollen. In the gallbladder, various calculi are palpable. On the back wall 12 p.c. the covered perforated ulcer with a fibrinous pellicle is determined.

**Choice 7 –** Gastrectomy by Billrot-2 (P) / Stem vagotomy, excision and suturing of the ulcerative defect (G) / Selective vagotomy, excision and suturing of the ulcerative defect (E)
The operation was performed: laparoscopy (laparotomy), selective proximal vagotomy, excision of the ulcer, duodenoplasty, sanitation and drainage of the abdominal cavity. Conducting a probe for enteral feeding. The patient was discharged on 10 day in a satisfactory condition.

**Learning Objectives**
Anatomico-physiological data;
The reasons for the development of ulcer diseases;
Complications of ulcer diseases;
Perforated ulcer: Clinical manifestations, diagnosis and differential diagnosis, complications, therapeutic tactics.

**Errors covered**
Fixation and loss of perspective, poor triage
Ignorance
Insufficient skills, Bravado/Timidity
Poor communication
Poor teamworking

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## Case 5. Mykola Huryliov. (Pulmonary embolism). Author: Oleksandr Voloshyn

### Case outline

A patient – Mykola Huryliov - 66 years old has come to the Regional Hospital admission department with the complains of the general weakness, ailment, temperature rise, pain in the chest, and discomfort between scapula and lower back.

**From the anamnesis of disease**: about one month ago the patient was treated in the surgical department of the Central Regional Hospital because of bullouse form of rose of the left lower extremity. The patient was discharged from the hospital 10 days ago with slight positive changes. And 7 hours ago because of deterioration of general health condition the patient referred to a doctor in the hospital admissions (temperature rise, pain in the chest and lower back).

**From the anamnesis of life:** about 10 years ago the patient suffered from an injection drug use (injections were made into the great vessels of the lower and upper extremities). According to the evidence of relatives and the patient himself he has been in remission for 10 years. Patient has been suffering from high blood pressure for a long time; the patient is not receiving the required systematic treatment. The patient has been suffering from Hepatitis B and Hepatitis C for about 15 years, from Diabetes of the 2$^{nd}$ type for 5 years. 7 years ago the patient was operated because of the perforated gastric ulcer.

**Results of an examination:** a thin man, 190 sm high, significant kyphoscoliosis and koilosternia are noted. The general health condition of the patient is severe, the state is confusional, the man is a bit retarded; he answers to questions not clearly with significant inspiratory dyspnea. The skin and visible mucous membrane are pale. Body temperature is 37,0°. BP is 100/50 mm.Hg on the left arm and 120/60 mm. Hg on the right arm. RR is 25 sighs per min. Heart rate is 79 beats per min. The respiration is harsh; the breath sounds are abruptly decreased in the lower parts. Upon auscultation the rasping systolic murmur in the second intercostal space on the right from the chest are heard.

**Choice 1**. Do Duplex ultrasound of lower extremity veins / multislice computed tomography of the thoracic organs (E) / 100000 Da of Heparin intravenous by stream infusion through bolus, fiberoptic gastroduodenoscopy urgently (E)

You have introduced 100000 Da of Heparin intravenous by stream infusion through bolus and conducted fiberoptic gastroduodenoscopy urgently. Results of fiberoptic gastroduodenoscopy: Chronic ulcer of the stomach of 7 mm. Hemorrhage Forest 2C. Cicatricial ulcerative deformation of the duodenal cap. Slight erosion. / Heparinotherapy in the department of the intensive care, anti-ulcer therapy (E)

From the second day of the heparin therapy the patient's health improved. The result of the control multislice computed tomography after 5 days: Miller index reduced, and now it is 10. On the 7$^{th}$ day of the management the patient was transferred to the ward of the cardiac surgery department. The therapy was changed to indirect-acting anticoagulants, and the patient was discharged on the 12$^{th}$ day of the treatment.

**Choice 2**. Continue diagnostics and appoint laboratory follow-up examination (G).

While waiting for the results of treatment and conducting examinations and tests the condition of the patient deteriorated greatly, the severe pains in the chest, respiratory difficulty, fear of death appeared; the patient became pale. Abrupt hemodynamic

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deterioration is present, blood pressure is 80/20 mm.Hg., heart rate is 112 beats per min., the respiratory rate is 33 sighs per minute.
Auscultation: the appearance of systolic gallop rhythm, increase of the 2nd tone in the 2nd hypochondrium on the left of the thorax. / Selective thrombolysis Actilise 100 mg in the emergency department (P)
During the thrombolysis a massive gastrocardiac hemorrhage started. And the patient died.

**Choice 3**. Transfer the patient to the cardiologic dispensary to treat the infective endocarditis or pneumonia (P) / Adrenaline 1,0 intravenous by stream infusion, Infusion detoxication and antibacterial therapy (P).

You made infusions of:
Adrenaline 1,0 intravenous by stream infusion
Infusion detoxication – Rheosorbilact 400,0 intravenous by drop infusion
Antibacterial therapy – Levofloxacin 1000 mg intravenous by stream infusion.
During the treatment the condition of the patient abruptly deteriorated, the manifestations of the respiratory distress increased, inspiratory dyspnea appeared, sharp pains in the thorax appeared. The attempt of intubation failed. The cardiac arrest emerged, the doctors start closed-chest massage and expired air ventilation. Resuscitation procedures are not sufficient, and the patient dies in 45 minutes.

**Learning Objectives**
Thromboembolia of the pulmonary artery: etiology, risk factors;
Differential diagnosis of the thromboembolia of the pulmonary artery;
Peculiarities of a thrombolytic and anticoagulantic therapy.

**Errors covered**
Fixation / loss of perspective;
Playing the odds;
Insufficient skills;
Bravado.

**Case 6. Zoia Strybok. (Sepsis). Author: Oleksii Kapshytar**
**Case outline**
You are an ambulance doctor.
Your new patient is a woman of 47 years old, Zoia Strybok.

On 23.03.17 (12 o'clock) the emergency team came after the patient's call. The patient – Zoia Strybok, born in 1970 (47 years old) complains of the chills, cough, temperature of $39^0$ C, pain in lower back, dry mouth, nausea, general weakness, dizziness.
The patient says that all these manifestations appeared on 20.03.17, can't find any reasons for them. On her own accord she took Aspirin, Paracetamol, and the hyperthermia was decreased for short period of time. She hasn't consulted a doctor. Today she was going to visit a general practitioner.

The patient has cold-related diseases 3 or 4 times a year. When she was in senior classes of the middle school she had severe acute pyelonephritis, and after that she has been followed by the doctor with chronic pyelonephritis.

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**Results of an examination:** the condition is of intermediate severity, the patient is conscious and mentally competent. The skin is pale pink. AP 140/90 mm. Hg; St., Heart rate = Ps is 92 per 1 min. The breath over the whole lungs surface is harsh, dry rales in the lower right part are heard, Respiratory rate is 20 sighs per min. The tongue is dryish, not coated, the abdomen is not distended, a fresh scar along the middle line, without any peculiarities, the patient feels epigastric pain, pain in the right hypochondrium, there are no peritoneal syndromes, peristalsis is audible. Tinel's symptom is weakly positive on the right. The patient also mentions about pollakiuria.

**Choice 1** Consultation of the surgeon (E) / Consultation of the therapeutist (G) / Consultation of the urologist (P) the condition is of intermediate severity, the patient is conscious and mentally competent. The skin is pale pink. AP 140/90 mm. Hg; St., Heart rate = Ps 92 per 1 min. The breath over the whole lungs surface is harsh, dry rales in the lower right part are heard, Respiratory rate is 20 sighs per min. The tongue is dryish, not coated, the abdomen is not distended, soft, a fresh scar along the middle line, without any peculiarities, the patient feels epigastric pain, pain in the right hypochondrium, there are no peritoneal syndromes, peristalsis is present. Tinel's symptom is weakly positive on the right. The patient also mentions about pollakiuria.

**Choice 2** Procalcitonin, C-reactive protein / abdominal plain radiography / samples for analysis (G) / abdominal ultrasound (E) / sputum examination, plain radiography of thoracic organs (P)
In subhepatic space a round shape formation of 60x40 мм is found, the formation is inhomogeneous echostructure, boundaries are distinct and plain. The capsule is easily defined.

**Choice 3** Fiberoptic esophagogastroduodenoscopy (P) / Computed tomography (G) / diagnostic and treatment laparoscopy (E)

**Learning Objectives**
Anatomico-physiological data;
Reasons of sepsis development;
Sepsis: clinical manifestations, diagnostics and differential diagnosis, complications, surgical management.

**Errors covered**
Fixation and loss of perspective;
Playing the odds;
Ignorance;
Poor teamworking;
Insufficient skills;
Bravado.

The case structure (case maps) is performed in Annex 2 (2.3).

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### 3.2.4. Bukovinian State Medical University (BSMU), Ukraine

**Case # 1** Bronchial asthma Polovchenko Oksana (case author – Sergii Sazhyn).

**Case outline***:* You are a doctor at the reception office of the city hospital.

Patient Maxim Marochko, 42 years old. Complaints of dry cough that appeared a few days ago at night, discomfort during breathing, body temperature up to 37.1 C. During the conversation, the patient speaks with pauses.

Objective examination: General condition of moderate severity due to respiratory failure. Skin covers pale, clean. Swelling is absent. Above the lungs, percussion blunt pulmonary sound over the lower lobes of both lungs; Auscultatory - breathing rigid, dry and wet wheezing on both sides. Respiratory rate - 28 / min., Heart rate - 96 / min. Abdomen is soft, painless in palpation, participates in the act of breathing. The liver is not enlarged.

**Case # 2** Acute enteric infection Gerasymiuk Andriy (case author – Mykola Garas)

**Case outline***:* You are a doctor-intern of a municipal policlinic. At the reception, boy A., 22 years old, a 3rd year student at a medical university, is unmarried, complains about a sudden deterioration in the state of the day before yesterday, on Saturday, while staying in relatives in the village, when there was nausea, multiple vomiting and diluted stools, increase body temperature up to 38˚C. These complaints relate to the food factor - the consumption of malnutrition. After the vomiting, the condition improved somewhat, nausea decreased, but continued to disturb the apparent general weakness, dizziness, fever to 37.3˚C, abdominal discomfort, which prevented the preparation for examinations in surgery and pediatrics, which took place these days, so decided to apply for medical assistance for examining and receiving a certificate of temporary disability. In the history of the patient - vaccinated by the calendar, chronic gastritis, chronic cholecystopancreatitis with periodic exacerbations. Congenital far-sighted astigmatism, since childhood, uses glasses. Grandmother along the maternal line and the mother of the boy suffer from peptic ulcer disease.

**Examination:** body temperature (axillary) 36,7˚C, skin and visible mucous membranes are pale, dry, clean, limbs with a touch of warm, tissue turgor satisfactory. The guy, when viewed in the mind, is adequate, the meningeal signs are negative, the pupils react to the light symmetrically, somewhat expanded. Above the lungs is percussion - clear sound, breathing is carried out equally on both sides, the frequency of respiratory movements is 18 / min, cardiac activity is rhythmic, tons of noisy, heart

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rate 88 / min. The tongue is a white-cheek stratification. In the ziva - a slight hyperemia of the back wall of the pharynx. Percussion over the stomach timpanic sound. Slight pain in palpation in the epigastrium. The Shchotkin-Blumberg symptom and the fluctuation symptom are negative. When auscultation of the abdomen is heard, intestinal noises are heard at a frequency of 10 / min. The percutaneous border of the liver according to Kurlov is 9/8/7 cm. The lower edge of the liver by linea medioclavicularis dextra 1 cm below the right edging arc. Symptoms Ker, Ortner are questionable. The spleen is not palpable.

**Case # 3** Anemia Gayduk Olena (case author – Nataliia Bogutska)

**Case outline***:* You are a doctor-intern 2 years of study. The doctor is delayed and you personally accept the patient.

Patient Olena Haiduk, 33 years old, housewife. Appeared in connection with the fact that when conducting a preventive general analysis of blood 2 months ago, there were changes (decrease in the amount of hemoglobin, red blood cells, increase in the number of leukocytes). A little worried about difficulty swallowing, in the throat "there is a tangle" and prevents swallowing, especially dry food, have to drink, nothing more worries.

**Case # 4** Diabetes mellitus Sydorenko Maria (case author – Uliana Marusyk)

**Case outline***:* You are a resident doctor of the therapeutic department, you are being called into a waiting room where you see the Patient Maria, 35 years old with complaints of multiple vomiting, thirst, severe headache, a feeling of compression and throbbing in the temples, tingling in the ears, tenderness and weakness, frequent urination.

**General overview:** The skin is clean, slightly pale and dry to the touch. Turgor and tissue elasticity are moderately reduced. The tongue is covered with white layers. The percurious limits of the heart are not altered, auscultatively rhythmic tones, tachycardia is observed. The pulse on the radial artery is stable, with a high filling, 92 beats per minute. Respiratory rate 22 per minute. Percussion over the lungs, clear pulmonary sound, auscultatory vesicular breathing is evenly performed on both sides, wheezing is absent. Abdomen is soft, non-pleural with palpation. AT 140/100. Axial body temperature 37.2˚C.

**Case # 5** Systemic lupus erythematosus Maria Kosovan (case author – Galyna Bilyk)

**Case outline***:* You are a young family doctor in polyclinic.

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Patient Maria Kosovan, 35 years old, looks a little tired, lofty. Mary complains of general weakness, rapid fatigability, periodic fever (37.0-37.2 C), anxiety, palpitations, periodic pain in small joints of the hands, swelling, frequent irritation. These symptoms began to notice about 3 months ago. Transmitted diseases - frequent catarrhal diseases, chronic noncalculous cholecystitis, menstruation from 13 years, sexual life from 20 years. No allergies were observed. Social history: married, working as a nurse for 12 years, no harmful habits, currently 6 months breastfeeding baby. Life history: 3 pregnancies, two of which ended in childbirth. First pregnancy without features, childbirth physiological, no complications, older daughter 5 years. 2nd pregnancy due to the developmental defects of the fetal egg ended up scratching for gestation for about 3-4 weeks 2 years ago. 3rd (delivery 6 months ago) complicated by the threat of interruption. The child was born in the gestation period of 39 weeks by means of a caesarean section. Written home on the 5th day after childbirth. Review: Temperature - 36.9 C, heart rate - 79 beats / min, BH - 20 / min, AP - 130/80.

**Case # 6** Myocardial infarction Petrenko Oleksandr **(**case author – Victoria Khilchevska)

**Case outline***:* You are a young physician-therapist at the city clinic, leading an urgent reception of patients.

A 47-year-old man, Alexander, appealed to you with complaints of pain in the epigastric area, right hypochondrium, nausea, heartburn, shortness of breath. I felt bad in the morning at work while working for a computer. Alexander works as a web-programmer in a large computer corporation who is not married, which explains a rigid inflammatory character and a reluctance to maintain long-term relationships. On the eve of her husband informed about the contraction at work, all evening he felt anxiety, depressed mood, sleep badly at night, in the morning he ate a lot and with appetite. Earlier, such symptoms were not observed, in the history - chronic noncalculous cholecystocholangitis. From bad habits - smoking for 10 years to 10-12 cigarettes per day. Alcohol does not abuse. Power is irregular, often uses fast food.

Over the past 2 years, it has noticed an increase in weight by 20 kg. Over the past 5 years, the patient registered high blood pressure (up to 160/95 mm Hg), antihypertensive drugs were taken irregularly. Arterial pressure in normal conditions 130/80 mm Hg.

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In an objective examination, the patient's condition is closer to moderate severity. Consciousness is clear. Temperature 37.0C. When viewed slightly excited, the skin is clean, pale, but clinically not anemic. Visible mucous membranes of pale pink color, subcurrent sclera. Thyroid gland is not enlarged. Peripheral lymph nodes are not palpable. No peripheral edema.

The case structure (case maps) is performed in Annex 2 (2.4).

**3.2.5.Hanoi Medical University (HMU), Vietnam**

**Case author #1: Vu Quoc Dat; HIV/AIDS**

National Hospital of Tropical Diseases

You are a resident physician of the National Hospital of Tropical Diseases. During a tour of the Clinic, you received a 36-year-old male patient who has had a fever and cough for about one month. The patient with a history record of HIV infection have been diagnosed for 3 years and are currently on ART for TDF + 3TC + EFV regimens for 2 years. The patient underwent CD4 examination but only remind the most recent visit in July 2016 was 39 tb/mm3. In the past one month, the patient appeared cough white sputum, with high fever, cold shivering, two days usually in the evening, weight loss 5kg / month, no shortness of breath, no chest pain -> to see.

Patient examination: Patient conscious, good contact. Temperature: 39 degrees Celsius. Meningeal syndrome (-). Dry cough. White-lipped mussel. Infection (+). Heart beat, lungs less explosive in the lungs F. Soft abdomen, splenomegaly not large. M 120 HA 130/80 breath rate 18

Height: 172 cm. Weight: 63 kg

You decide for the patient to do some blood tests including blood chemistry, biochemical, cardiopulmonary X-ray, abdominal ultrasonography, sputum AFB, the results are as follows:

CTM: HC: 3.3. Hbg: 101g / l; BC: 3.54, TT56.5%, LY: 29.1%, TC: 215

SHM: CRP: 65; Ure: 4,4; Glucose: 4.6; Creatinin: 72; Bil.P6.5; Albumin: 42, Protein: 80, Na 136, K: 4, Cl: 103 mmol / l; AST: 26, ALT: 17, GGT: 116

Lung X-ray: (Image)

The heart is not big, the heart is normal. The medial wall is not wide. Blurring of lobules on the right lung. No spillage, pneumothorax on both sides. No abnormal software, chest bone

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Conclusion: X-ray lung metaplasia P. Abdominal ultrasound: normal. Sick throat look for fungus: positive. Sputum AFB: Negative. What is the next management approach?

Your actions:

- The patient is hospitalized
- The patient undertakes the tests for sputum smear MGIT, find the bacteria and send patients to the home monitoring, appointment 5 days; subsequent treatments will be applied after having enough results
- The prescription includes oral antibiotics and let the patient home, require another appointment if the issues not improved yet after 5 days

**Case author #2: Nguyen Kim Thu, Viral hepatitis**

At the clinic

The 46-year-old male patient, who regularly drank alcohol and used drugs, had a history of hepatitis B 10 years ago but did not receive any treatment and the patient was HBsAg positive for this visit. In this 7 days event, patients appear tired, anorexia, dark urine, accompanied by patients without fever. The patient has been examined at Hospital A and have an AST/ALT of 150/230 U/L. The patient's father was diagnosed with liver cancer died 2 years ago. You are the doctor who examines this patient and decide to test the hepatitis virus marker for the patient.

Your actions:

- Patient outpatient follow up, make some hepatitis virus evaluation and make another appointment after 6 months returning to the clinic for re-evaluation and screening for liver cancer.
- Patient outpatient follow up, make some hepatitis virus evaluation and screening for liver cancer
- Provide the patient with liver function drugs and make re-appointment after 6 months

**Case author #3: Nguyen Van Duyet, Tetanus**

At the clinic, a 56-year-old male patient, a history of disk herniation, sometimes has a back pain, restricts movements, but only takes a few days to recover. Patients are brought to the clinic because many people complain, restrict travel, eating difficult. No symptoms: 36oC, pulse: 80 times/minute, blood pressure: 120/80 mmHg. You are a physician treating patients at the Central Hospital for Tropical Disease, you are giving the

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patient blood tests and X-ray of the vertebrae of the straight waist-tilt, magnetic resonance imaging of the lumbar spine. Test results:

CTM: BC: 98 G/L, TT: 75%, lym: 8%, momo: 7%, HC: 4.5 T/l, Hct: 0.42 l/l, Hgb: 134 g/l. TC: 215 G/l.

HSM: ure: 7.5 mmol/l, creatinine: 78 umol/l, CK: 1245 UI/l

Spine X-ray straight tilt image degeneration lumbar spine

MRI scan of patients with spinal disc herniation in lumbar vertebra 3-4, L 4-5.

You choose:

- Transfer the patient to the outpatient department, review the spine surgery for the spinal cord to relieve the spinal cord for patients
- Transfer the patient to the rehabilitation department to stretch the spine and wear the spine to the patient
- Ask the patient to take the pain relief medication and follow up the appointment after 5 days

**Case author #4: Le Thi Hoa, streptococcus suis infection**

The 21-year-old male patient was taken to a clinic for stimulation, speech impotence. After asking to know that this patient as a builder, a history of aneurysm node was 6 years ago, did not inject, drank much and the night before drank a lot of alcohol. Parents do not know if they have had diarrhea or recently taken any medication. From early morning appear chattering, stimulating, hugging head but no convulsions, family hospitalized. Mucosal abscess: 120/80 mmHg, M: 80 times/min, T: 38.6 degrees, Glassgow 14 points, no skin lesions, no localized lesions, dirty tongue, stiff neck, unknown kernig. What will you do next?

- Hospitalization in the Department of Neurology
- Hospitalization in the Department of Poison Control
- Hospitalization in the Department of Infectious Diseases

**Case author #5: Nguyen Manh Truong, Dengue hemorrhagic fever**

You are a resident physician in the hospital's clinic. On a night at the clinic, you received a 28-year-old female patient who had a fever on day 4th. Exploring a healthy patient population living in an epidemic area with many patients. Diagnosing dengue hemorrhagic fever. 4-day course of patients develops high fever of 39-40 degrees, accompanied by headache, fatigue, sore eyes, since yesterday patients presented menstruation earlier than the usual cycle number little, today found menstruation more

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than normal, feeling nausea but no vomiting, no cough, no sore throat, no shortness of breath,

Examination patients, the patient is tired, high 160cm, weight 55kg, fever 38.50C, Pulse rate 100l/min, HA: 100/60mmHg, pulse rate 18l/min, pink mucosa, congestion, moderate amount of dermal hemorrhage, softening of the lungs, cardiopulmonary hearing loss, Soft belly, not liver spleen.

You think most people with dengue hemorrhagic fever, you give the patient test results:

NS1 positive, Red blood cell: 4.5T/l, HCT 40%, BC: 1.3G / l, TC: 55G / l, AB blood group, AST: 123U / l, ALT: 250U / l, ultrasound with little abdominal cavity, pleural membrane, sacral lung pulmonary heart lung, less bilateral pleural fluid. You diagnose a patient with dengue hemorrhagic fever, the direction of treatment for this patient:

- Hospitalization in the Emergency Department
- Hospitalization in the Department of Infectious Diseases
- The patient can go home, take the prescription, ask for the re-appointment if the patient has serious symptoms as heavy blood, shock, rebension.

**Case author #6: Nguyen Thi Lien Ha, Typhoid fever**

You are a general practitioner. On a tour of the Emergency Clinic at the National Tropical Hospital, you can see the following case:

Male patient, 40 years old. No history of hypertension and no previous disease. A history of allergy to penicillin antibiotics. Patients in the hospital on day 4 of the disease because of high fever continuously and away from loose stool 3-4 days. Patient at hospital, very sick, fever 39.5 degrees, pink, mucosa, HA: 140 / 80mmHg, pulse 60 times / minute, breath 30 times / minute, dry lips, dirty tongue, lung abscess, soft bloating, moderate abdominal distension, pressure ulceration, no response to suspected abdominal cavity in the pelvic cavity, 4 cm thick ribs below the ribs, soft, light, spleen 2cm below From the morning till the urine is 100ml / 14 hours.

Your action?

- Give the patient a special examination to exclude appendicitis
- Provide the patient the antipyretics and diagnostic tests at the clinic, if necessary, the patient will have outpatient treatment
- The patient need to hospitalize

The case structure (case maps) is performed in Annex 2 (2.5).

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### 3.2.6. Hue University of Medicine and Pharmacy (HUMP), Vietnam

**VP case #1 "Abdominal pain, jaundice", author: Le Minh Tan**

You are a doctor who received a patient at Dept. Internal medicine with the following characteristics: Male, 55 years old, farmer, hospitalized for upper right abdominal pain and jaundice. These symptoms have appear about 10 days, initially with anorexia, fatigue, muscle aches in the arms and legs, fever accompanied by chills. After one week of extra abdominal pain, especially in the epigastrium and lower right side, there is no pain relief. Enlarged abdominal pain is yellow eyes, dark urine, and jaundice. The patient also has difficulty breathing and diarrhea for 2 days. No history of weight loss, diabetes, hypertension, vomiting, black stool or TB, no previous hepatitis B or hepatitis A vaccination, no history of medication special; However, patients often go to the doctor near the house to be injected and given medicine when tired, fever. Drinking alcohol 40g per day for 10 years, smoking 10 cigarettes per day. One month ago, between two crops, patients went to Laos to work in an area adjacent to the border.

Recorded at the hospital:

Consciousness, blood pressure 100 / 70mmHg, Circulation 106 times/min, breathing breath 22 times / min, T $38.5^0$C

Fatigue, loss of appetite, muscle aches, skin pinching, yellowing of the eyes and jaundice, no palmetto, no nodules.

Good airway ventilation, no sound pathology.

Pain in the epigastrium and right lower abdomen, soft abdomen, pressure in the lower right flank, liver flanks in the ribs.

Tests:

Blood cell count: WBCs $8.2x10^9$ / l, Neu 70%; RBCs $3.51x10^{12}$ / l, Hb 11.2 g / l; Platelet $86x10^9$ / L

Bilirubin (TT) 125.4 mmol / l, Bilirubin (D) 85.1 mmol / L, Bilirubin (I) 40.3 mmol / L

ALP 142 U / L AST 159 U / L ALT 197 U / l INR 1.6

Ure 14.2 mmol / l creatinine 135 µmol / l

Negligible Na + 140 mmol / l K + 3.9 mmol / l

Urine HC (-), Protein (-)

X-ray of the lungs and normal ECG.

Abdominal ultrasound: thick gallbladder but no gravel. OMC diameter # 8mm, no stones, normal liver structure, not large, no fluid in the abdomen.

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What to do in this situation:

A. Ciprofloxacin antibiotics, intravenous metronidazole

B. Symptomatic treatment, HBsAg test, anti HCV, anti HAV

C. Doxycycline treatment

D. Blood smears for malaria parasites.

**VP case #2 "Headache - subarachnoid hemorrhage", author: Tran Thi Phuoc Yen**

At the hospital emergency room medical facility

N.V.A, a 56-year-old patient, went to the emergency room for a sudden headache this morning after exercising. He said that this is the most intense headache he has ever had. At present, the pain is reduced, because he had to take a painkiller, but not significantly reduced and still very painful. In addition, the patient has no other expression, no vomiting, no blurring, no double vision, no weakness.

Recorded history:

- Patient with a history of migraine from age 40, about 50% of cases have a history of symptoms with blurred vision, numbness of the left side. The first time the pain occurs with a frequency of about 4-5 times a month, in times when the patient can not do anything. However, in recent times, the frequency of attacks has decreased, with 4-5 months after the onset of a seizure, and responds very quickly to conventional analgesia.

In addition, patients with a history of hypertension for 10 years, regular treatment with Amlodipine 5mg / day.

- In the mother family also Migraine.

Physical examination:

The patient is awake.

Circulation: 86 times / min

Blood pressure: 200/100 mmHg

T: 37.2 ° C

Headache, more on the left side, with no nausea or vomiting.

Normal quadriplegia, normal tendon reflex, Babinski (-)

No sign of stiff neck.

No sensory disorder

No cranial nerve paralysis

Regular heartbeat sound; normal lung.

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Clinical evidence of any other abnormalities.

What you will do?

A1. Allow patient go home, prescribe analgesic treatment in the direction of Migraine with Sumatriptan. Appointment for a follow-up visit after 3 days.

A2. Give Advil Pain Relief (Acetaminophen + Ibuprofen), lower blood pressure with Nifedipine 10mg under the tongue and follow up in the emergency room.

A3 Hypotension and immediate referral to specialist hospital.

**VP case #3 "Acute appendicitis", author: Phan Dinh Tuan Dung**

You are a surgeon who has just graduated for 2 years - you are participating in the department of specialty gastroenterology at your hospital today.

Clinical case:

Bao Chau, 21 years old, was taken to a multidisciplinary medical clinic for mild abdominal pain. In the emergency room, medical staff received a brief medical history and received a rapid cardiovascular examination 100 times per minute, with a fever of 37.8 °C. Exploitation of the pathological process by asking the patient and family member (patient's mother) indicates that the patient has had abdominal pain two days before admission. Patients with abdominal pain sometimes have periods near the menstrual cycle, however, this cycle is expected to last about 3 days. An abdominal clinical examination records patients with mild abdominal pain, mild but soft abdomen, only slightly painful abdominal area to the right. The emergency room physician recommends that an emergency doctor is consulted and that you go to the emergency room for an on-call consultation.

After the clinical examination, you agree with the records of the emergency room medical staff, but you also note that the patient looks more alarmed and anxious and asks for a doctor's referral. Ask your doctor about the clinical symptoms of a patient who is primarily involved in obstetrics.

The emergency room physician contacted the referral physician but was advised to refer to an oncologist for emergency surgery for a patient with a diagnosis of ectopic pregnancy. New arrivals can come to the same meeting.

You recommend a patient's abdominal ultrasound and continue to see another patient. After 30 minutes you get back and get the following ultrasound results: the esophageal swelling as well as the fluid in the pelvis and the pocket with Douglas, the size 1x2cm in the right ovary, not the bowel superfluous

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What are your appointments?

1.1- Do not handle anything, return home and return home after 01 week.

1.2- Proposals for further follow-up in the emergency room

1.3- Please wait for the doctor to diagnose and then make a decision

1.4- Go for antibiotics, intravenous fluids right away then continue to monitor.

**VP case #4 "Gastrointestinal perforation", author: Nguyen Doan Van Phu**

A 50-year-old male patient was admitted to the emergency department at 9:00 pm due to abdominal pain on day 3. Patients with abdominal pain, dull continuous pain, occasional cramps, nausea with nausea during the day, vomit and diluted white water, the patient was not able to defecate more than a day. Patient fatigue many recorded at the hospital: Circulation: 100 times / min, blood pressure: 95/65 mmHg, heat: 38.5 degrees. Your records at the emergency department: Medium to the moderate abdomen, palpable abdominal pain, decreased intestinal perforation, rectal bleeding without blood. The emergency department doctors do some tests: ctm, crp, unvaccinated film, abdominal ultrasound

Test results:

RBCs: $4.8x10^{12}$ / l Hb: 135g / l WBCs: $22x10^{9}$ / 1 N: 90% CRP: 120

Unvarnished ventricular: large intussusceptions, vapors, and vapor levels.

Abdominal ultrasound: a small volume of the abdomen, obstructive loops, difficult to survey the remaining organs.

Your decision?

1. Place the stomach sone, pump the anal flux for the patient
2. Antibiotics, pain relief for patients
3. Invitation for doctors from the external department

**VP case #5 "Postpartum hemorrhage", author: Nguyen Hoang Long**

In the hospital bedroom

You are a 1 year obstetric residency in the hospital delivery room. Today is a very active session many serious illnesses need to track and many pregnant women on birth. At 3 o'clock, you are tired and just have a nap, the midwife tells you that there is a case of women in the hospital.

You meet the woman and explore the information of pregnant women as follows:

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The 41-year-old woman, third trimester PARA (2002) 38 weeks, admitted to hospital for bipolar disorder.

Twice before birth usually at the clinic near the house. The first birth 10 years ago, birth 01 baby girl weighs 3700 grams, the second birth 6 years ago, usually 01 baby girl weighs 3800 grams, however this time pregnant women stay longer because the birth has missed and need to cure the uterus. These two children are attending elementary school and are very good at learning.

Personal history and family do not suffer from special diseases.

Pregnant women and their parents want to have more children, although when they do not use contraceptives, they are still not pregnant for nearly two years. Pregnant women decided to visit the reproductive-assisted center and performed in vitro fertilization. The procedure took place smoothly, about two months later, pregnant women to test and find themselves carrying twins. The ultrasonologist at the time of the first trimester reported to the women that they were twins and two amniocentes. Pregnant women are advised very carefully as well as have experienced two previous pregnancies, so the supply of nutrients, vitamins, iron, folic acid were taken two months ago.

At 13 weeks gestation, women were screened for Q1 and combined, resulting in a low risk of recurrence and subsequent follow-up.

Up to 20 weeks, the woman will be examined and screened for the second trimester. The doctor concludes that the two pregnancies are developing normally, however, the length of the cervix is only 25 mm and is recommended for progesterone use. Naturally 1 capsule for up to 34 weeks.

However, up to 32 weeks, the woman was admitted to the hospital for pelvic pain, and the woman was admitted to the hospital because her doctor found that her uterus was fine. Pregnant women were treated for 5 days with Nifedipine 20 mg and Lung maturation with Dexamethasone. After 5 days of treatment, stable maternal condition, no cervical uterus, should be discharged.

Until now, pregnant women should go to hospital.

Current examination:

Circulation: 90 times / min. Temperature: 37 $^{o}$C. Blood pressure: 130 / 90mmHg. Breathing frequency: 20 breaths / min.

Patients are well alert, have good contact, mucocutaneous pinky, no abnormalities, no abnormal lymph nodes.

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Other organs have not detected any abnormalities.

Physical examination:

Two well-proportioned breasts, dark isola, large nipple, no abnormal fluid flow

Uterine abdomen / waist circumference: 35/101 cm

Feet 1 is the head, hear the heart fetal heart rate of 150 times per minute.

The second you do not touch, can not find the fetal heart.

Cervical soft, erased almost all, open 3 cm, swelling, touching the fetus, normal pelvis.

You specify basic tests: blood count, blood type, coagulation, pregnancy ultrasound, and fetal heart rate.

Then you ask the midwife to give the baby the test and return to the room. You see the family members are very anxious.

After 30 minutes, the midwife informs you that the test results are as follows:

**Coagulation test**

Normal platelet concentration

Full blood clotting

Bleeding time 3 minutes (1 - 4)

Blood clotting time 8 minutes (5 - 10)

Normal blood coagulation function

**The blood formula**

White blood cells: 8.3 G / l

Hemoglobin: 3.35 T / l

HGB: 109 g / l

Hct: 31.3%

Platelets 115 G / l

**Emergency ultrasound**

Gestational pregnancy in the womb

Pregnancy position 01: Left. Top hit. Pregnancy weight 2900 grams. Pregnancy: 148 / min. The largest amniocentesis is 5 cm. Grabbing behind the group 2. Maturity of each other: degree III

Position of pregnancy 02: Right. Top hit. Pregnancy weight 2800 grams. Pregnancy: 145 beats per minute. The largest amniocentesis is 4 cm. Grab the back of group 1. Amniocentesis two.

**CTG**

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Basic fetal heart rate: 160 beats per minute (drive 1), 150 beats per minute (drive 2)

Internal oscillation: 10 - 15 beats / minute

Increment: +

Reduction of DIP 1 in the fetal heartbeat 1.

Uterine contractions: 3 bouts / 10 minutes

You check the cervix open at this time, you press the amniotic fluid and give birth often because you think this case is quite favorable. Pregnant women and their families want to have a cesarean section for safety, but you explain to pregnant women and their families that they should give birth because they are doing well, they agree, but feel uncomfortable. The first baby boy weighs 2700 grams, the Apgar 8/1 - 9/5 and the second baby boy weighs 2700 grams, the Apgar 8/1 - 9/5. You inform the pregnant woman and her family, they are very happy to hold the two grandsons as expected.

You pass the next steps to 6$^{th}$ year students are practicing in the obstetric department. You get a check-up for serious illnesses and other cases of labor.

15 minutes later, the midwife informs you that the current pregnant woman is still stable but the placenta is not clotting.

What do you do next?

1. Ask 6$^{th}$ year students to pull the umbilical cord
2. Continue to monitor the disease and will return after 15 minutes
3. Return immediately

**VP case #6 “Pre-eclampsia”, author: Nguyen Hoang Long**

In the delivery room

You are a first year obstetrician and gynecologist. Today is your session at the hospital. Your attendance consists of 03 people: 01 primary doctor, 01 second year obstetric residency and you. The weather in recent days has been erratic, turning to cold air and heavy rain.

Your team is handing over 04 cases are tracking, and in the delivery room are 5 cases to monitor of birth. It's 2 am now, you feel quite tired. A 30-year-old woman is hospitalized for headaches.

Pregnant women were shown to have a third pregnancy (1011), a history of caesarean section three years ago due to the low birth weight, low birth weight. One miscarriage two years. Internal history of the disease has no special disease. Pregnant women do not

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remember definitively the last menstrual period, the first ultrasound in the first trimester of pregnancy has a date of birth, up to now is 34 weeks 3 days.

Recorded at the hospital:

The apple appetite, good contact. Pink mucosa skin. There are mild swelling of the legs, white, soft, pressed concave.

Circulation: 90 times / min. Temperature: 37 oC. Blood pressure: 140/100 mmHg. Breathing frequency: 16 bpm

Little headache. The heartbeat is clear, not heard. Two fields heard clearly, not heard rale.

Fundal height/abdominal girth measurements: 28/96 cm. 2 pregnant palpable.

Fetus number 1 positioned head-down, fetal heart rate 150 times / min. Fetus number 2 positioned inverted, fetal heart rate 140 times / minute. Do not feel uterus when touched. Soft abdomen, pain in the shade. Scar on the skin 10 cm, on the guard 2 cm, pressing painless. The vagina does not bleed.

Vaginal Exam: Cervix is long, closed, no abnormal fluid from the cervix. Tentacles are lumpy. Diameter 12 cm.

What do you do next?

1. Give antihypertensive drugs + Routine routine testing
2. Test for pre-eclampsia
3. Explain to pregnant women that this is a common symptom of pregnancy, not risky and rest for a time will lose all symptoms

The case structure (case maps) is performed in Annex 2 (2.6).

## 4. Peer review of created new cases and their modification

### 4.1 Astana Medical University (AMU), Kazakhstan

After 6 VP clinical cases were created, AMU tutors exchanged cases for peer-review. Peer review consisted of two stages. At first, case authors provided cases to each other for review. Taking into account comments and recommendations, cases were re-considered again with case writers. Secondly, cases were provided for internal review. Partner institutions within one country exchanged with 6 VP cases. Working group of case writers provided access to OpenLabirynth to KSMUs' reviewers.

Recommendations after peer review: Clinical cases more complicated, therefore should be modified according to students competencies, after every options we should write some commentaries, the options should not be returnable, we should orient to Jonathan's clinical cases.

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After writing new cases, they have been sent for the review to KSMU. Within 2 weeks, we have received reviews of each case from teachers of KSMU. In the reviews were evaluated - the structure of a case, availability of information, compliance of a case to the clinical protocols of the Republic of Kazakhstan

The main offers in reviews of cases:

1. to add additional options in some cases as there is not enough choice option;
2. to correct some grammatical mistakes;
3. to simplify a little bit a case (bleeding) as there were many operational manipulations and to reconsider according to the protocol;
4. to simplify a case (diabetes) as it is too difficult.

After reviewing, all cases have been reconsidered by tutors of JSC AMU in view of teachers' proposals at KSMU.

(See report of internal and external reviews in Annex 3 (3.1).

**4.2 Karaganda State Medical University (KSMU), Kazakhstan**

After creation 6 VP cases in GP, KSMU's medical teachers exchanged cases for peer-review procedure. Peer review consisted of two stages. At first stage, case authors provided cases to each other for review. According to comments, cases were re-considered again with case writers. At second stage, cases were provided for eternal review. Partner institutions within one country exchanged with 6 VP cases. Working group of case writers provided access to OpenLabirynth to AMUs' reviewers. External review process took 5 months. According to AMU's recommendations KSMU reconsidered 6 VP cases. Main points for modification were case structure.

(See report of internal and external reviews in Annex 3 (3.2).

**4.3 Zaporozhye State Medical University (ZSMU), Ukraine**

After creation 6 VP surgery cases, ZSMU's medical teachers exchanged cases for peer-review procedure. Peer review consisted of two stages. At first stage, case authors provided cases to each other for review. According to comments, cases were re-considered again with case writers. At second stage, cases were provided for external review. Partner institutions within one country exchanged with 6 VP cases. Partner institutions within one country exchanged with 6 VP cases. External review process took several months. According to BSMU's recommendations ZSMU reconsidered the 6 VP cases.

(See report of internal and external review in Annex 3 (3.3).

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### 4.4 Bukovinian State Medical University (BSMU), Ukraine

After creation 6 VP cases in internal medicine, BSMU's medical teachers exchanged cases for peer-review procedure. Peer review consisted of two stages. At first stage, case authors provided cases to each other for review. According to comments, cases were re-considered again with case writers. At second stage, cases were provided for external review. Partner institutions within one country exchanged with 6 VP cases. External review process took several months. According to BSMU's recommendations ZSMU reconsidered 6 VP cases.

(See report of internal and external review in Annex 3 (3.4).

### 4.5 Hanoi Medical University (HMU), Vietnam

After creation 6 VP infectious cases, medical teachers self-reviewed by themselves. First, case authors review their case by their own. Then they send their cases to other authors from Infectious Department for Internal review. According to comments, cases were re-considered again with case writers. Afterward, all six cases were provided for the external review by experts in HUMP. The content and structure of cases were considered to modify if needed.

(See report of internal and external review in Annex 3 (3.5).

### 4.6 Hue University of Medicine and Pharmacy (HUMP), Vietnam

After creation 6 VP cases, Hue UMP exchanged cases for peer-review procedure. Peer review consisted of three stages. At first stage, case authors provided cases to the other in same department for review, eg. internal medicine cases have been reviewed by lecturers in internal medicine department. At second stage, cases were provided for a different department to review. 6 Modified cases have been uploaded to Open Labyrinth by a technician and provided access to reviewers. At third stage, cases were provided for exchange review between HMU and Hue UMP.

The reviewer attention to modifying the content and structure of cases. Identifying relevance of content and objectives. Specifying medical errors were present in the cases.

(See report of internal and external reviews in Annex 3 (3.6).

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## ANNEX 1. Learning outcomes and medical errors

### 1.1 Astana Medical University (AMU), Kazakhstan

#### a) 6VP cases in GP

| Partner country | University name | № | Name of module | Number of hours | Number of days | The title of the case (2 days/6 hours DPBL) |
|---|---|---|---|---|---|---|
| Kazakhstan | AMU | 1. | GP (Cardiology) | 6 | 2 | Headache (hyperpiesis) |
| Kazakhstan | AMU | 2. | GP (Pulmonology) | 6 | 2 | Cough (Pneumonia) |
| Kazakhstan | AMU | 3. | GP (Hematology) | 6 | 2 | General Weakness (Anemia) |
| Kazakhstan | AMU | 4. | GP (Endocrinology) | 6 | 2 | Thirst (Diabetes mellitus) |
| Kazakhstan | AMU | 5. | GP (O&G) | 6 | 2 | Bleeding (abruption of placenta) |
| Kazakhstan | AMU | 6. | GP (Children diseases in GP) | 6 | 2 | Difficult breathing (Bronchial asthma) |

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## b) 6 VP Cases with learning outcomes

| Case theme/ No | Headache (hyperpiesis) | Cough (Pneumonia) | General Weakness (Anemia) | Thirst (Diabetes mellitus) | Difficult breathing (Bronchial asthma) | Bleeding (abruption of placenta) |
|---|---|---|---|---|---|---|
| **Outcomes** | Definitions of indications for hospitalization. | indications for hospitalization | indications for hospitalization | Signs of diabetes mellitus | Causes of bronchial wheezes | indications for hospitalization |
| | differential diagnosis | differential diagnosis | differential diagnosis | Diagnosis of diabetes mellitus | indications for early inhalant steroids | differential diagnosis |
| | the management of hypertensive patients. | principles management | principles of management | Management of diabetes mellitus | specific clinical manifestations of bronchial wheezes | principles of management |
| | complications of hypertension | features of pneumonia in old patients | features of anemia | Complications of diabetes mellitus | Preventive measures | features of patients with bleeding |
| | features of headache | complications of pneumonia | complications of anemia | Risk of death from diabetes mellitus | complications of delayed untreated wheezes | complications of bleeding |
| | Triage skills of a patient with headache | mortality rate of pneumonia | | Treatment of diabetes mellitus | principles of treatment | mortality rate of bleeding |
| **Medical errors** | Lack of skills Bravado Miss-triadge Poor communication System error | Ignorance, Team-working, Playing the odds, poor communicatio | Ignorance, Team-working, Playing the odds, poor communicatio | Ignorance, Team-working, poor communication, bravado;sloth;Fixation;Lack of skills and knowledge | ignorance, team working, bravado, timidity | Ignorance, Team-working, Playing the odds, poor communication, bravado |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | n, bravado | n, bravado | | | |
| **Case author** | | Bekbergenova Zh. | Nurpeissova R. | Shnaider K. | Zhakupbekova.M | Zhuzzhasarova A. | Tyan V. |
| **Case title** | | Alma Akhmetova | Serik Baizhanov | Amet Akbota | Dmitrii Marchenko | Askar Alimov | Luiza Akhmetova |
| **Commentaries on:** | **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |
| | **local review** | reviewed by A. Syzdykova, Nurpeissova R. on 10.04.2017 | reviewed by A. Syzdykova on 10.04.2017 | reviewed by A. Syzdykova, Nurpeissova R. on 10.04.2017 | reviewed by A. Syzdykova, Nurpeissova R. on 10.04.2017 | reviewed by A. Syzdykova, Nurpeissova R. on 10.04.2017 | reviewed by A. Syzdykova, Nurpeissova R. on 10.04.2017 |
| | **review by the other PCU** | KSMU | KSMU | KSMU | KSMU | KSMU | KSMU |

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## 1.2 Karaganda State Medical University (KSMU), Kazakhstan

### a) 6VP cases in GP

| Partner country | University name | № | Name of module | Number of hours | Number of days | The title of the case (2 days/6 hours D - PBL) |
|---|---|---|---|---|---|---|
| Kazakhstan | KSMU | 1. | GP (Cardiology) | 6 | 2 | Chest pain (myocardial infarction) |
| Kazakhstan | KSMU | 2. | GP (Pulmonology) | 6 | 2 | Breathlessness (bronchial asthma) |
| Kazakhstan | KSMU | 3. | GP (Gastroenterology) | 6 | 2 | Bleeding (gastric ulcer) |
| Kazakhstan | KSMU | 4. | GP (Endocrinology) | 6 | 2 | Intoxication (acute rheumatic fever) |
| Kazakhstan | KSMU | 5. | GP (O&G) | 6 | 2 | Acute abdomen (ectopic pregnancy) |
| Kazakhstan | KSMU | 6. | GP (Children diseases in GP) | 6 | 2 | Diarrhea (acute enteric infection) |

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## b) 6 VP Cases with learning outcomes

| **Case theme/ No** | Chest pain (myocardial infarction) | Breathlessness (bronchial asthma) | Bleeding (gastric ulcer) | Intoxication (acute rheumatic fever) | Acute abdomen (ectopic pregnancy) | Diarrhea (acute enteric infection) |
|---|---|---|---|---|---|---|
| **Outcomes** | Atypical forms of myocardial infarction | Ethiology, pathogenesis of bronchial asthma | The problem of gastric ulcers | Ethiology, pathogenesis of rheumatoid arthritis | Differential diagnosis of acute pain in the abdomen | Etiopathogenesis of dysentery |
| | Interpretation of ECG | Clinical presentation and differential diagnosis of bronchial asthma | Clinical symptoms of gastric ulcers | Clinical presentation and differential diagnosis of rheumatoid arthritis | The problem of ectopic pregnancy in adolescents | Clinical picture, complications and differential diagnosis of dysentery |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | Differential diagnosis of abdominal pain | Rational therapy of bronchial asthma | Diagnostic criteria for gastric ulcers according to the clinical protocol | Rational therapy of rheumatoid arthritis | Complications of ectopic pregnancy | Laboratory diagnostics of dysentery |
| | Stages of treatment and rehabilitation of patients with myocardial infarction according to the clinical protocol | | Differential diagnosis of gastric ulcers | Features of conducting patients with rheumatoid arthritis | Treatment and rehabilitation of women with ectopic pregnancy | Treatment and prevention of dysentery |
| | | | Treatment of gastric ulcers according to the clinical protocol | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Complications of gastric ulcers | | | |
| | | | | | | |
| **Medical errors** | Playing the odds, Poor triage, Fixation, Ignorance | Ignorance, Bravado, Insufficient skills | Fixation, Sloth, System error, Ignorance | Ignorance, Insufficient skills, System error, Bravado, Timidity | Poor communication, Ignorance, Bravado, "Playing odds", System error | Poor communication, Ignorance, Poor triage, Bravado, «Playing the odds», System error |
| **Case author** | K. Dobler | A. Beysenaeva, A. Ibysheva, A. Sersauletova | K.Amangeldieva, K. Dobler | A. BeysenaevaA. Ibysheva, A. Sersauletova | M.Serikova, B.Otynshiev, Zh. Kalbekov | A. Dyusembaeva, G. Alshinbekova |

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| Case title | | Yermek Kunaev | Nurbol Asanov | Serik Nurzhanov | Victoria Lavrova | Marzhan Akhmetova | Askar Yusupov |
|---|---|---|---|---|---|---|---|
| **Commentaries on:** | **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |
| | **local review** | reviewed by G.Mershenova | reviewed by G.Muldaeva | reviewed by G.Mershenova | reviewed by G. Muldaeva | reviewed by K. Alihanova | reviewed by P. Begaydarova |
| | **review by the other PCU** | reviewed by AMU | reviewed by AMU | reviewed by AMU | reviewed by AMU | reviewed by AMU | reviewed by AMU |

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## 1.3 Zaporozhye State Medical University (ZSMU):

### a) 6VP cases in surgery

| Partner country | University name | № | Name of module | Number of hours | Number of days | The title of the case (2 days/6 hours D - PBL), + 2 hoursfor each lection |
|---|---|---|---|---|---|---|
| Ukraine | ZSMU | 1. | Elective course “Medical errors in surgery” | 6 | 2 | Acute abdominal syndrome (acute appendicitis) |
| Ukraine | ZSMU | 2. | Elective course “Medical errors in surgery” | 6 | 2 | Mesenterial thrombosis |
| Ukraine | ZSMU | 3. | Elective course “Medical errors in surgery” | 6 | 2 | Acute intestinal obstruction |
| Ukraine | ZSMU | 4. | Elective course “Medical errors in surgery” | 6 | 2 | Acute abdominal syndrome (perforative ulcer) |
| Ukraine | ZSMU | 5. | Elective course “Medical errors in surgery” | 6 | 2 | Bacterial complications after surgery |
| Ukraine | ZSMU | 6. | Elective course “Medical errors in surgery” | 6 | 2 | Pulmonary embolism |

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## b) 6 VP Cases with learning outcomes

| | Author | Bilai A.I. | Voloshyn A.M. | Kapshytar O.O. | Bilai A.I. | Kapshytar O.O. | Voloshyn A.M. |
|---|---|---|---|---|---|---|---|
| Outcomes | № | Acute abdominal syndrome (acute appendicitis) | Mesenterial thrombosis | Acute intestinal obstruction | Acute abdominal syndrome (perforative ulcer) | Bacterial complications after surgery | Pulmonary embolism |
| | 1 | Causes of acute abdominal syndrome development | Definition of mesentric trombosis. Aetiology and pathogenesis | Definition of the term. Aetiology and pathogenesis | Abdominal pain. Aetiology and pathogenesis of perforated gastroduodenal ulcers | Definition of the term: surgical sepsis, Systemic Inflammation Response Syndrome | Embolism issue (of pulmonary artery). |
| | 2 | Appendicitis: clinical implications | Typical and atypical clinical aspects of the disease | Typical clinical aspects of Acute intestinal obstruction. Classification. Differential diagnostics | Clinical aspects of typical and atypical perforated gastroduodenal | Causes of infection generalization in the affected area | Causes of development, diagnostics and differential |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | ulcer. | | diagnostics |
| | 3 | Atypical forms of appendicitis | Differential diagnostics of mesenterial thrombosis. | Differential diagnostics of acute intestinal obstruction | Diagnostics and differential diagnostics of typical and atypical perforated gastroduodenal ulcer. | Causes of sepsis. | Modern possibilities of non-surgery treatment |
| | 4 | Differential diagnostics acute abdominal syndrome | Principles of non - and surgical treatment | Pecularities of examining of patient with acute intestinal obstruction. | Disease management in case of perforated gastroduodenal ulcer | Diagnostics of sepsis. | Surgical indications |
| | 5 | Tactics of appendicitis treatment | Pecularities of pre-operational preparation | Modern diagnostic methods. | Non-surgical treatment during post-operational period | Treatment methods of sepsis. | Ways of prevention of embolism of pulmonary artery. |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 6 | | | Principles of non surgical treatment | Ways of prevention of ulcer | Regulations for antibiotic treatment for prevention and treatment of sepsis. | |
| | 7 | | | Operation management in case of acute intestinal obstruction. | | | |
| | Medical errors | Fixation Ignorance Team-working Playing the odds | Fixation Sloth Playing the odds | Fixation Ignorance Sloth System error | Fixation Ignorance Communication Miss triadge Team working | Fixation Ignorance Lack of skill Team working | Fixation Playing the odds Lack of skills Bravado Miss-triadge |
| **Case title** | | Nikolai Savin | Sagan | Prokhir Shaliapin | Eduard Ivanov | Zoia Strybok | Guryliov |
| **Commentaries** | **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **on:** | **local review** | reviewed by VoloshynO.M., Kostrovskyi O.M., Furyk O.O. | reviewedbyBilai A.I., Kostrovskyi O.M., Furyk O.O. | reviewedbyBilai A.I., Kostrovskyi O.M., Furyk O.O. | reviewedby Voloshyn O.M., Kostrovskyi O.M., Furyk O.O. | reviewed by KostrovskyiO.M. | reviewed by KostrovskyiO.M., FurykO.O. |
| | **review by the other PCU** | reviewed by BSMU | reviewed by BSMU | reviewed by BSMU | reviewed by BSMU | reviewed by BSMU | reviewed by BSMU |

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## 1.4 Bukovinian State Medical University (BSMU), Ukraine

| Case theme / No | Cardialgia (Infarction of myocardium) | Fever and rash (Systemic lupus erythematosis) | Polyuria (Diabetes mellitus) | Pallor of skin (Anemia) | Diarrhea (Acute enteric infection) | Cough (Bronchial asthma) |
|---|---|---|---|---|---|---|
| Outcomes | Leading clinical symptoms and syndromes myocardial infarction | The syndrome of fever of unknown origin, infectious rash, clinical manifestations | Differential diagnosis of the syndrome of hyperglycemia. | Leading clinical symptoms and syndromes | Leading clinical symptoms and syndromes. | Leading clinical symptoms and syndromes in bronchial asthma. |
| | Differential diagnosis of anemia and previous clinical diagnosis | Leading clinical symptoms and syndromes in systemic lupus erythematosus | Leading clinical symptoms and syndromes in diabetes. | Differential diagnosis of anemia and previous clinical diagnosis | Differential diagnosis of acute intestinal infections. | Peculiarities of asthma in children, depending on the severity and level control. |
| | Laboratory and instrumental datas of myocardial infarction | Clinical course and complications variants | Differential diagnosis of acute and chronic complications of diabetes | Laboratory and instrumental datas | Differential diagnosis of AEI among themselves and with diseases of the gastrointestinal tract infectious origin. | Laboratory and instrumental datas in asthma. |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | Clinical management of patient | Laboratory and instrumental datas | Leading clinical symptoms and syndromes in coma: ketoatsydotychna hyperglycemic, hypoglycemic, hiperlaktatsydemichna, hyperosmolar coma. | Treatment and clinical management of patients | Clinical management of patients with AEI. | Differential diagnosis of asthma and bronchial obstruction syndrome. |
| | Treatment and emergency for complications of myocardial infarction | Differential diagnosis of systemic connective tissue diseases | Providing emergency assistance in a coma. | | Anti-epidemic measures in the foci of infection. | Clinical management of patients with different clinical variants course of bronchial obstruction syndrome and its complications in children. |
| | Preventing complications. | Treatment and clinical management of patients | Diagnosis and tactics of children with chronic complications of diabetes. | | Emergency conditions in acute intestinal infections. | Providing emergency assistance in a fit of breathlessness and asthma status. |
| | | Preventing complications. | Prevention coma and chronic complications of diabetes. | | | |

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| **Medical errors** | Ignorance, poor triage, poor communication | Insuffience skills, bravado, poor team working, playing the odds | Sloth, ignorance, fixation | Fixation, system error, playing the odds | Fixation, playing the odds, bravado, poor communication | Ignorance, poor team working, fixation, poor triage |
|---|---|---|---|---|---|---|
| **Case author** | Viktoriia Khilchevska | Galyna Bilyk | Uliana Marusyk | Nataliia Bogutska | Mykola Garas | Sergii Sazhyn |
| **Case title** | Petrenko Oleksandr | Kosovan Maria | Sydorenko Ivan | Gayduk Olena | Gerasymiuk Andriy | Polovchenko Oksana |
| **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |
| **local review** | reviewed by Mykaliuk L. on 20.06.2017 | reviewed by Bilous T. on 15.06.2017 | reviewed by Khodorovskyi V. on 15.06.2017 | reviewed by Bilous V. on 21.06.2017 | reviewed by Koloskova O., Bilous T. on 23.06.2017 | reviewed by Koloskova O. on 17.06.2017 |
| **review by the other PCU** | reviewed by ZSMU | reviewed by ZSMU | reviewed by ZSMU | reviewed by ZSMU | reviewed by ZSMU | reviewed by ZSMU |

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## 1.5. Hanoi Medical University (HMU), Vietnam

### a. 6 VP cases:

| Partner country | University name | № | Name of module | Number of hours | Number of days | The title of the case (2 days/6 hours D - PBL) |
|---|---|---|---|---|---|---|
| Vietnam | HMU | 1. | Infectious Diseases | 6 | 2 | HIV/AIDS |
| Vietnam | HMU | 2. | Infectious Diseases | 6 | 2 | Viral Hepatitis |
| Vietnam | HMU | 3. | Infectious Diseases | 6 | 2 | Tetanus |
| Vietnam | HMU | 4. | Infectious Diseases | 6 | 2 | Streptococcus suis infection |
| Vietnam | HMU | 5. | Infectious Diseases | 6 | 2 | Dengue hemorrhagic fever |
| Vietnam | HMU | 6. | Infectious Diseases | 6 | 2 | Typhoid fever |

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## b. 6 VP cases with learning outcomes

| **Case theme/ No** | HIV/AIDS | Viral Hepatitis | Tetanus | Streptococcus suis infection | Dengue hemorrhagic fever | Typhoid fever |
|---|---|---|---|---|---|---|
| **Outcomes** | HIV transmission route | Viral hepatitis causal agents and transmission routes | Epidemiological characteristics: causal agent, transmission route | Epidemiological characteristics: causal agent, transmission route | Epidemiological characteristics: causal agent, transmission route | Epidemiological characteristics: causal agent, transmission route |
| | Pathogenesis relating to HIV prevention and treatment | Clinical manifestation of acute viral hepatitis | Clinical manifestation | Clinical manifestation | Clinical manifestation and laboratory test | Clinical manifestation |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | HIV diagnostic test for adult and children | Laboratory tests for acute viral hepatitis: diagnostic test, hepatic function test, Viral hepatitis B markers | Complication | Confirmative and differential diagnosis | Confirmative and differential diagnosis | Complication |
| | Diagnosis, treatment and prophylaxis for common OIs | Acute viral hepatitis treatment principle and consultancy | Laboratory test | Treatment for meningitis and sepsis cases | Treatment and prevention | Laboratory test |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | ART: treatment criteria and principles<br><br>HIV/AIDS prevention | Viral hepatitis prevention | Treatment and prevention | Prevention | | Treatment and prevention |
| **Medical errors** | Fixation, Ignorance, Poor communication, Miss triadge | Playing the odds, Poor triage, Fixation, Ignorance | Bravado, Fixation, Ignorance, Insufficient skills, Miss triadge | Insuffiecint skills, Ignorance, Miss Triadge, Poor communication | Bravado, Fixation, Ignorance, Insufficient skills, Miss triadge, Poor communication, Playing the odds | Team-working, Ignorance, Miss triadge, Insufficient skills, Poor communication |
| **Case author** | Vu Quoc Dat | Nguyen Kim Thu | Nguyen Van Duyet | Le Thi Hoa | Nguyen Manh Truong | Nguyen Thi Lien Ha |

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| **Case title** | | HIV/AIDS | Viral Hepatitis | Tetanus | Streptococcus suis infection | Dengue hemorrhagic fever | Typhoid fever |
|---|---|---|---|---|---|---|---|
| **Commentaries on:** | **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |
| | **local review** | reviewed by Dr. Dzung | reviewed by Dr. Dzung | reviewed by Dr. Dzung | reviewed by Dr. Van | reviewed by Dr. Van | reviewed by Dr. Van |
| | **review by the other PCU** | reviewed by HUMP | reviewed by HUMP | reviewed by HUMP | reviewed by HUMP | reviewed by HUMP | reviewed by HUMP |

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## 1.6 Hue University Medicine and Pharmacy (HUMP), Vietnam

### a. 6 VP cases

| Partner country | University name | № | Name of module | Number of hours | Number of days | The title of the case |
|---|---|---|---|---|---|---|
| Vietnam | HUMP | 1. | Internal medicine | 6 | 2 | Abdominal pain, jaundice |
| Vietnam | HUMP | 2. | Internal medicine | 6 | 2 | Headache - subarachnoid hemorrhage |
| Vietnam | HUMP | 3. | Surgery | 6 | 2 | Acute appendicitis |
| Vietnam | HUMP | 4. | Surgery | 6 | 2 | Gastrointestinal perforation |
| Vietnam | HUMP | 5. | Obstetrics | 6 | 2 | Postpartum hemorrhage |
| Vietnam | HUMP | 6. | Obstetrics | 6 | 2 | Pre-eclampsia |

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b. **6 VP cases with learning outcomes**

| Case theme/ No | VP case #1 | VP case #2 | VP case #3 | VP case #4 | VP case #5 | VP case #6 |
|---|---|---|---|---|---|---|
| **Outcomes** | List the pathologies that may present clinical abdominal pain, jaundice | Identify a secondary headache, potentially life-threatening | List the causes of acute appendicitis and the course of the disease | Diagnosing gastrointestinal perforation | List the risk factors for postpartum hemorrhage | Identification of risk factors for pre-eclampsia |
| | Diagnosis of patients with specific abdominal pain | Indicated of clinical cases, exploration for patients with an acute headache | Understand the role of clinical symptoms as well as laboratory tests to help diagnose acute appendicitis | Notes on the late perforation cases | Diagnosis and handling of postpartum haemorrhage | List the criteria for pre-eclampsia diagnosis and the severity of pre-eclampsia |
| | Evaluation of treatment response, drug side effects. | Know the common causes of subarachnoid hemorrhage. | Demonstrate differential diagnosis of acute appendicitis | Notes on the treatment and monitoring of gastrointestinal perforation | | Diagnose the difference between pre-eclampsia and hypertension in other pregnancies. Treatment of pre-eclampsia |
| | | | Describe the treatment attitude of acute appendicitis. | | | |
| **Medical errors** | Insufficient | Insufficient | Insufficient skills, | Insufficient | Ignorance, | Ignorance, |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | knowledge and skills, ignorance, fixation/loss of perspective, system error. | skills, fixation, ignorance, system error. | poor team working, poor triage. | knowledge and skills, ignorance, fixation/loss of perspective, system error. | insufficient skills, poor team working. | insufficient skills, poor team working. |
| **Case author** | | Le Minh Tan | Tran Thi Phuoc Yen | Phan Dinh Tuan Dung | Nguyen Doan Van Phu | Nguyen Hoang Long | Nguyen Hoang Long |
| **Case title** | | Abdominal pain, jaundice | Headache - subarachnoid hemorrhage | Acute appendicitis | Gastrointestinal perforation | Postpartum hemorrhage | Pre-eclampsia |
| **Commentaries on:** | **Completion of a case** | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author | completed by the author |
| | **local review** | reviewed by Dr. Chi | reviewed by Prof. Anh | reviewed by Dr. Chi | reviewed by Prof. Anh | reviewed by Dr. Chi | reviewed by Prof. Anh |
| | **review by the other PCU** | reviewed by HMU | reviewed by HMU | reviewed by HMU | reviewed by HMU | reviewed by HMU | reviewed by HMU |

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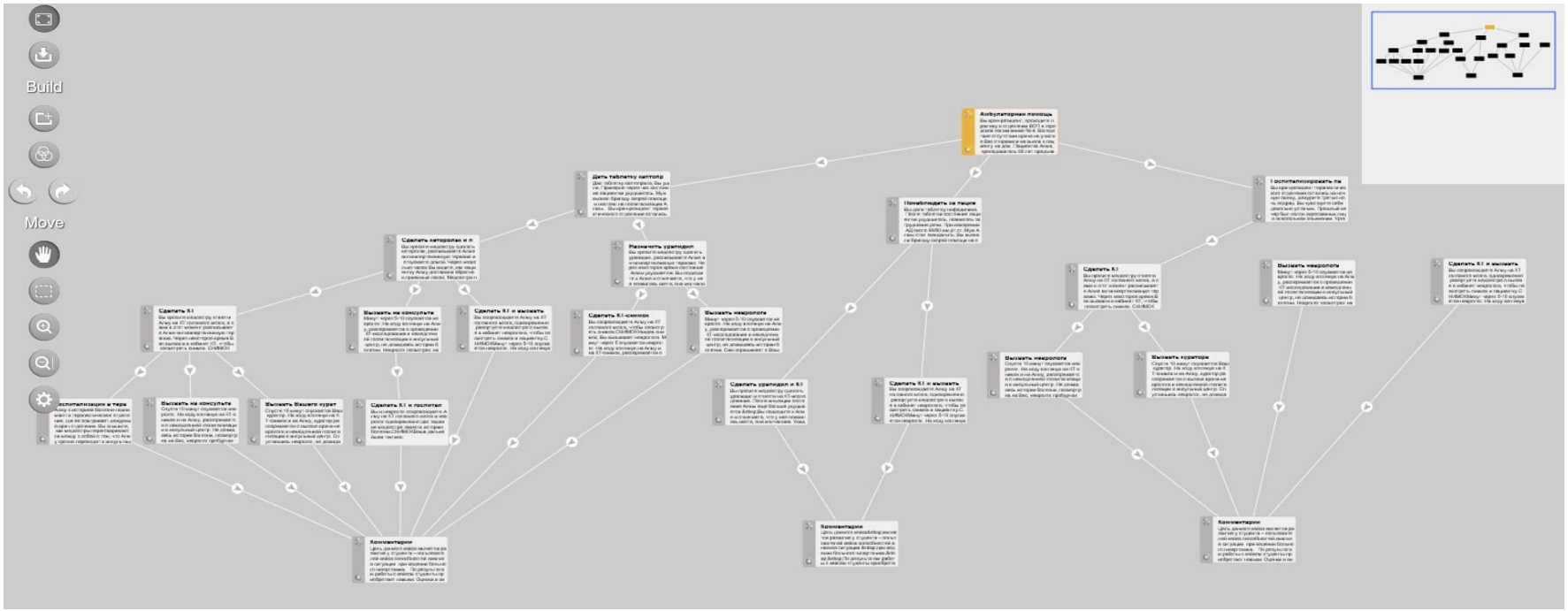
# Annex 2: New cases structure (Cases maps)

## 2.1 Astana Medical University (AMU), Kazakhstan

### Case author: Bekbergenova Zh. Headache (hyperpiesis)



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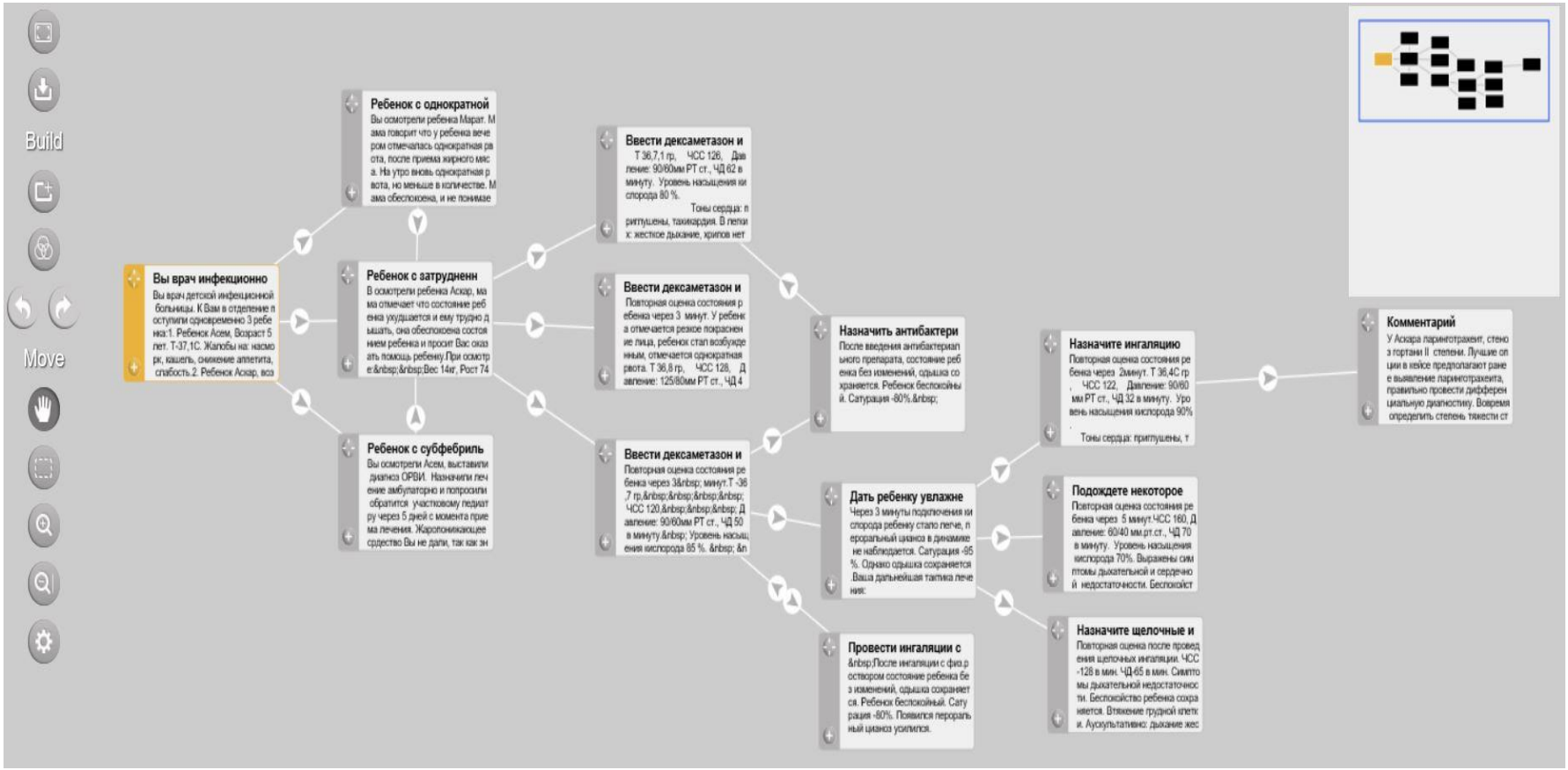
## Case author: Zhuzzhasarova A. Difficult breathing (Bronchial asthma)



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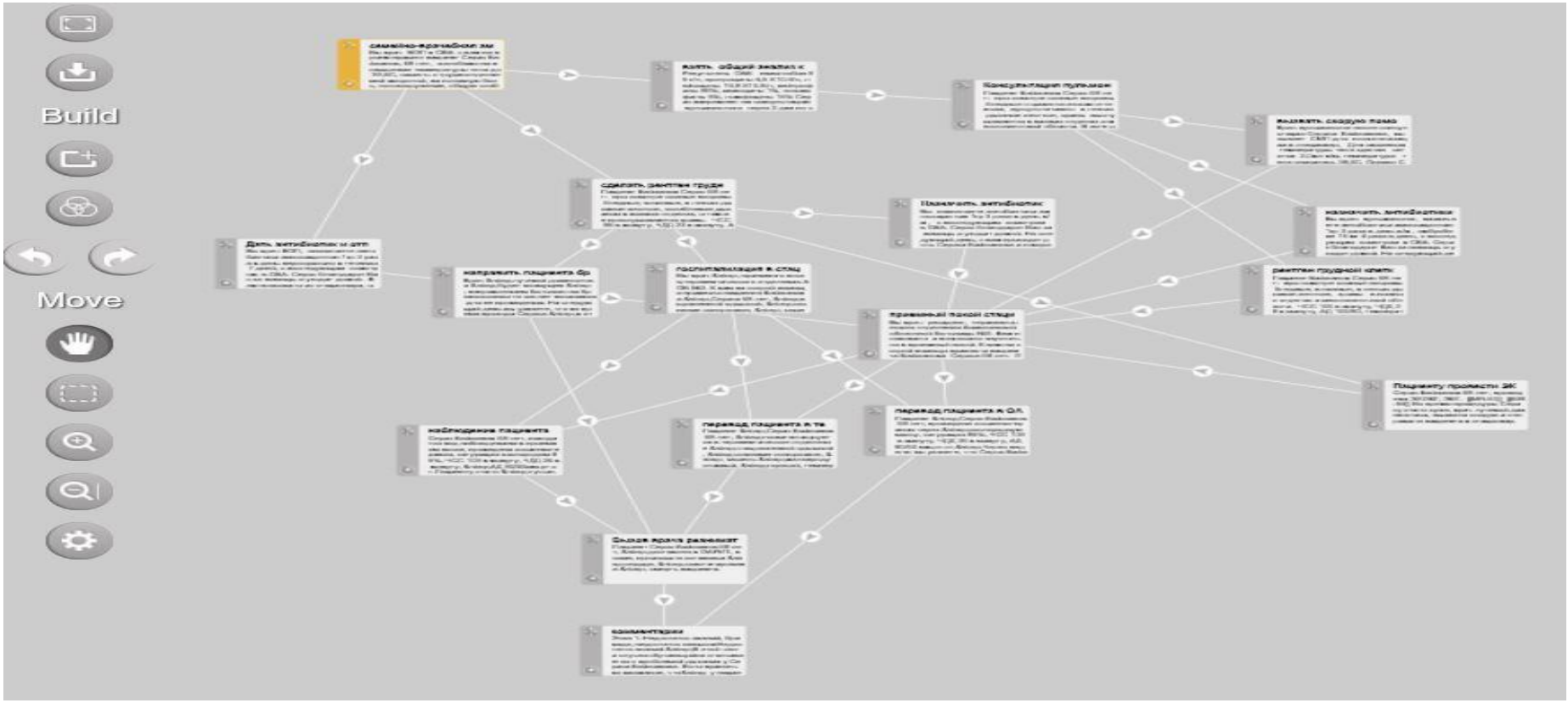
## Case author: Nurpeissova R.; Cough (Pneumonia)



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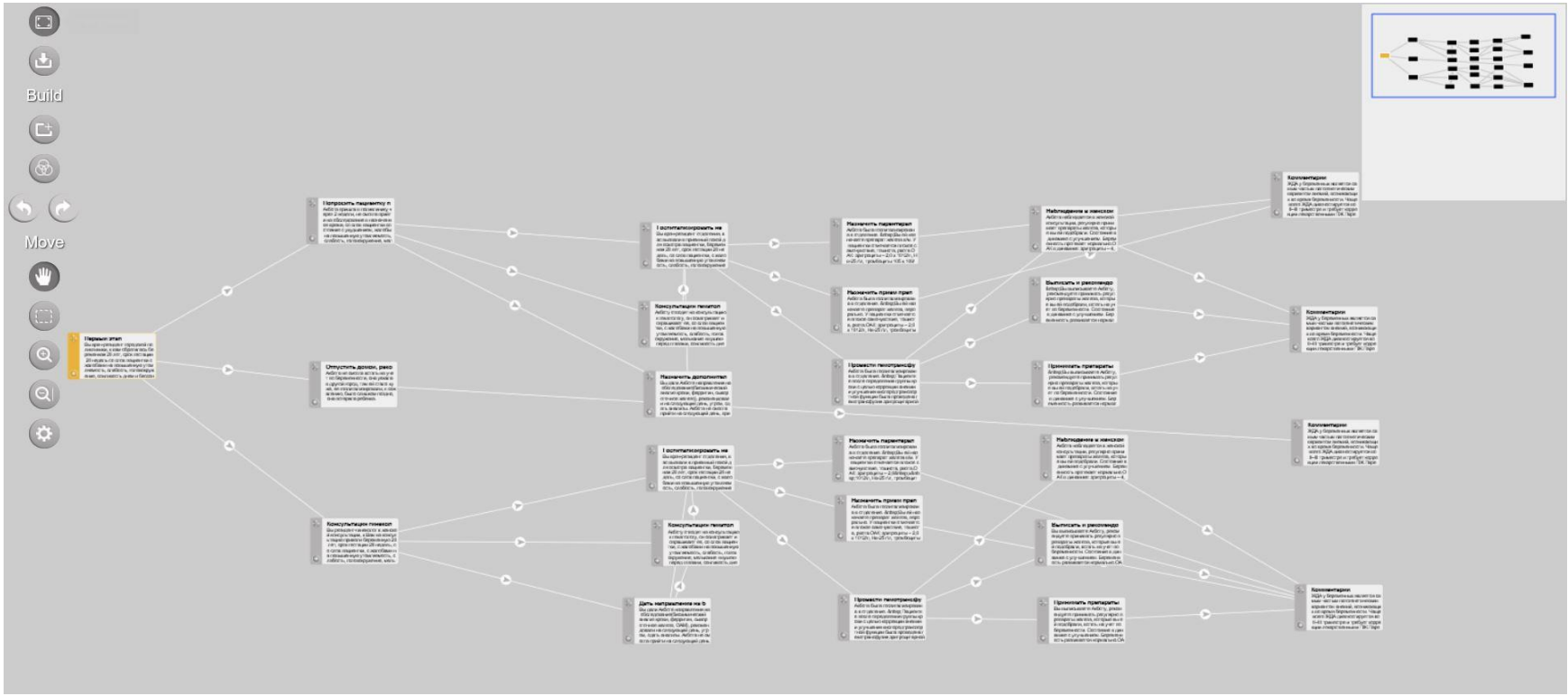
## Case author: Shnaider K., General Weakness (Anemia)



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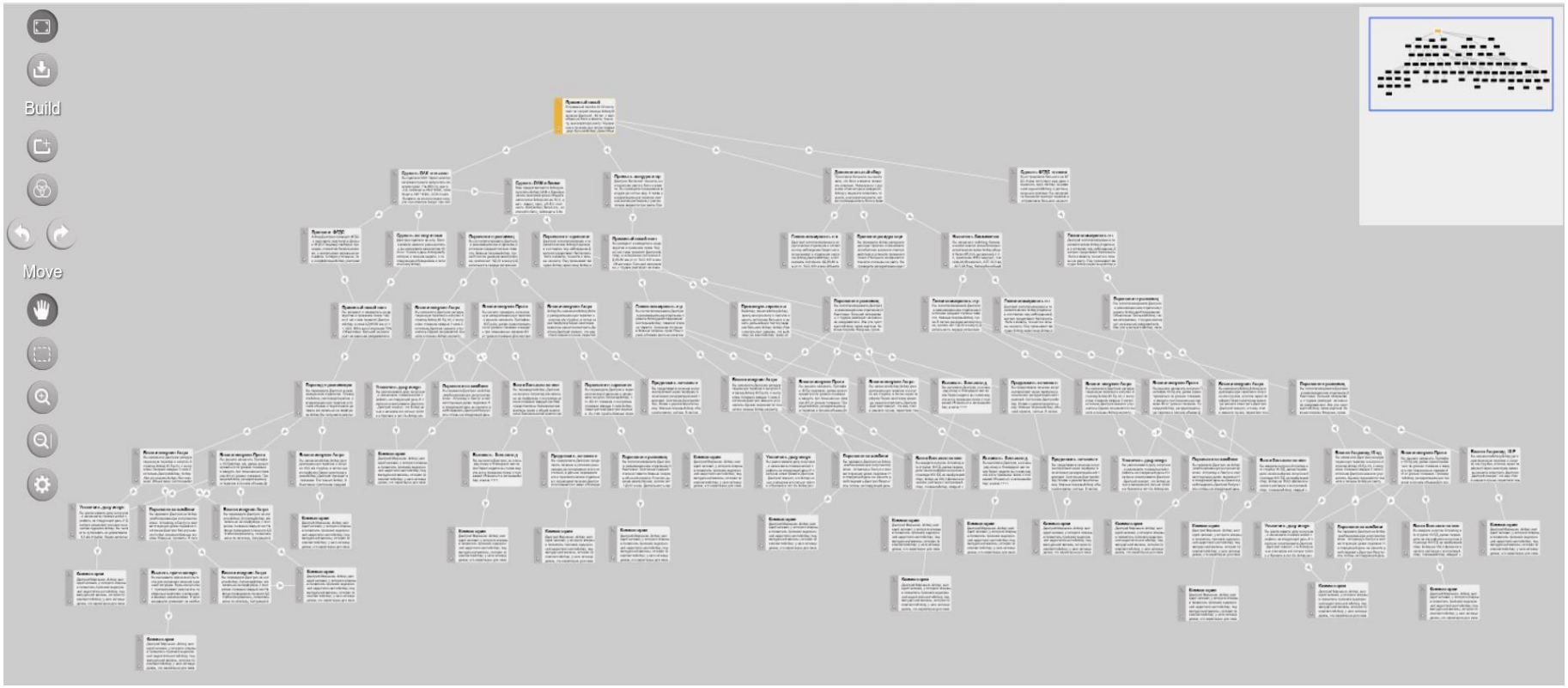
## Case author: Zhakupbekova.M,Thirst (Diabetes mellitus)



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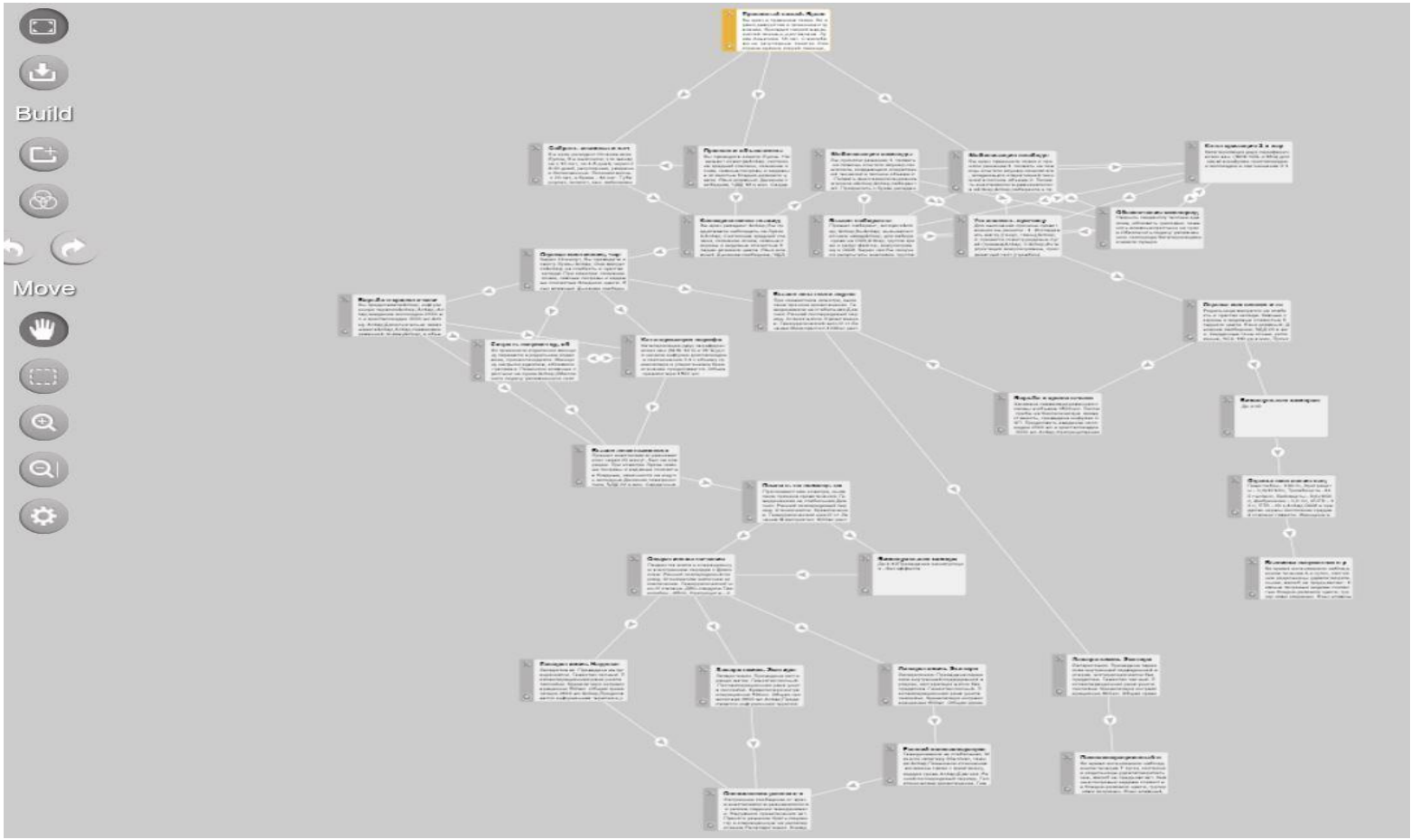
## Case author Tyan V.. Bleeding (abruption of placenta)



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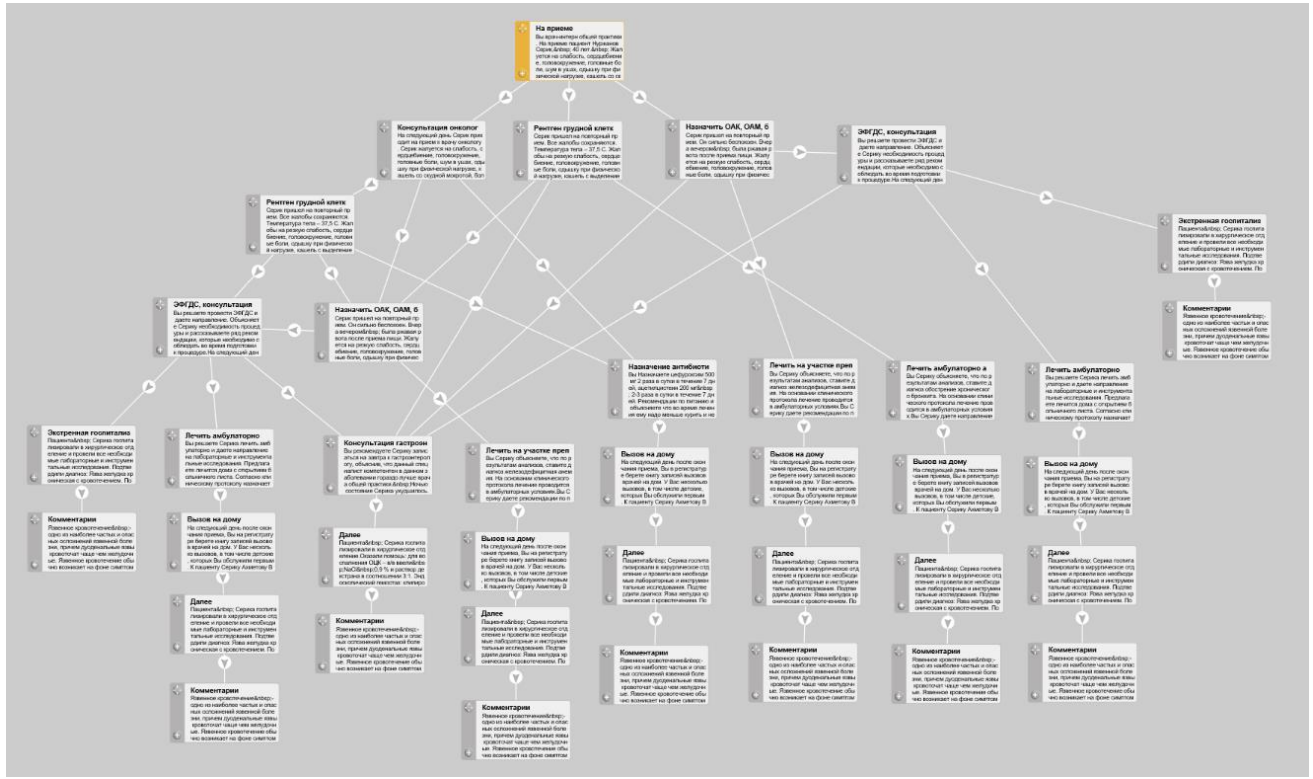
## 2.2 Karaganda State Medical University (KSMU), Kazakhstan

### Case #1 Yerzhan Akhmetov (bleeding)



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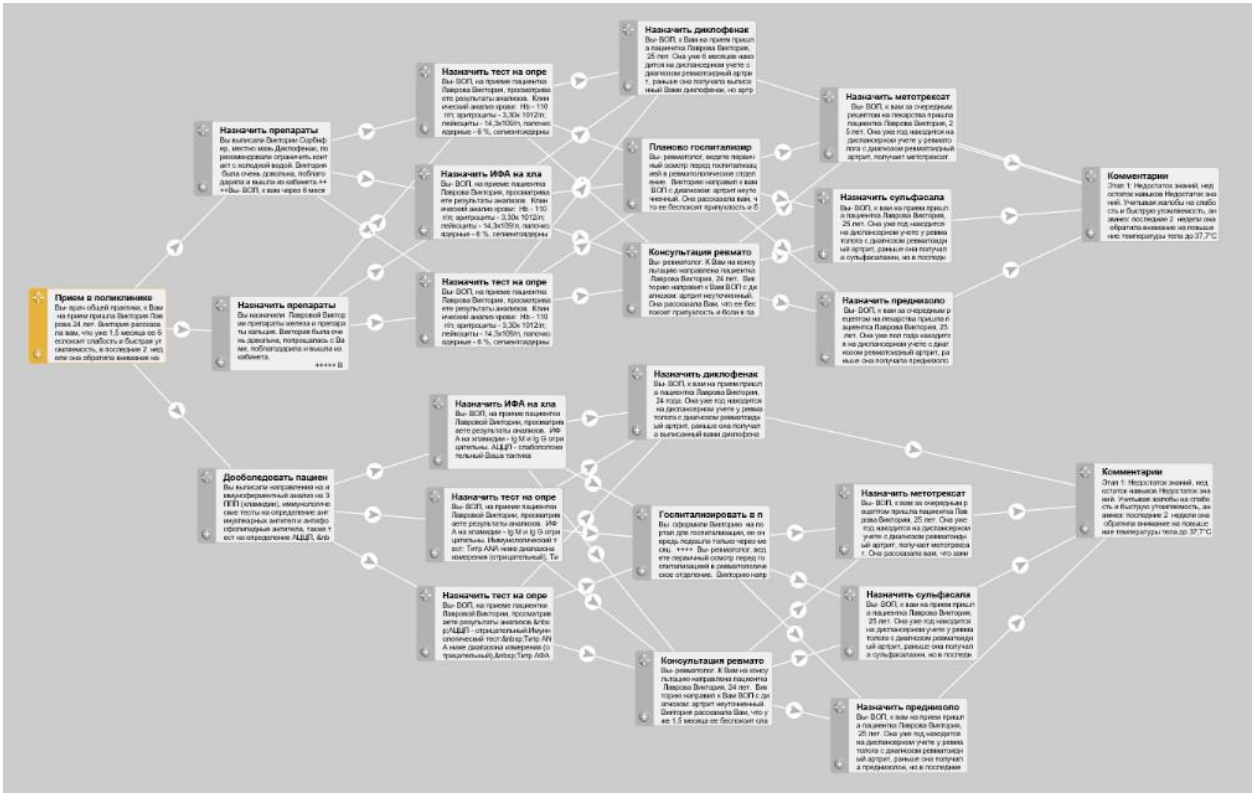
# Case #2 Viktoria Lavrova (Intoxic)



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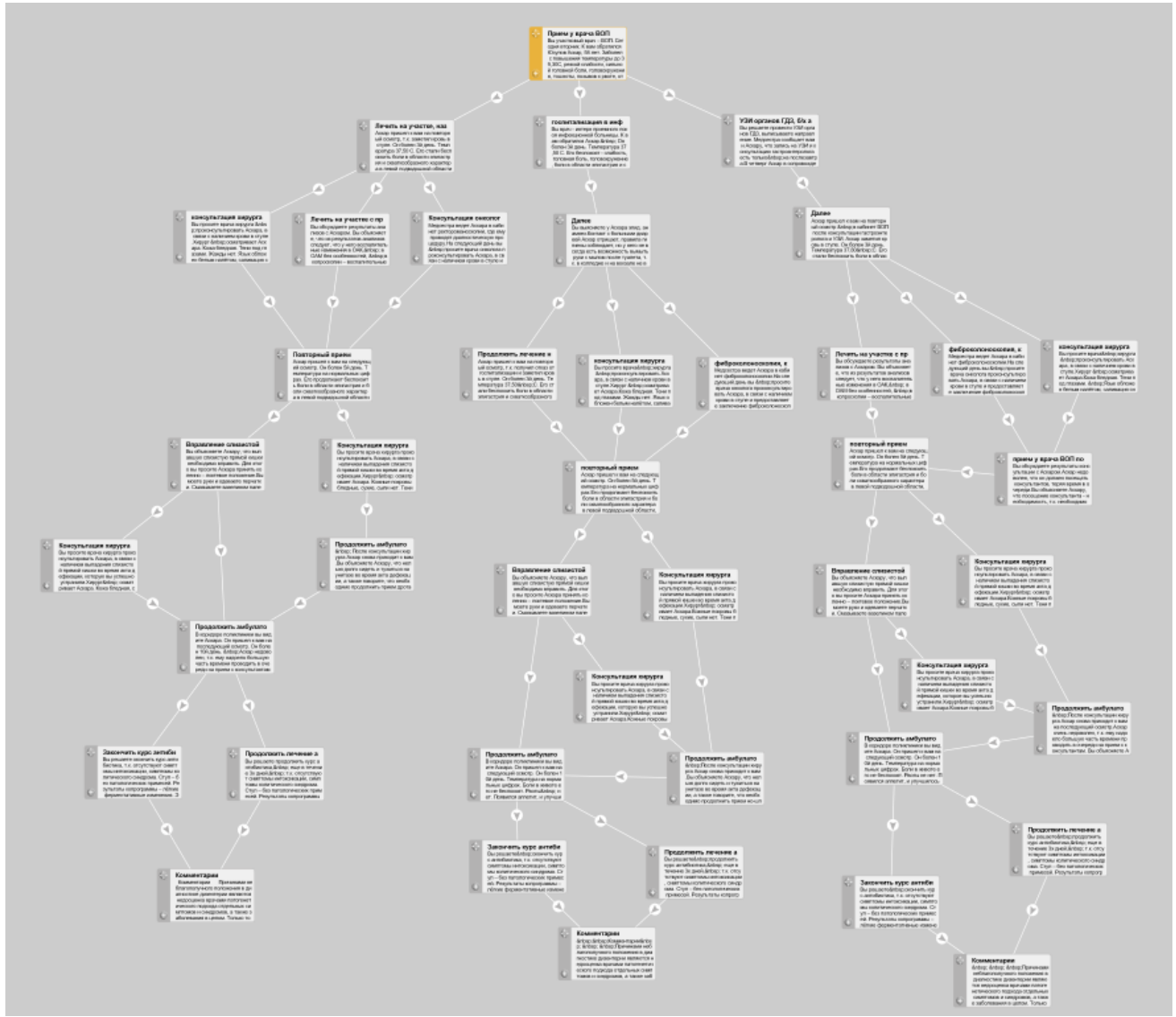
# Case # 3 Askar Yussupov (diarrhoea)



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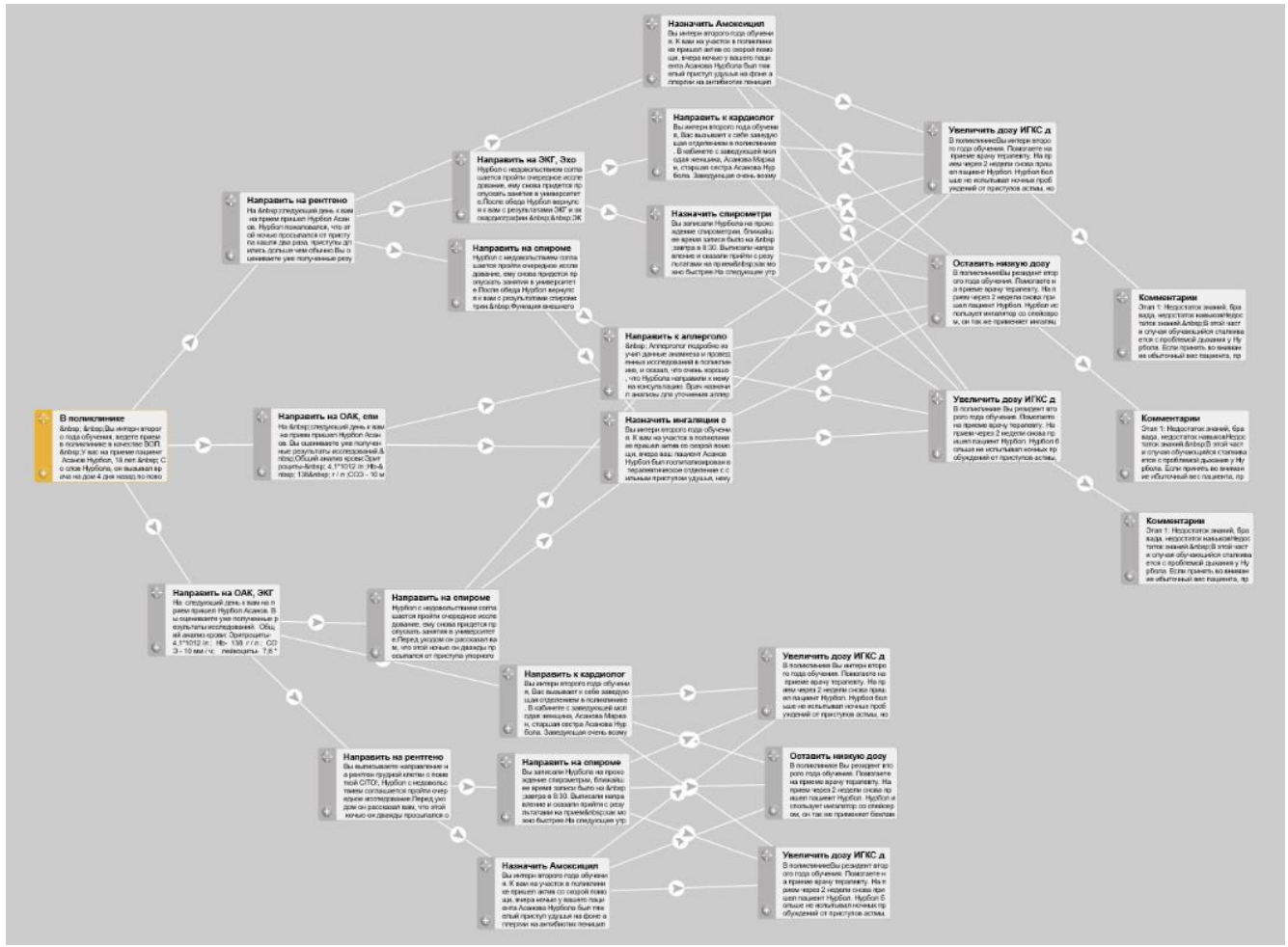
## Case#4 Nurbol Assanov (Breathlessness)



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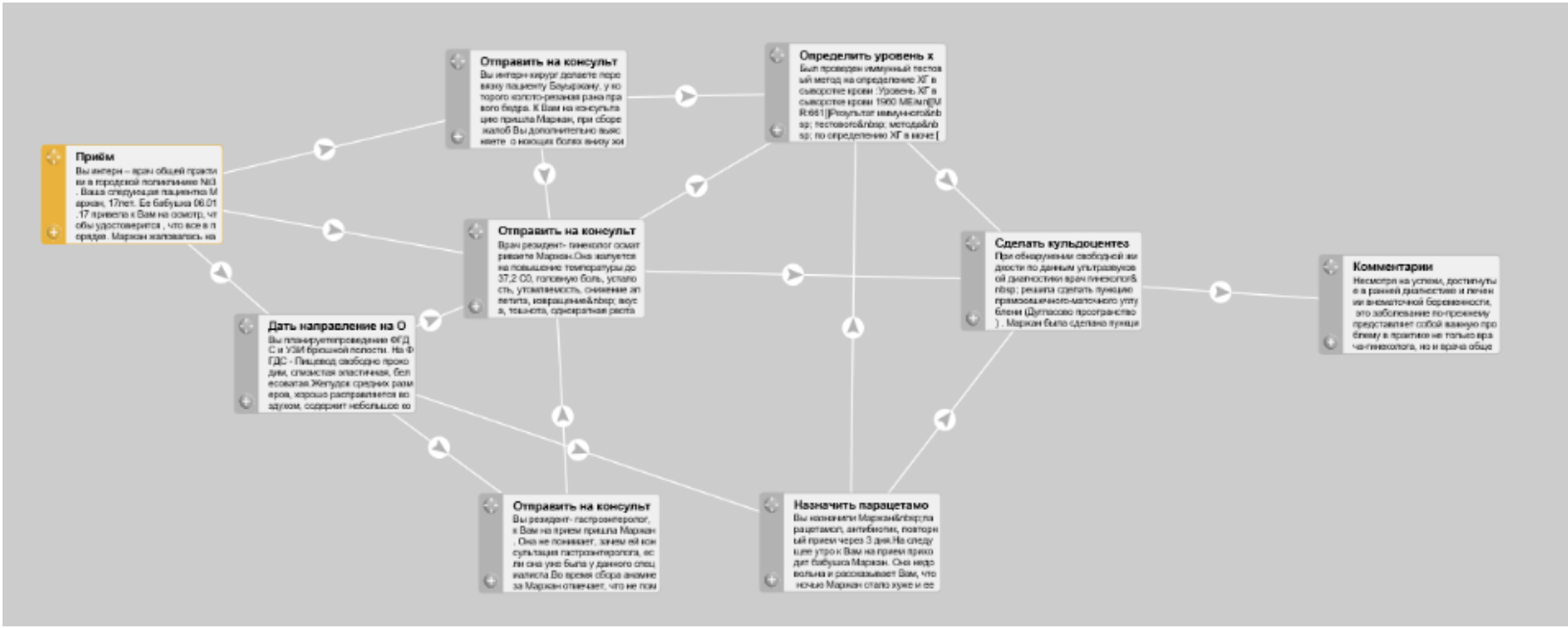
## Case #5 Marzhan Akmetoa (Acute abdomen)



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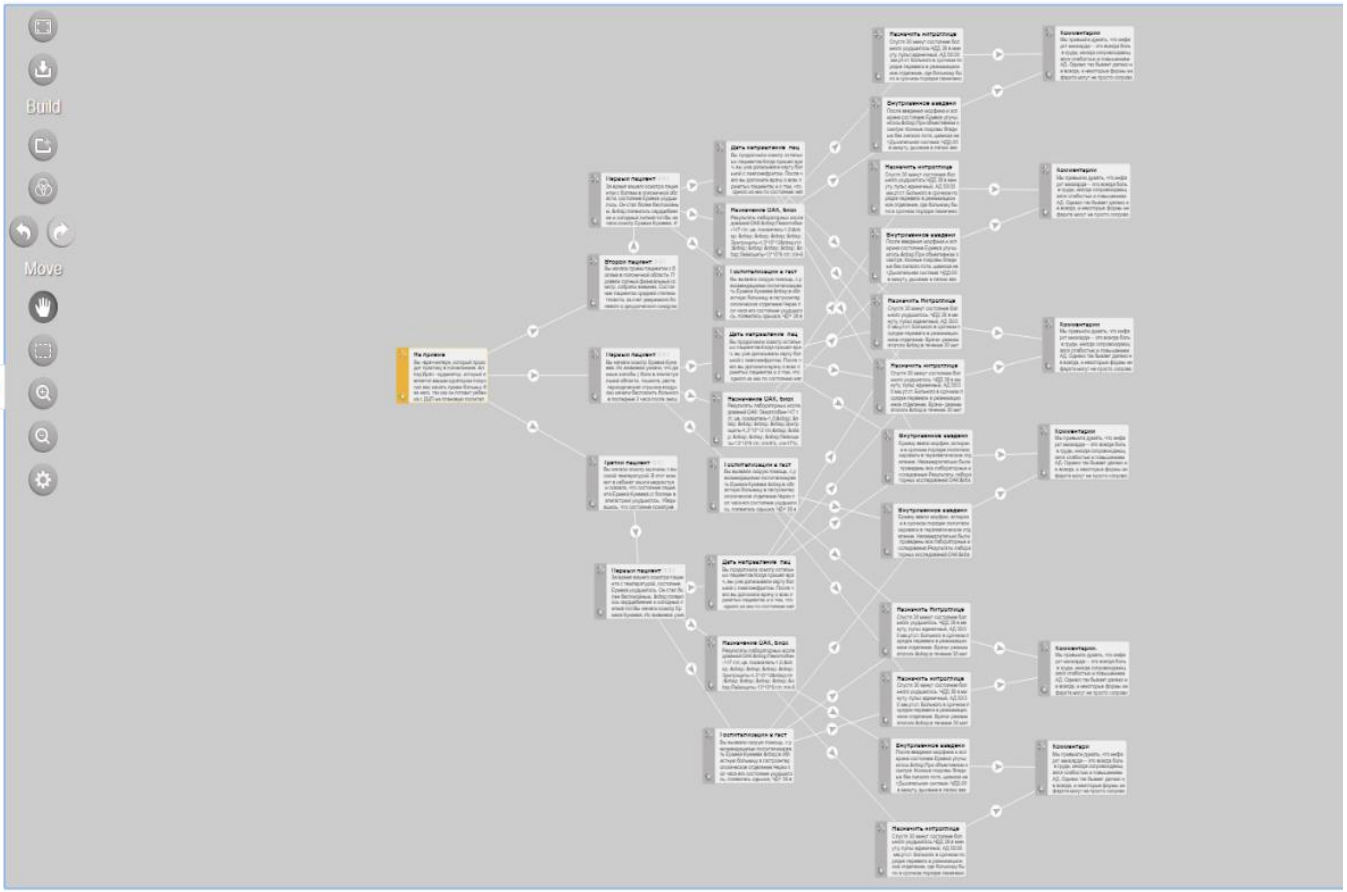
## Case #6 Ermek Ermek Kunayev» (Chest pain)



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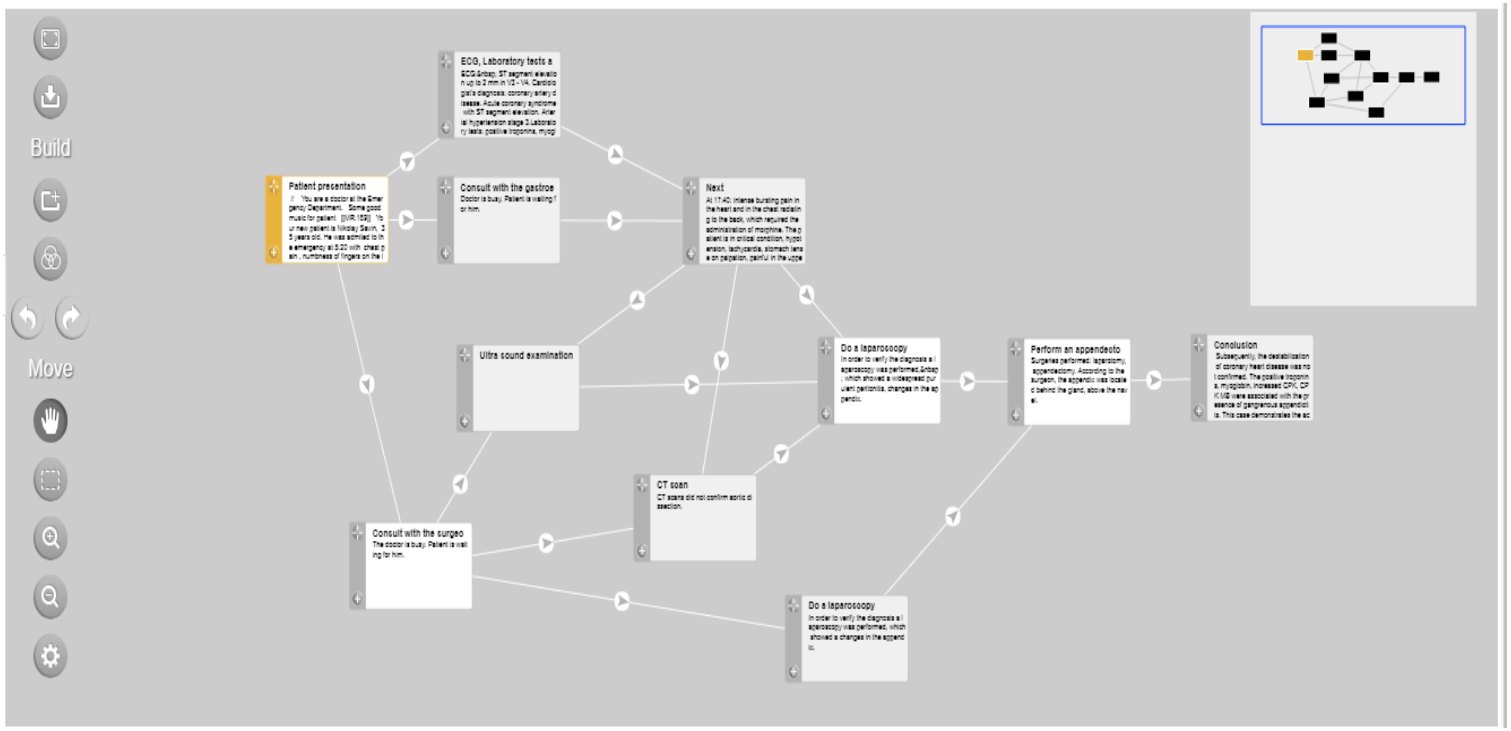
## 2.3 Zaporozhye State Medical University (ZSMU), Ukraine

**Case author: BilaiA.I.; Acute appendicitis.**



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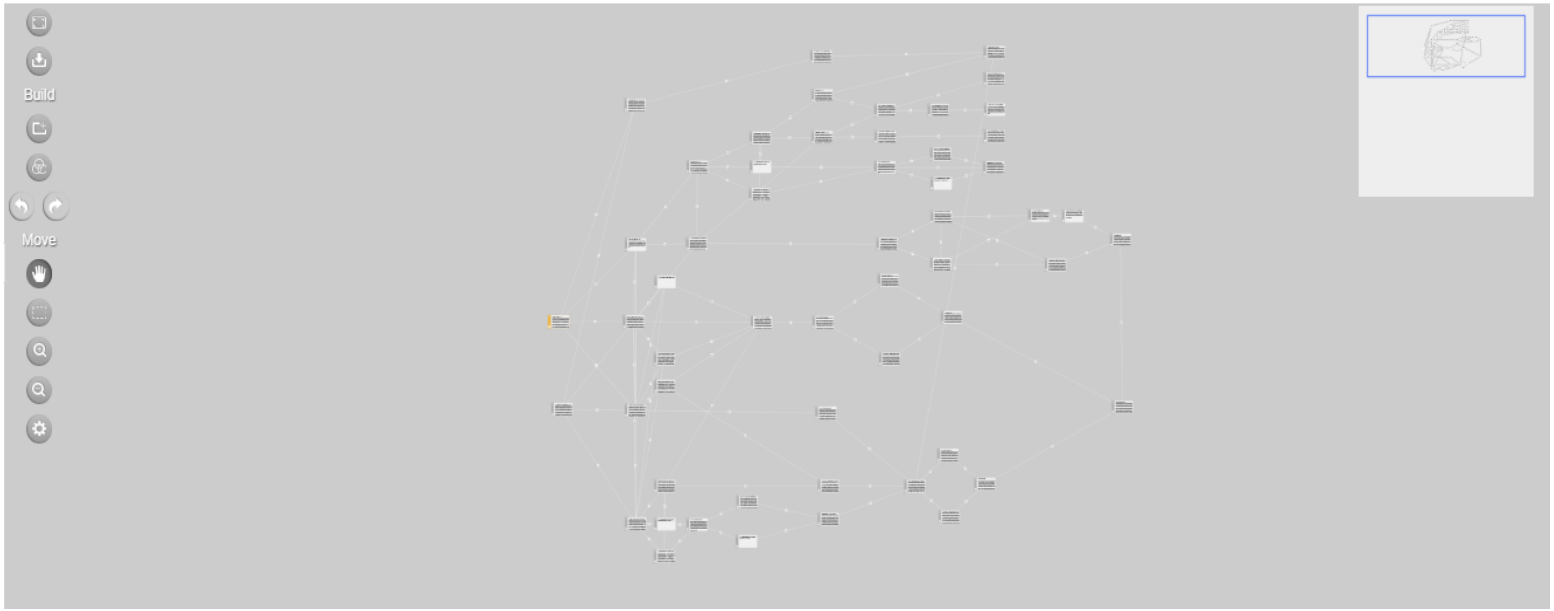
## Case authors: Voloshyn O. M.  Mesenterial thrombosis



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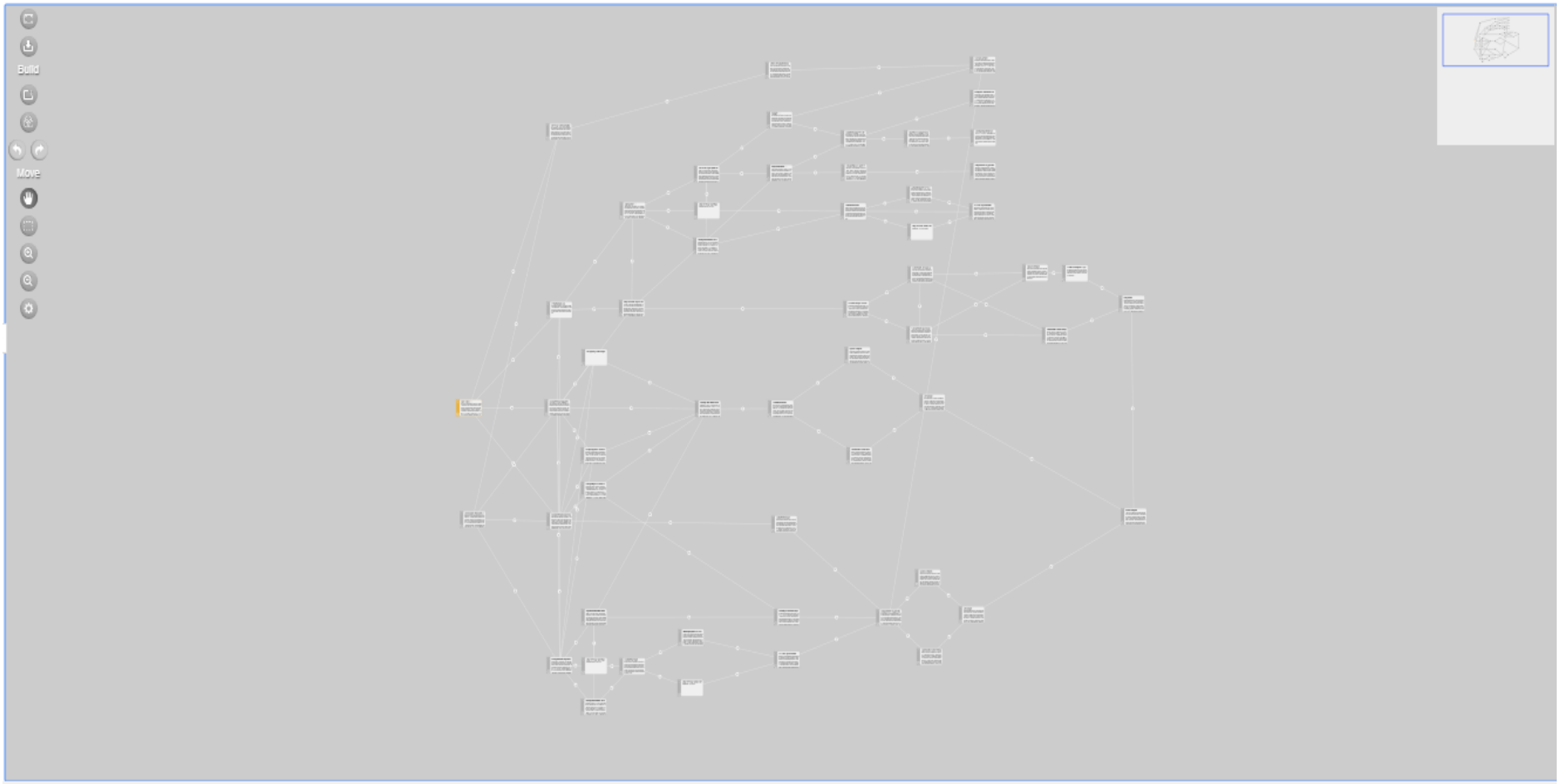
## Case authors: Kapshytar O. O. Acute intestinal obstruction



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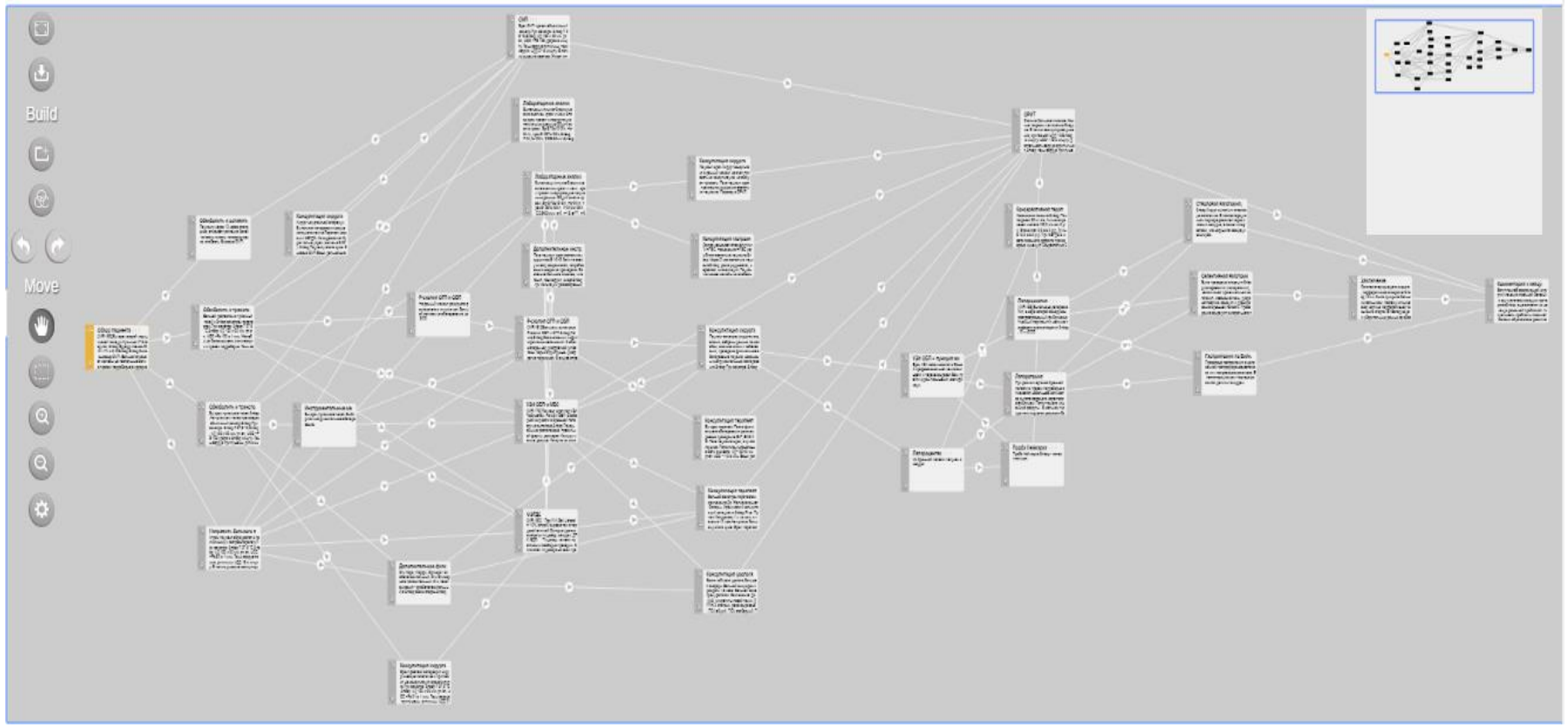
## Case authors: Bilai A. I. Perforated Ulcer



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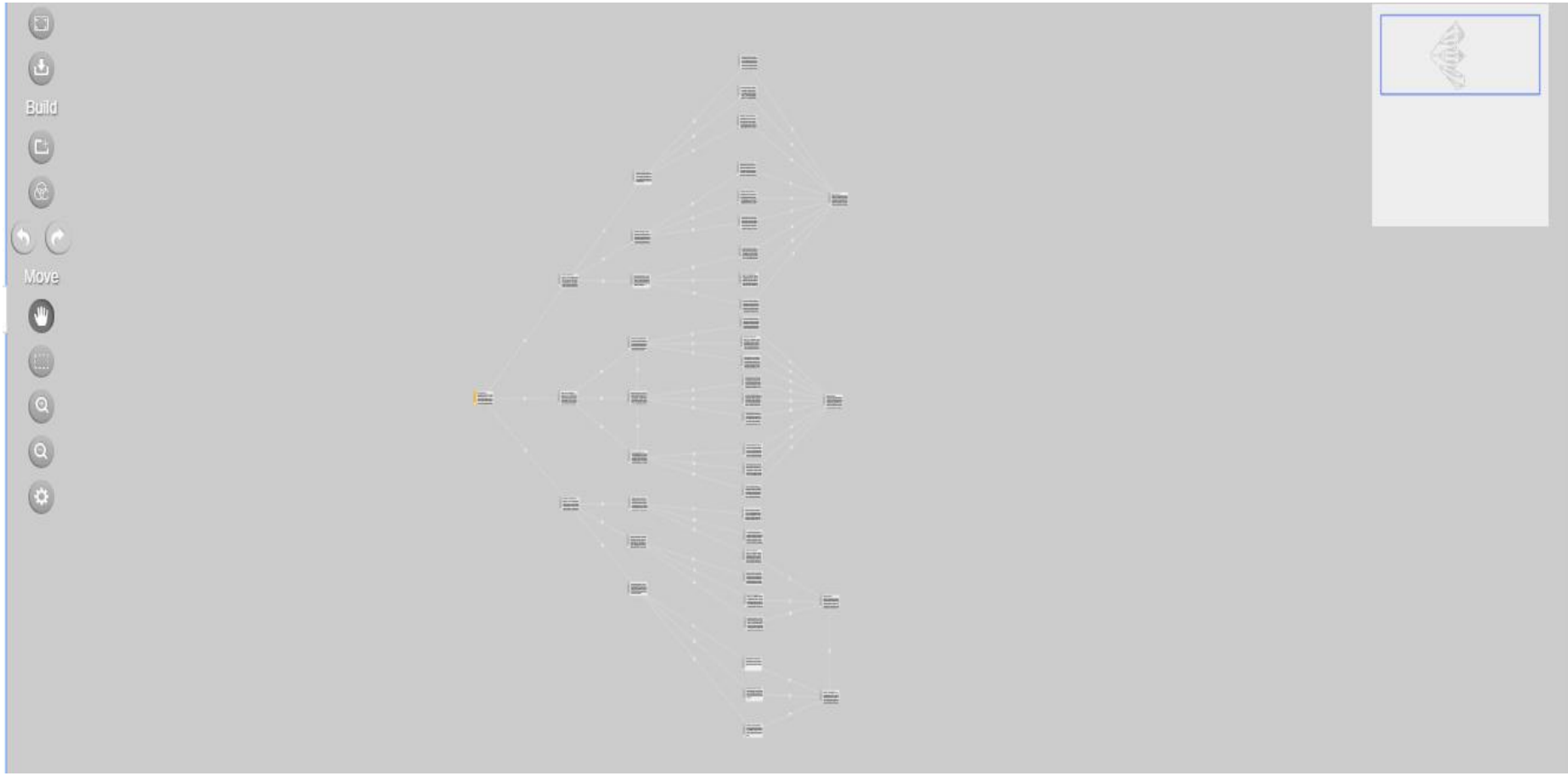
## Case authors #5 Kapshytar A.A. Bacterial complications after surgery



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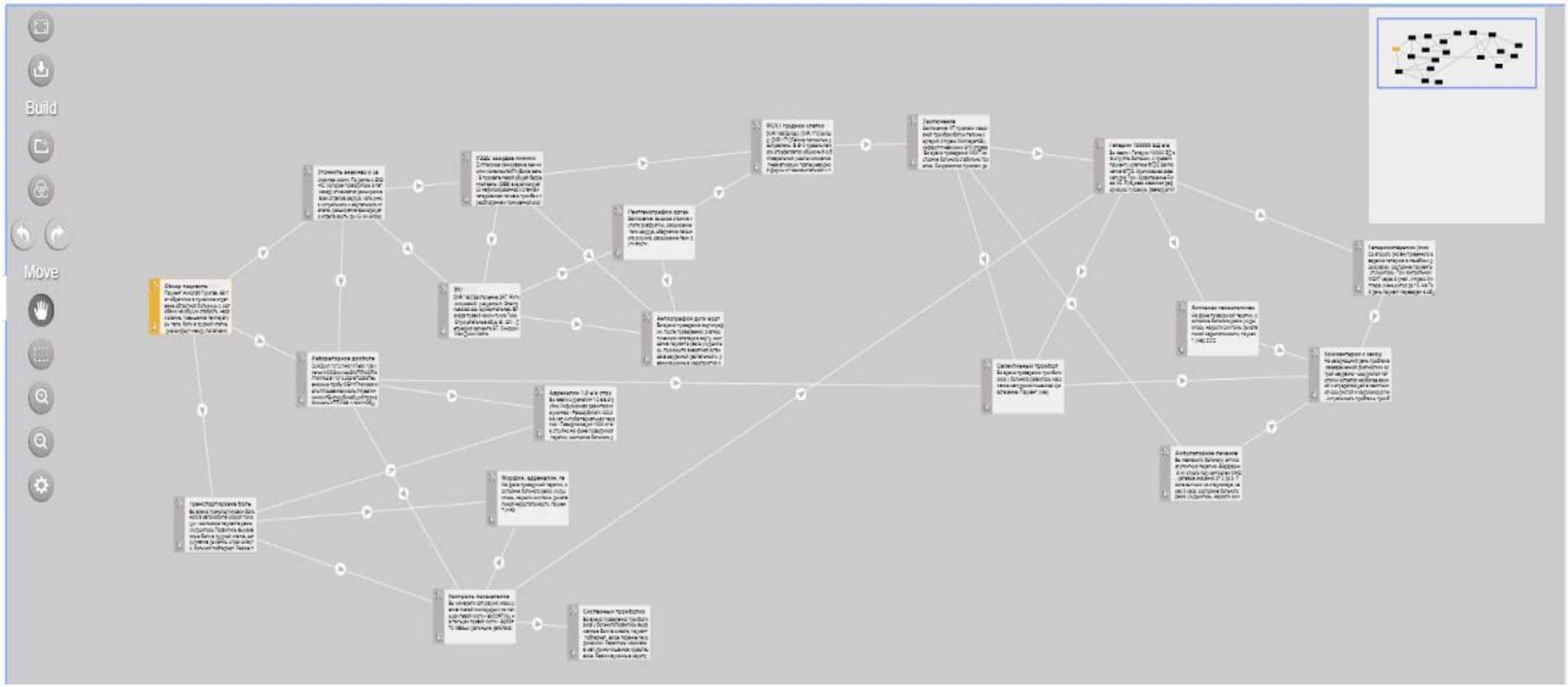
## Case authors # 6 Voloshyn O. M. Pulmonary embolism



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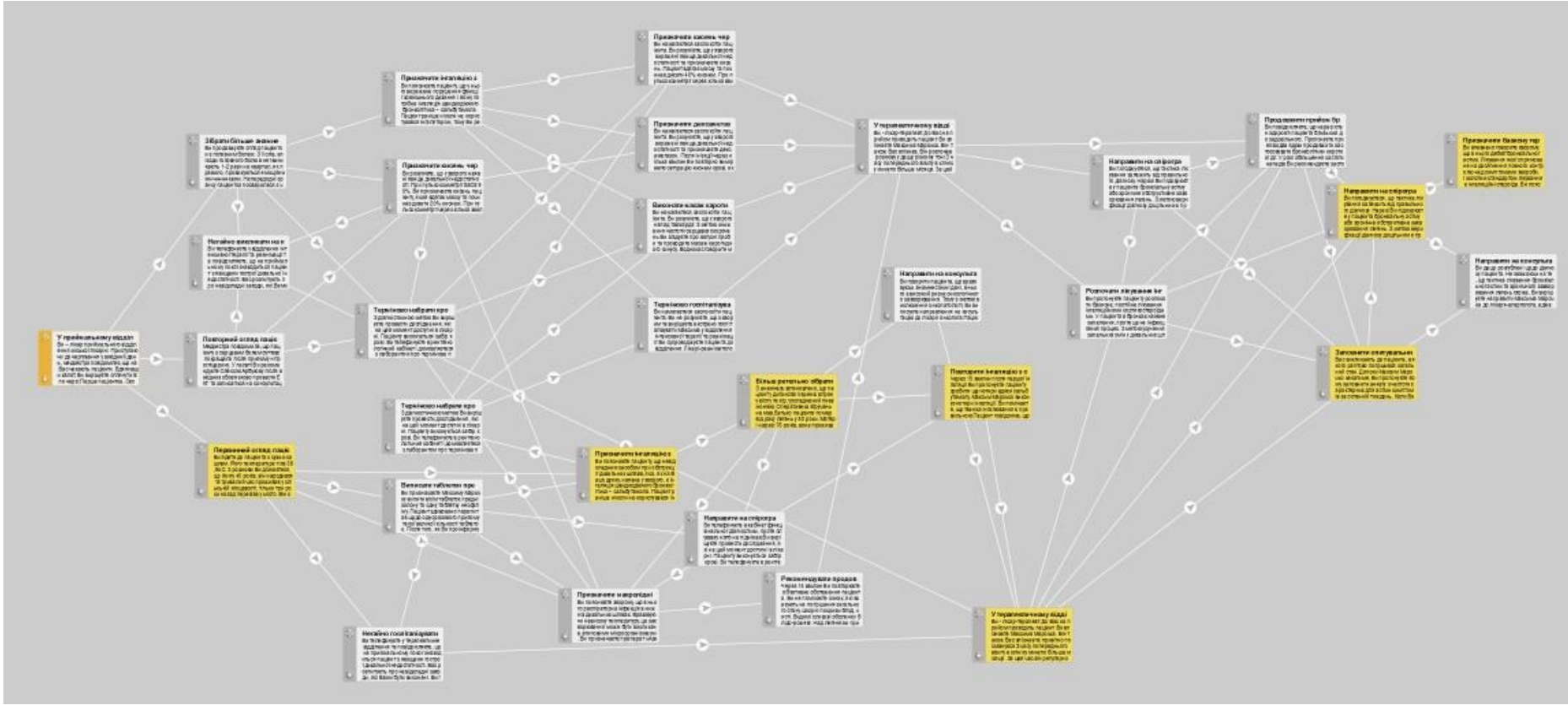
## 2.4 Bukovinian State Medical University (BSMU), Ukraine

**Case # 1** Bronchial asthmaPolovchenko Oksana (case author – Sergii Sazhyn)



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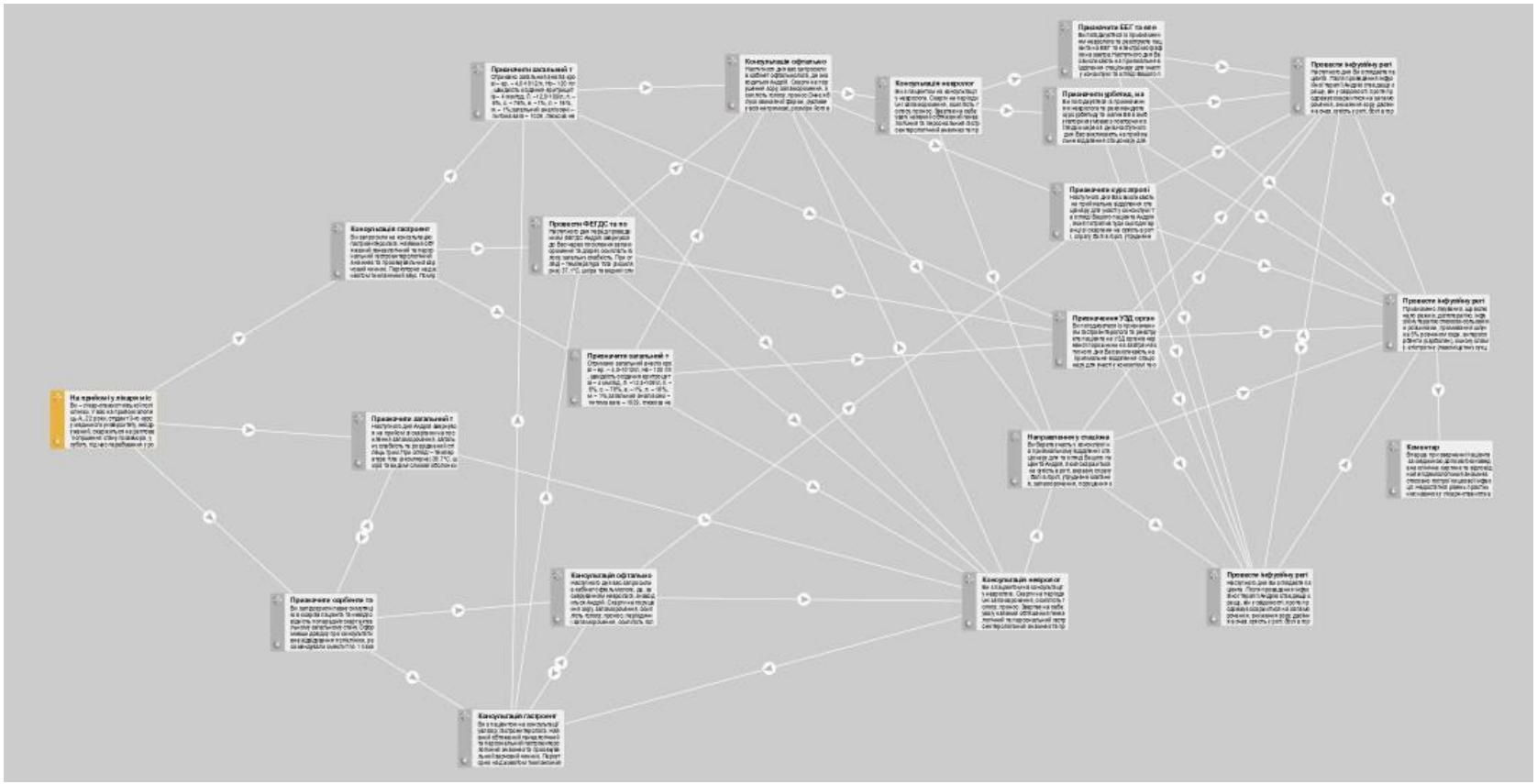
**Case # 2** Acute enteric infection Gerasymiuk Andriy (case author – Mykola Garas)



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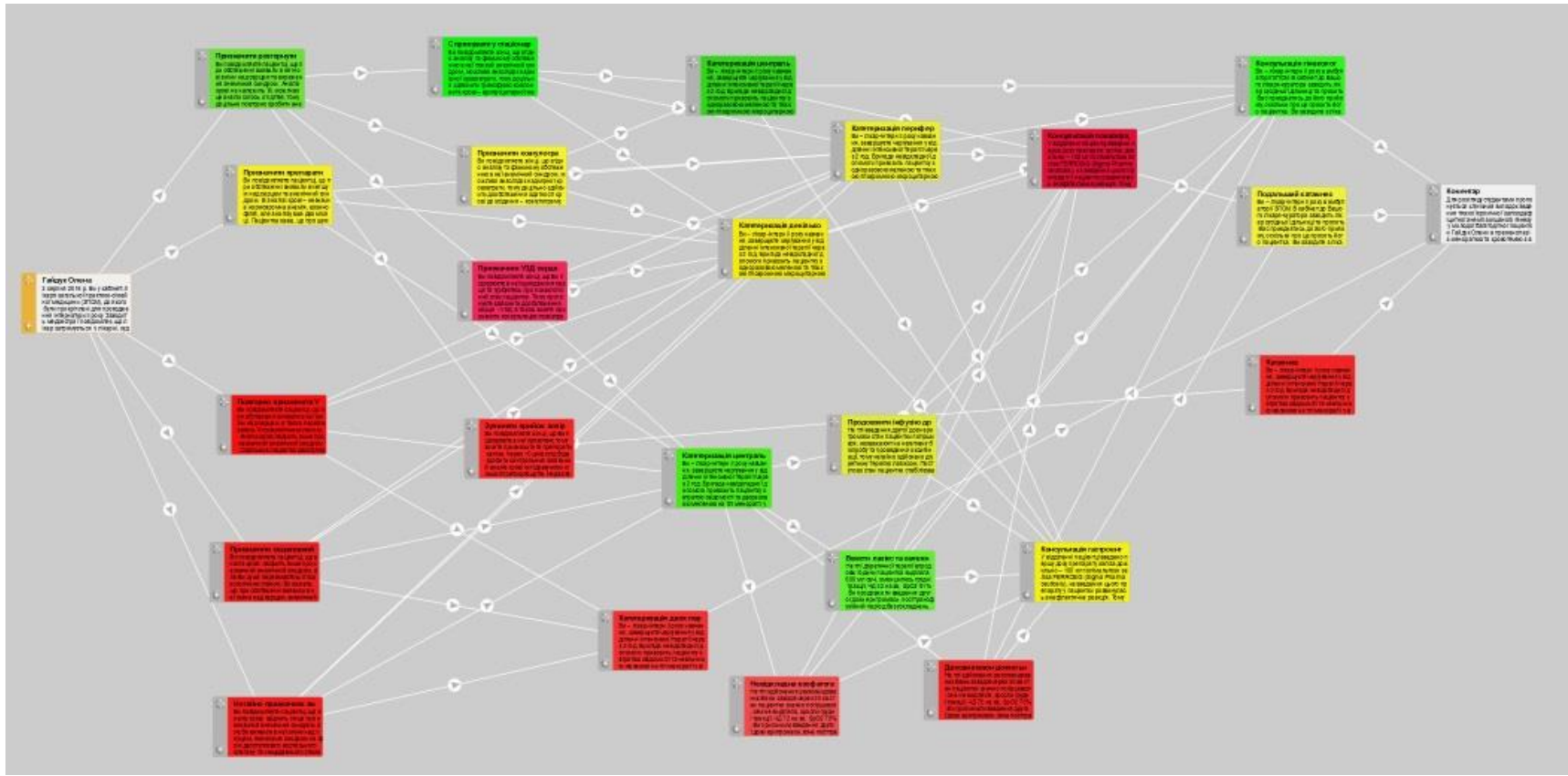
**Case # 3** Anemia Gayduk Olena (case author – Nataliia Bogutska)



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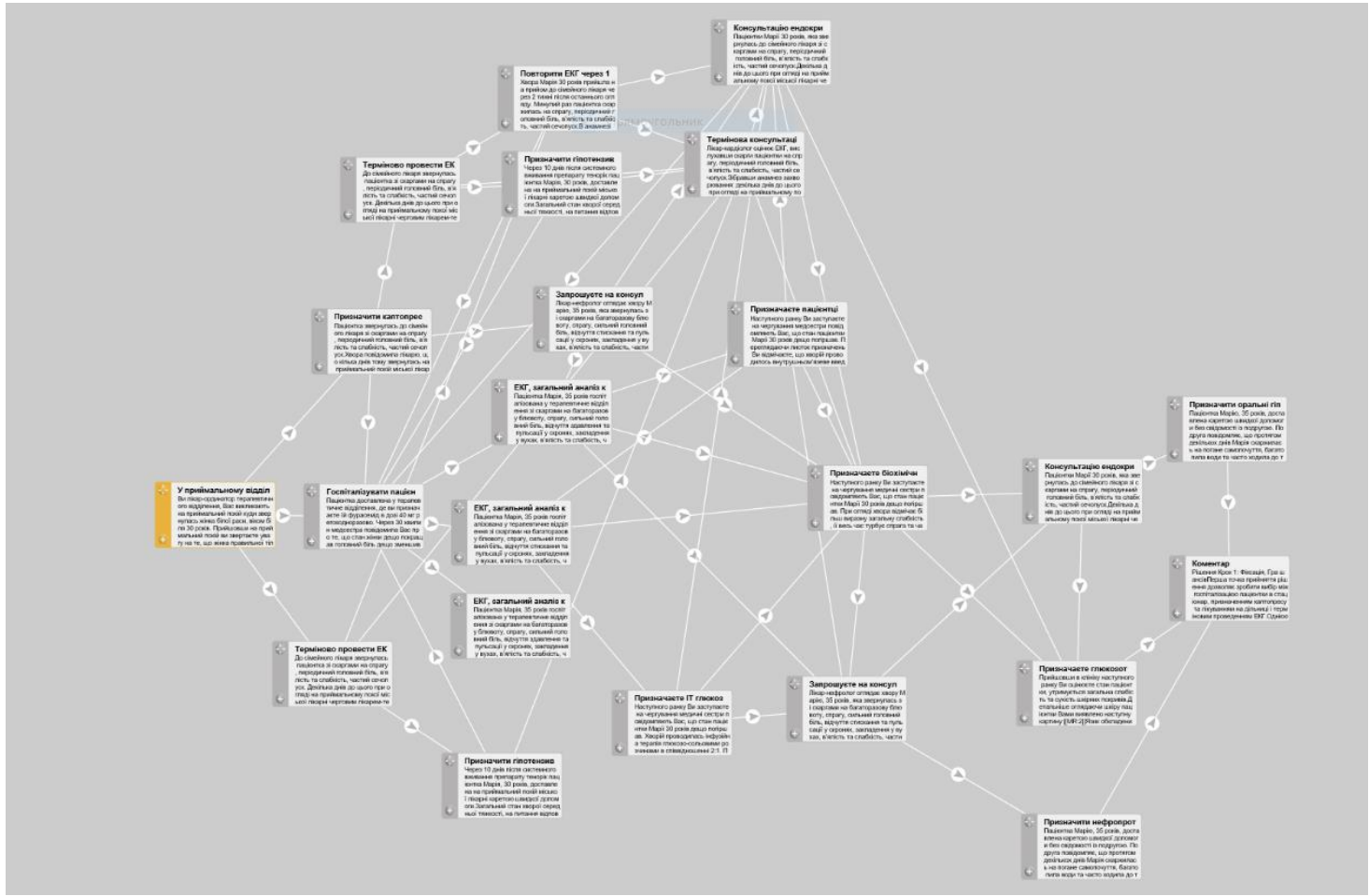
**Case # 4** Diabetes mellitus Sydorenko Ivan (case author – Uliana Marusyk)



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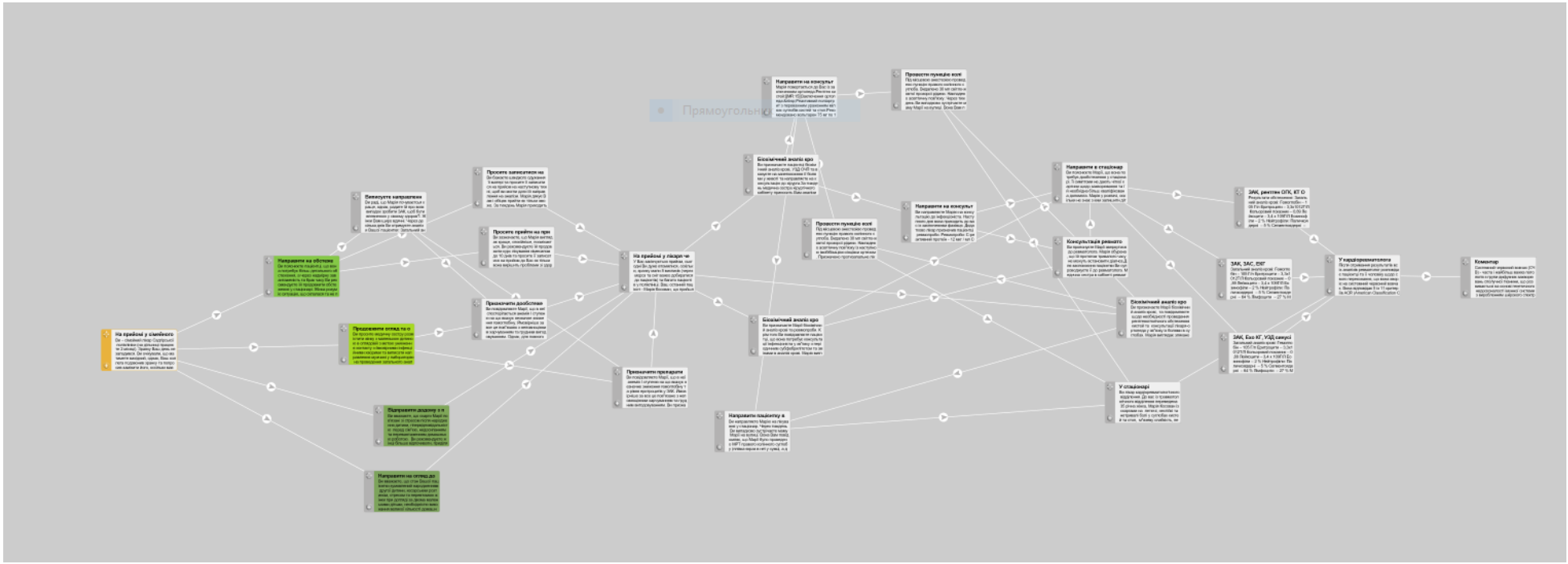
**Case # 5** Systemic lupus erythematosus Maria Kosovan (case author – Galyna Bilyk)



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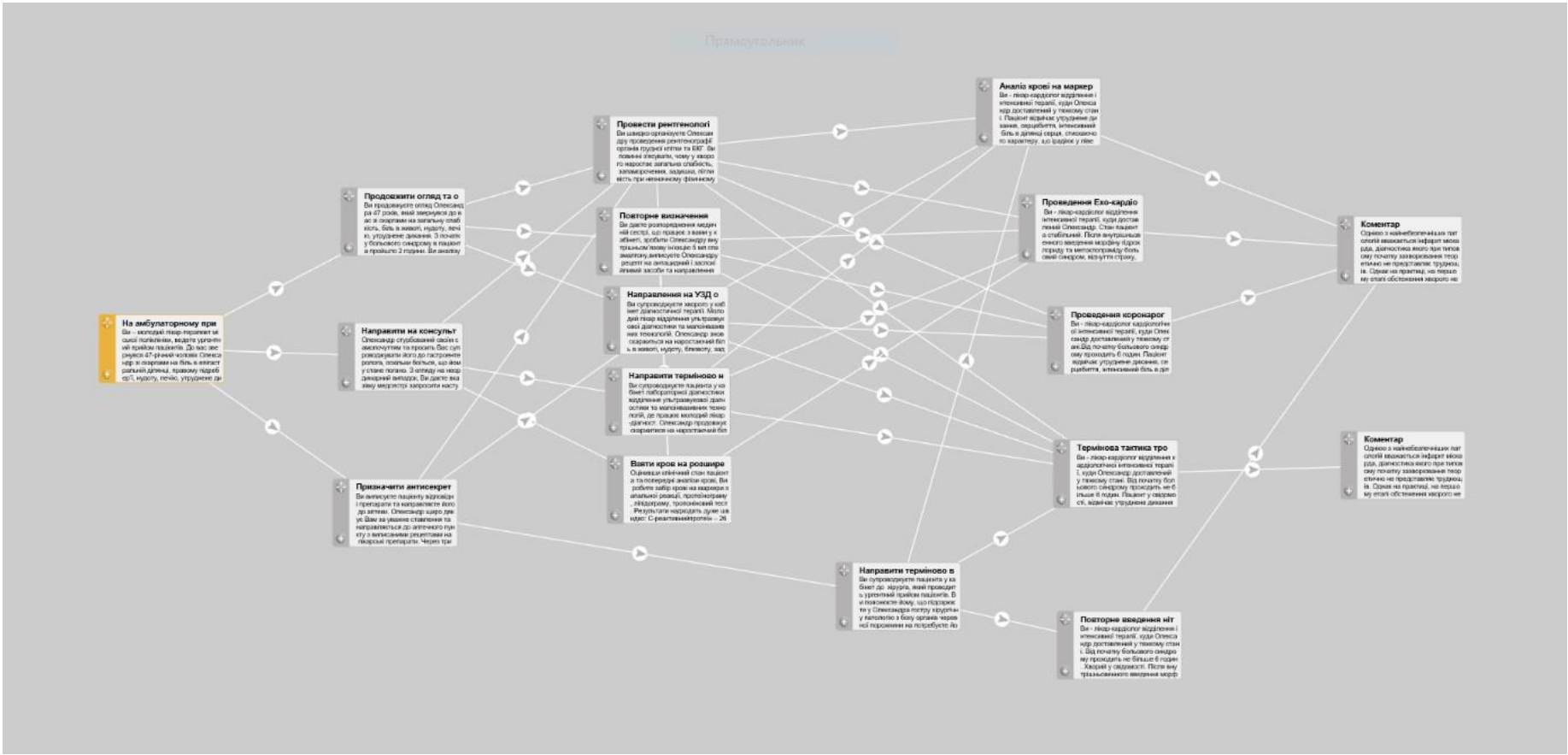
**Case # 6** Myocardial infarction Petrenko Oleksandr **(**case author – Victoria Khilchevska)



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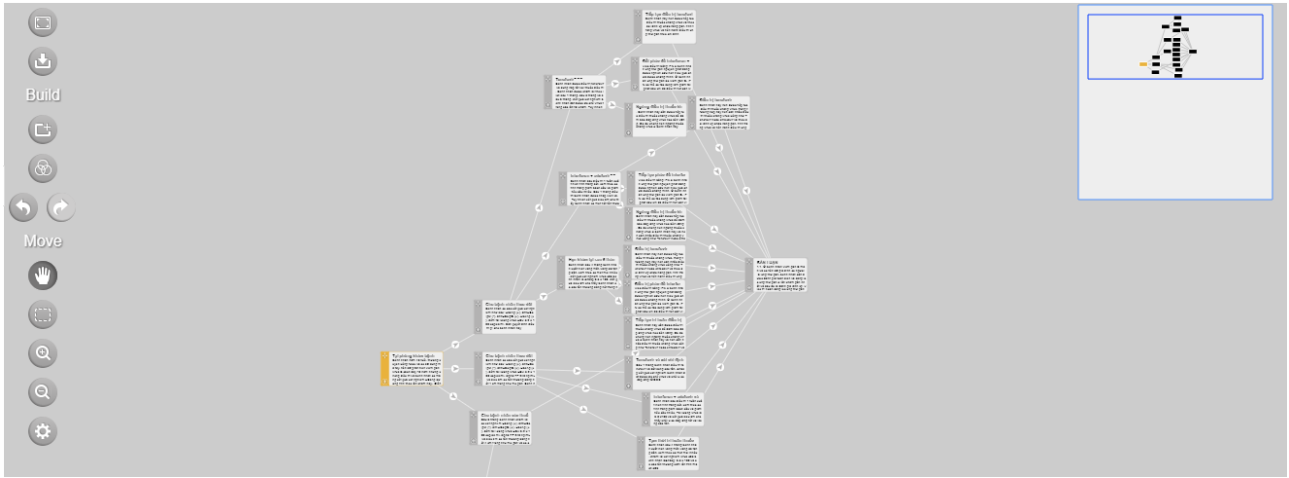
## 2.5. Hanoi Medical University (HMU), Vietnam

## VP Case: Viral hepatitis



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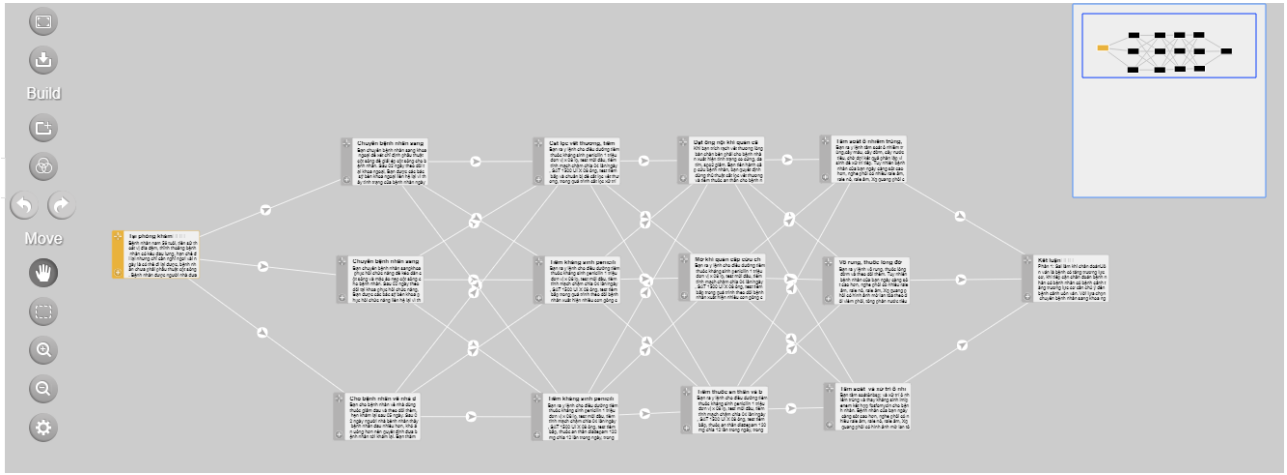
## VP Case: Tetanus



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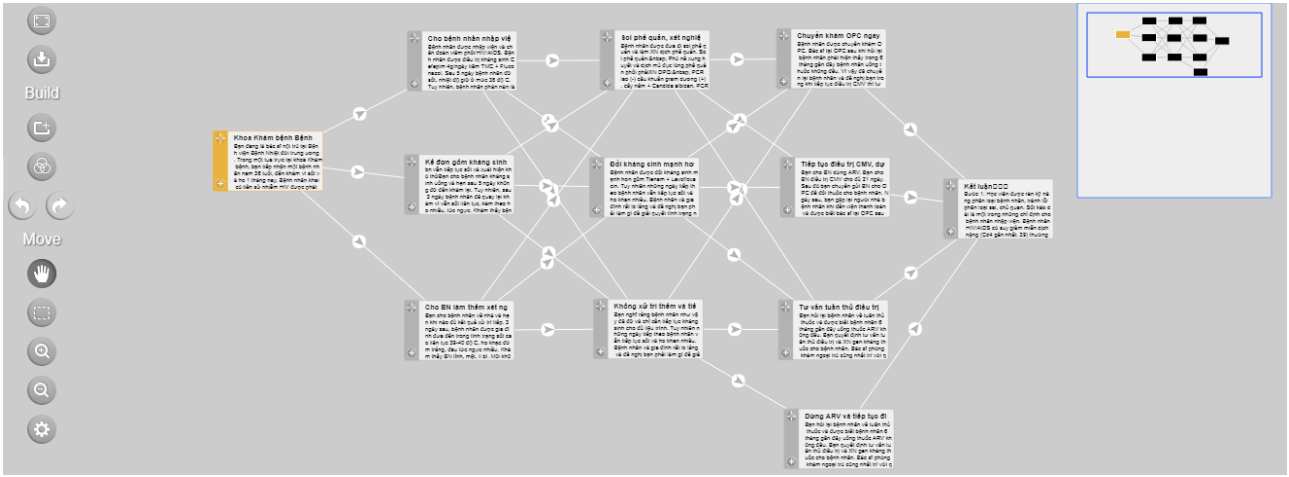
## VP Case: HIV/AIDS



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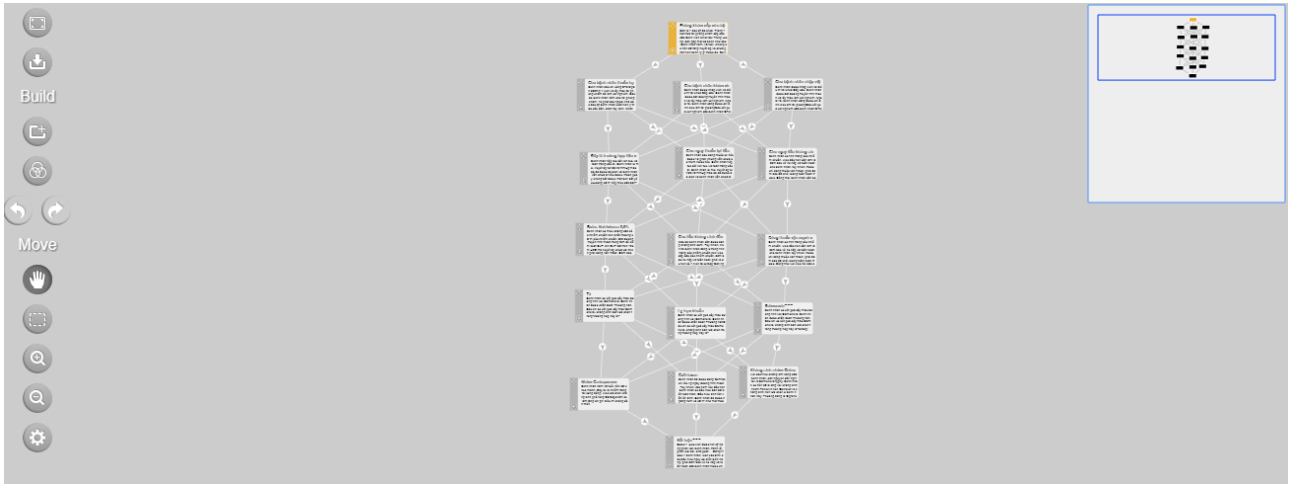
# VP Case: Typhoid fever



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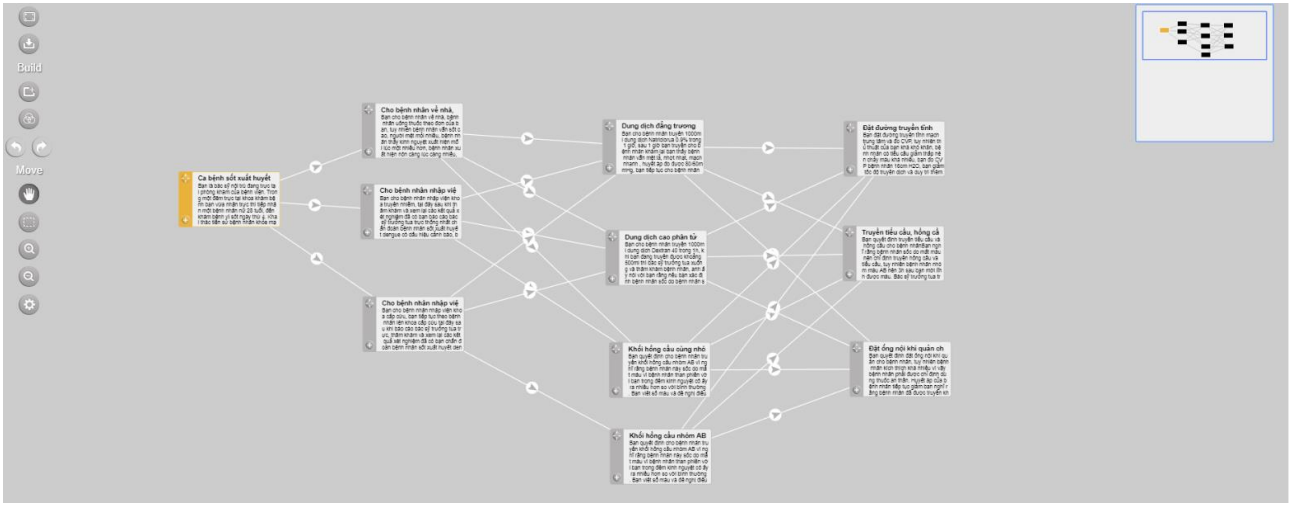
# VP Case: Dengue hemorrhagic fever



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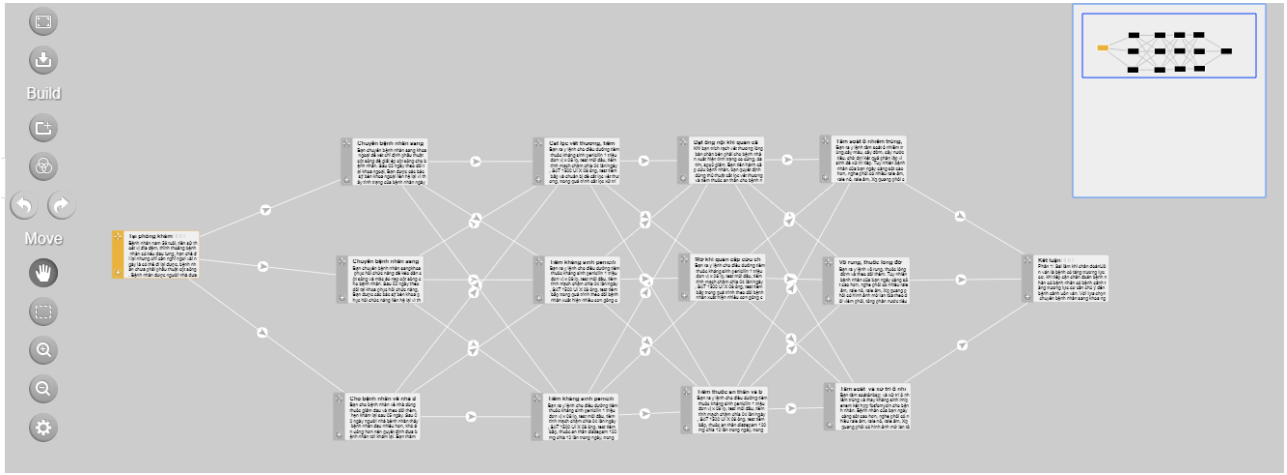
## VP Case: Streptococcus suis infection



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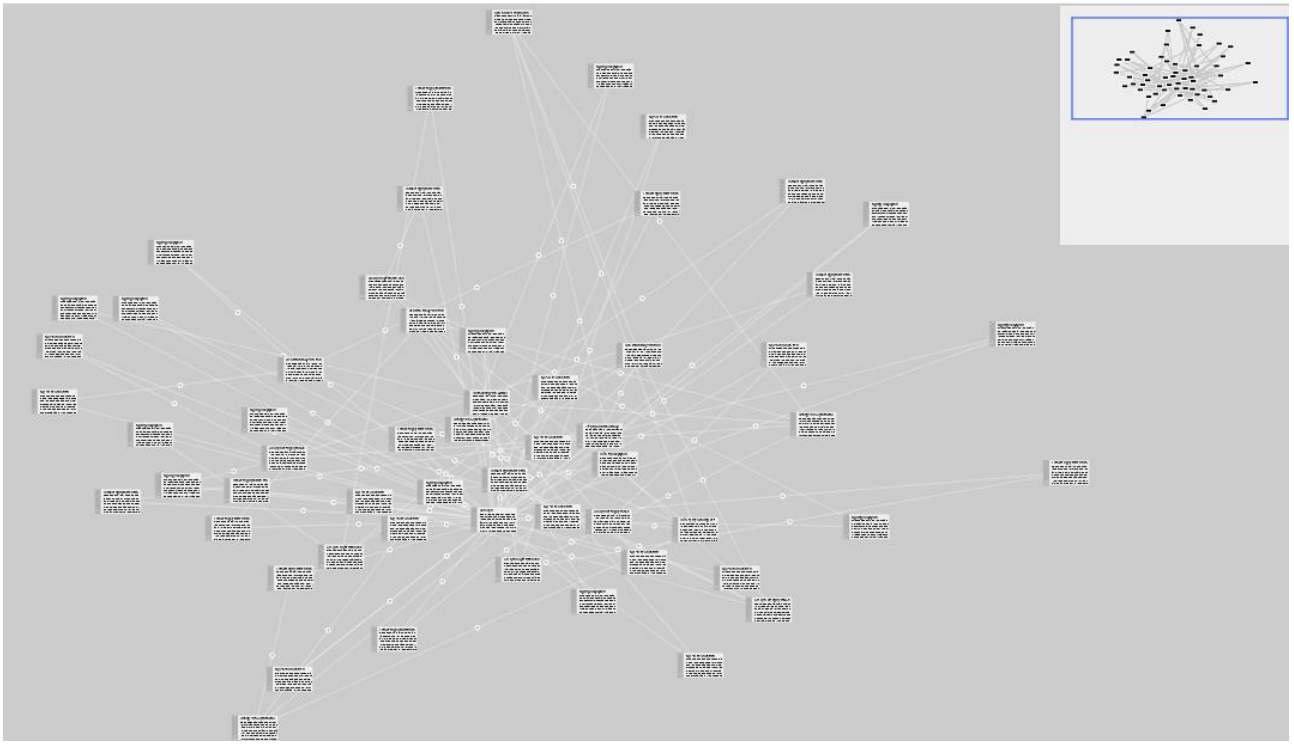
## 2.6 Hue University of Medicine and Pharmacy (HUMP), Vietnam

### VP case #1 “Abdominal pain, jaundice”.



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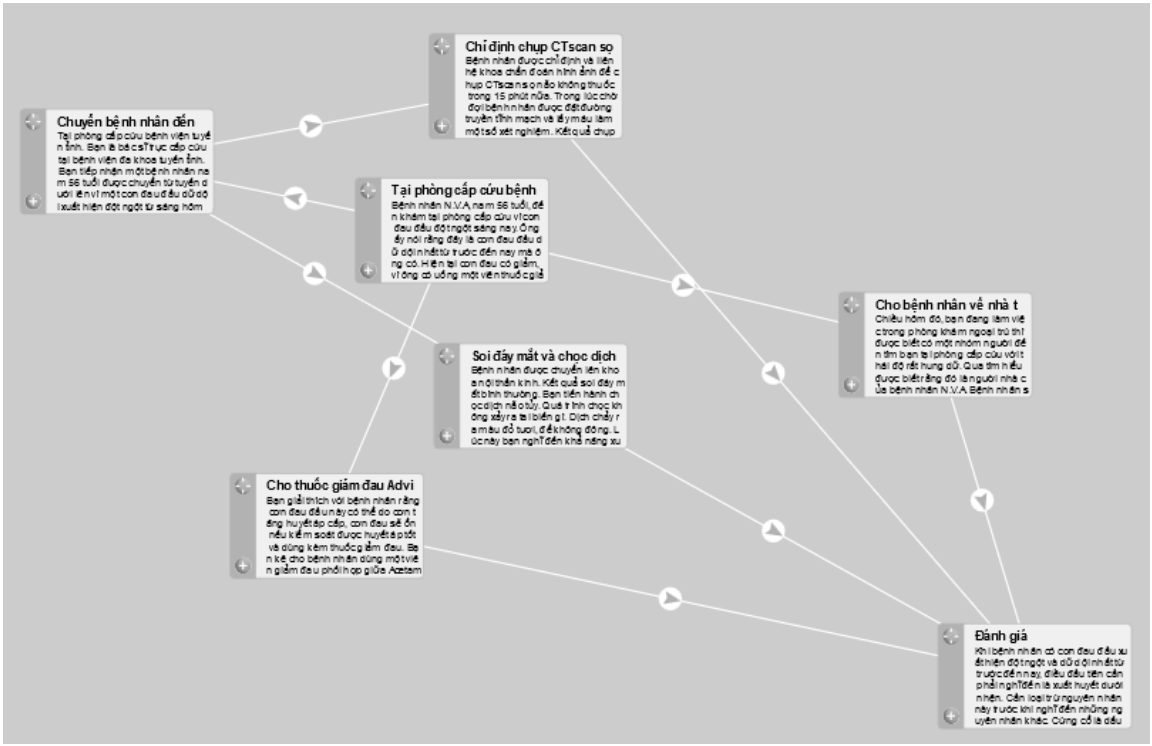
## VP case #2 “Headache - subarachnoid hemorrhage”.



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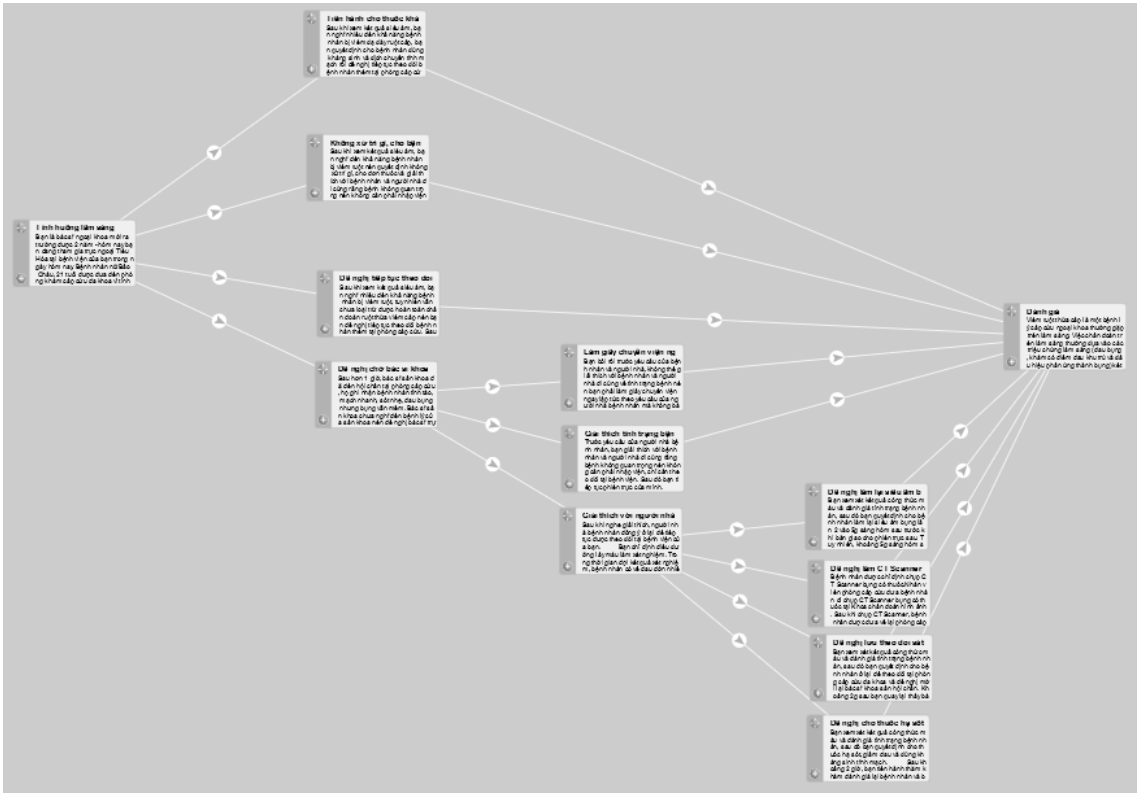
# VP case #3 “Acute appendicitis”



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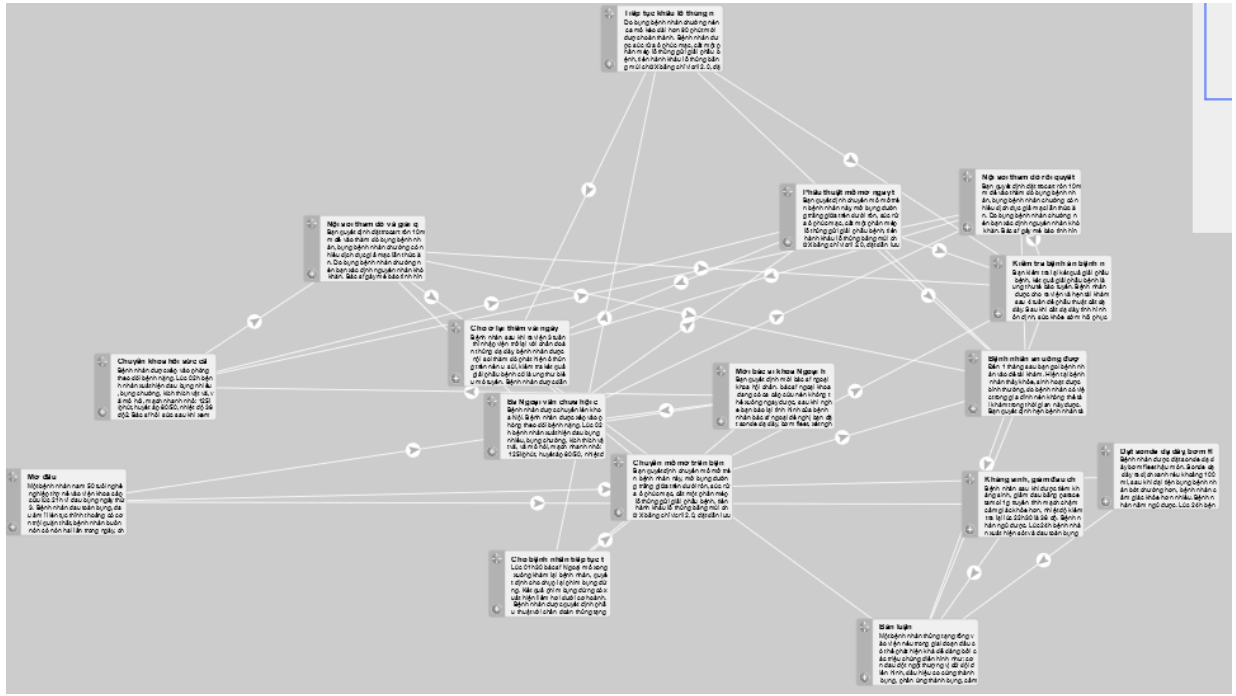
## VP case #4 “Gastrointestinal perforation”



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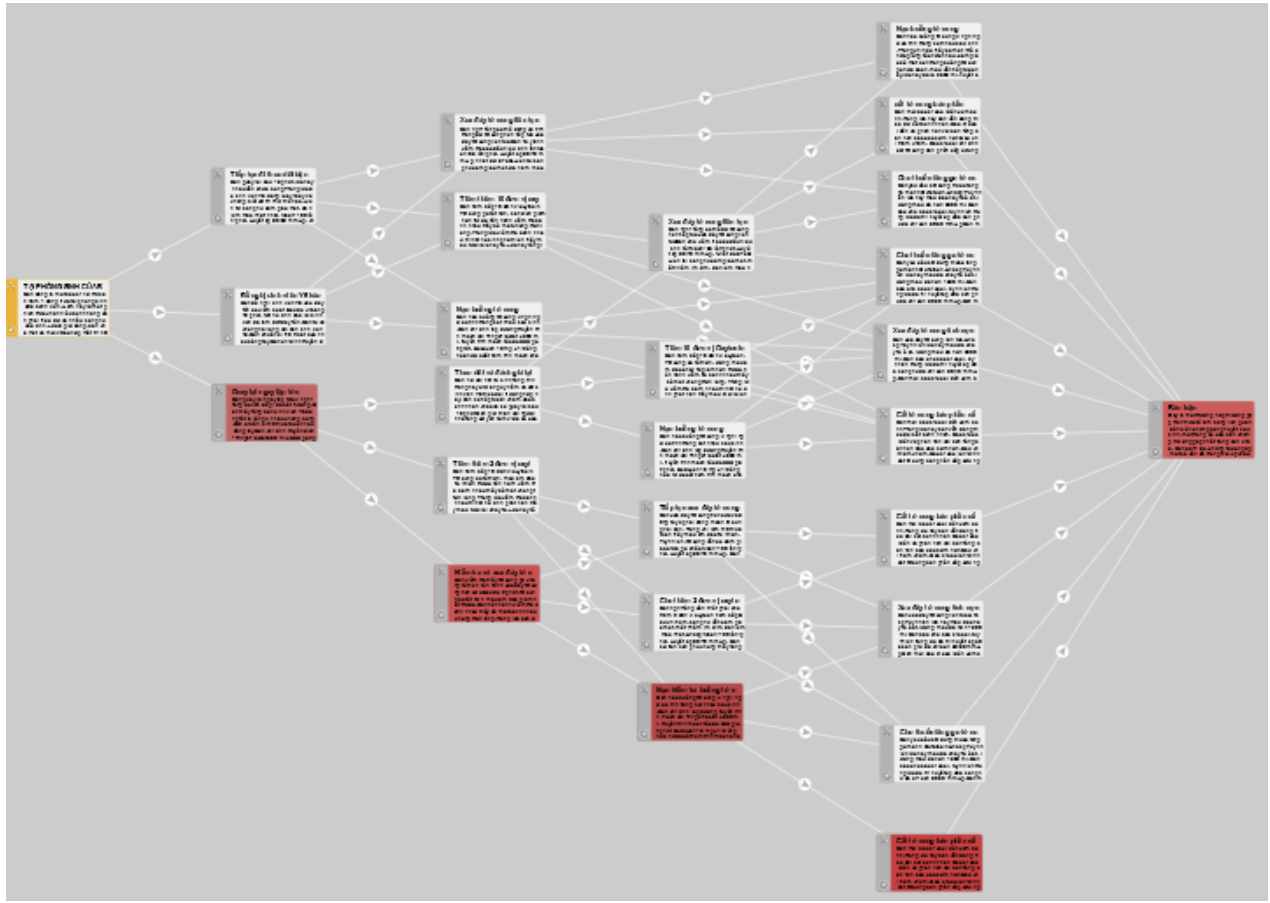
## VP case #5 “Postpartum hemorrhage”



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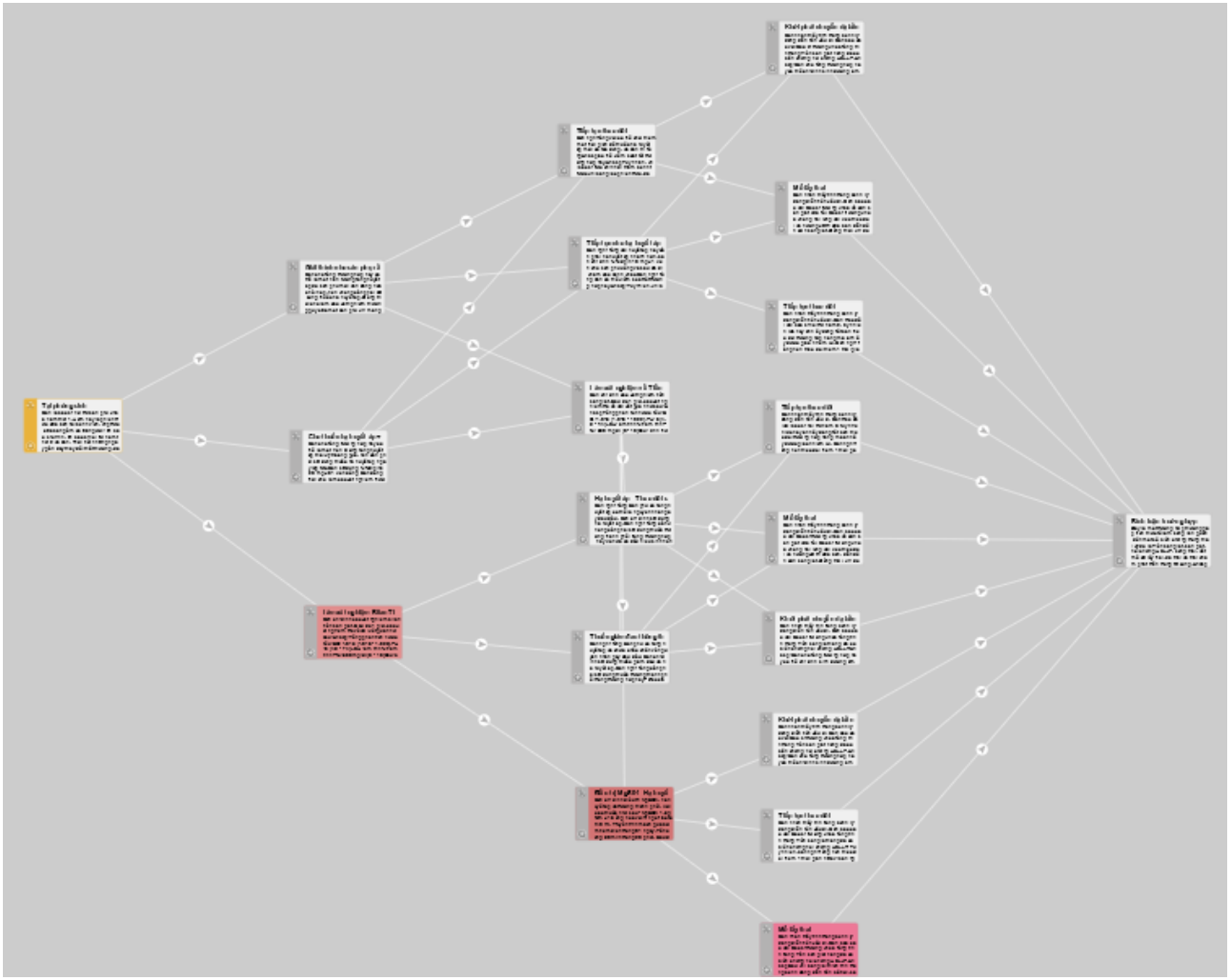
## VP case #6 “Pre-eclampsia”



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## Annex 3: Report of internal and external review

### 3.1 Astana Medical University (AMU), Kazakhstan

**Case author: BekbergenovaZh.; Headache (hyperpiesis)**

**Report on the case Alma Akhmetova**

| | Comments | Recommendations |
|---|---|---|
| 671(root) | Outpatient care | To complement the clinical picture |
| 675 | To hospitalize the patient in emergency order in a hospital | The clinical picture is supplemented. Patient's condition worsened |
| 686 | Make a CT scan and call a neurologist | A decision was made to change the CT scan in this node. In the previous one, leave the same. And in this to worsen. |

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**Case author: Nurpeissova R.; Cough (Pneumonia)**

**Report on the case "Pneumonia" BaizhanovSerik**

| Node № | Comments | Recommendations |
|---|---|---|
| №430 | Not completely patient history, in the first part about introduction | The described clinical picture resembles chronic obstructive respiratory disease, should include experienced smoking |
| №431 | To identify the main duties of physician in attending room | Resident of therapeutic branches |
| №431 | Physical examination of patient: too short, haven't any clinical features of respiratory insufficiency. | Physical examination should be broad, and informative for making decision, may include some clinical signs of respiratory insufficiency |
| №435 | Physical examination of pulmonologist not properly described condition of patient | Clinical exam of narrow specialist should be given completely information which were giving correct decision |
| №436 | For decrease body temperature to identify dose of drug | Should be choose special antipyretic drug in adequate dose |

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**Case author: Shnaider K., General Weakness ( Anemia)**

**Report on the case Amet Akbota**

| N | Comments | Recommendations |
|---|---|---|
| 1 | Many symptoms of anemia on first examination | Remove several symptoms |
| 2 | In one case, there are only two options | Add options |
| 3 | The case seems easy, add more options, complicate the script | If possible |

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**Case author: Zhakupbekova.M, Thirst (Diabetes mellitus)**

**Report on the case DmitriiMarchenko**

| Node № | Comments | Advices |
|---|---|---|
| 568 | Option- Rinse the stomach and rehydration therapy, let go home with recommendations with treatment in the polyclinic. Uninteresting to students because of the instructions to let go home. | Therefore, it was decided not to specify it in the option the name. |
| 696 | Students with the approbation of the case suggested adding one more option, since during the discussion there were probable diagnoses like gastritis or poisoning. | It was decided to add one more option: to conduct the EGF and to hospitalize in the therapeutic department. |
| 567 | Option-Make a C.B.C-triple and call a surgeon interested in several students | in this option, it was decided to remove the word "triple" and supplement the C.B.C data. |
| 576 | At the step-an additional medical history, there is a node -cytotoxic blood biochemistry and hospitalize in the intensive care unit | It was decided to remove the word “cyto” and to hospitalize in intensive care, it looks like a clue. |
| 697 | With the introduction of the FGD option and hospitalization in therapy, additional nodes appeared: | to hospitalize in therapeutics department |
| 634 | With the introduction of the FGD option and hospitalization in therapy, additional nodes appeared: | to transfer to resuscitation |

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**Case author: Zhuzzhasarova A. Difficult breathing (Bronchial asthma)**

**Report on the case "Difficult to breathing" AlimovAskar**

| Node № | Comments | Recommendations |
|---|---|---|
| №416 | To identify the main duties of physician | Resident of infection department |
| №419 | To identify dose of drug | Should be choose special drug in adequate dose |
| №421 | Physical examination of child, but not giving oxygen therapy due to respiratory insufficiency. | Physical examination should be broad, and informative for making decision, may include some clinical signs of respiratory insufficiency, prescription oxygen therapy |
| №423 | Inhalation with saline | Inhalation with saline should be contraindicated when child have difficult to breathing, and really confused students |
| №424 | Oxygen therapy, haven't vital signs of child conditions | During any procedures invasive or non invasive should be right arterial pressure, breathing rate, heart rate |
| №425 | Prescription antibiotics for child, indication | Antibiotic name, dose, way of administration should be write |
| №426 | Short information about respiratory and cardiac failure | In this option should be giving more clinical signs of heart and respiratory failure, where indicated all of features |

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| | | |
|---|---|---|
| №427 | Information about child condition after inhalation with adrenaline, too short and clinical not valuable | Should be write about dose, way of administration, duration, clinical features after inhalation |
| №428 | Alkaline inhalation, short information | Should be write indication of this type inhalation, what the child condition |

**Case author Tyan V.. Bleeding (abruption of placenta)**

**Report on the case LuizaAkhmetova**

| | Comments | Advices |
|---|---|---|
| 1 | Difficult case | 1. It is proposed to deploy events in 2 directions: to make a lethal outcome as a result of DIC syndrome. |
| | | 2. strengthen the "knot" - the fight against bleeding (intravenous infusion, the introduction of FFP, control of hemodynamics, the introduction of methylergometrine) |
| | | 3. To describe in more detail the course of events in the case: You are a GP physician, a woman in labor is delivered, with the diagnosis: home birth |

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| | | |
|---|---|---|
| 21 | Option - completely changed. It was:<br>Louise Akhmetova, 34 years old, after the birth of the afterbirth began to bleed profusely. Pale skin, weakness, PS - 110 beats per minute, Art. Pressure - 90/60 mm Hg. Uterus soft, flabby. Blood loss = 600 ml. and continues. | You are a doctor of an emergency medical emergency team. At 03:30 you took the call home with a preliminary diagnosis: Home birth. In 20 minutes after receipt of the call, you called the intercom in anticipation of the unknown. The door was opened by the agitated husband and hurried to invite an ambulance to the furthest room of the apartment and the floor was covered with two towels soaked in blood and amniotic fluid. A cry of a newborn was heard from the room. 30 minutes ago a boy was born, shouted at once. The score for Apgar is 7-8 points.<br>Your tactic:<br>1. Collection of anamnesis of the woman in childbirth.<br>2. To carry out an objective examination of the parturient woman and the child.<br>3. Catheterization of 2 peripheral veins. |

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| | | |
|---|---|---|
| 30 | Students with the approbation of the case suggested adding lethal outcome of the woman in childbirth from the DIC syndrome after the operation. | It was decided to add one more option: The patient was taken to the operating room in an emergency with Diagnosis: Early postpartum period. Atonic uterine bleeding. Hemorrhagic shock-III degree. DIC-syndrome.<br>Hemoglobin - 65 g / l, Erythrocytes - 2,0x1012 / l, Platelets - 70 thousand / μL, Leukocytes - 5,0x109 / l, fibrinogen - 2,0 g / l, APTT - 38 s, PTV - 12 s.<br>Your tactic:<br>1. Supravaginal amputation of the uterus without appendages<br>2. Extirpation of the uterus without appendages<br>3. Extirpation of the uterus with appendages and ligation of the internal iliac artery |
| 38 | In the option changed "Your tactics" | Your tactic:<br>1. Calling a laboratory assistant in the reception room<br>2. Mobilization of free staff and call an anesthesiologist<br>3. Establish the cause of bleeding |

| | | |
|---|---|---|
| 45 | Students offered to make a favorable outcome to the mother and an extract from home with the child. Therefore, option 45 is added. | During intensive monitoring for 4 days, the condition of the parturient woman is satisfactory, there are no complaints. Skin and visible mucous membranes are pale pink, the skin turgor is preserved. Tongue moist, clean. Auscultatory: breath vesicular, heart tones clear, rhythmical.<br>AD 110/70 mm Hg, Pulse 88 beats. in min., FHD 18 in min., Body temperature 36.7 * C.<br>Mammary glands are soft, lactation is preserved. The abdomen is soft, painless. Uterus dense, 15 cm above the heart. Sutures without hyperemia and edema. Healing is primary there are no pathological discharge from the genital tract. There is no peripheral and visible edema. Urination free, painless, had a normal stool.<br>The patient is preparing for discharge with the child.<br>Recommendations for further monitoring in outpatient settings are given. |
| 37 | Changed "Your tactic" was<br>1. Conservative-expectant management<br>2. Fighting with bleeding | Conservative-expectant tactics replaced by<br>1. Bimanual compression of the uterus |

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| | | |
|---|---|---|
| 705 | Students offered to make a tragic outcome due to the lack of knowledge and experience of the doctor. Lethal outcome of the parturient woman in the ambulance ambulance car before hospitalization.<br>The option was added | The specialized brigade arrived 10 minutes after your call.<br>When your colleague entered into the apartment, his attention was immediately drawn to 2 towels soaked in blood and amniotic fluid. Luiza looked asleep, did not respond to her name. Skin covers and visible mucous membranes are pale. The limbs are cold. Peripheral pulse is not palpable. The abdomen is soft, enlarged at the expense of the uterus. Uterus at the navel, flabby. Bleeding continues.<br>BP 50/30 mm.r.st., Auscultatory, cardiac tones of the deaf, bradycardia. Breath is superficial.<br>Despite the applied efforts, contact in the peripheral veins could not be found because of low blood pressure.<br>The emergency ambulance rushed through the night city, with a siren, to deliver Luiza as soon as possible to the nearest hospital. After 15 minutes, biological death was certified. |

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**KSMU provided written external reviews AMU's 6 cases. Samples of the review are seen below.**

Карагандинский Государственный Медицинский Университет
Рецензия на кейс Луиза Ахметова (геморрагический синдром), разработанный коллективом авторов Медицинского Университета Астана

Кейс Луиза Ахметова разработан на основе опыта реализации проекта TAME – Training against medical error в рамках международной программы Эразмус+ Европейского союза.

В кейсе Луиза Ахметова рассматривается вопрос кровотечений при беременности, приближен к реальной клинической ситуации (В приемное отделение, бригадой скорой медицинской помощи, доставлена роженица 34 лет, с регулярными схватками и полным открытием маточного зева. Из анамнеза: Роды - 4, А - 2 (последний аборт осложнился метроэндометритом), В – 1). Однако, в данном кейсе пропущен амбулаторный этап, действие разворачивается в приемном отделении и отсутствуют роли обучающихся, например: Вы- интерн или Вы- врач общей практики. Также необходимо преобразовать кейс в разветвленный и предоставить большее количество равнозначных вариантов, у обучающихся нет возможности вернуться на правильный путь. Отсутствует эмоциональная окраска.

В конце кейса необходимо расписать комментарии пошагово, указать на каком этапе какие были допущены ошибки и описать их значение для данного случая. В ходе изучения текста были выявлены стилистические и орфографические ошибки.

Ph- докторант кафедры общей врачебной практики №2 А.Р. Бейсенаева

Зав. кафедрой общей врачебной практики №2 д.м.н., доцент Г.М. Мулдаева

Карагандинский Государственный Медицинский Университет
Рецензия на кейс Алма Ахметова (гипертензивный синдром), разработанный коллективом авторов Медицинского Университета Астана

Кейс Алма Ахметова разработан на основе опыта реализации проекта TAME – Training against medical error в рамках международной программы Эразмус+ Европейского союза.

Кейс Алма Ахметова посвящен проблеме артериальной гипертензии и ее осложнениям, приближен к реальной клинической ситуации (Пациентка Алма, преподаватель 60 лет предъявляет жалобы на головные боли, головокружение, шум в голове, тошноту. Ухудшение состояние связывает с эмоциональным стрессом. Состоит на Д-учете по артериальной гипертензии, базисную терапию принимает нерегулярно. Со слов выпила самостоятельно таблетку каптоприла и эналаприла 10 мг. перед Вашим приходом. Вы проводите измерение артериального давления. АД на правой и левой руке равно 200/120 мм.рт.ст.), продемонстрированы взаимоотношения пациента и врача.

Однако, необходимо пересмотреть структуру кейса, предоставить большее количество равноценных вариантов дальнейшей тактики. С учетом, что кейс рассчитан на студентов 5 курса, дисциплины "Общая врачебная практика" целесообразно сделать акцент на поликлинический этап нежели стационарный, дать полную характеристику боли, расширить анамнестические и объективные данные, показать динамику клинического состояния.

Желательно пересмотреть клиническую картину и назначить дальнейшую тактику диагностики и лечения согласно протоколам диагностики и лечения данного заболевания. Помимо этого, комментарии к случаю предпочтительнее расписать пошагово с пояснениями, с учетом опыта адаптирования педиатрических кейсов, предоставленных университетом Св. Георга, Лондон. Были допущены стилистические и орфографические ошибки.

Ph- докторант кафедры общей врачебной практики №2 А.Р. Бейсенаева

Зав. кафедрой общей врачебной практики №2 д.м.н., доцент Г.М. Мулдаева

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## 3.2 Karaganda State Medical University (KSMU), Kazakhstan

Internal review comments:

1. New GP case (Yermek Kunayev) for 5th year students with medical error need to be focused on management in outpatient care and necessary to be updated according to comments.
2. Case (Marzhan Akhmetova) with abdominal pain commented by lack of anamnesis, clinical data and clinical features.
3. Case (Marzhan Akhmetova) with abdominal pain commented by necessity of creation more treatment options.
4. Overall comments to 6 GP cases is necessity to add proper comments to each root.
5. Case's structure (Bronchial asthma) need to be reconsidered.
6. Case () have only 1 option which not appropriate to branched cases. Case need more
7. Case Patient presentation gives only one option for treatment, there are lack of clinical and investigations data to understand and identify error.

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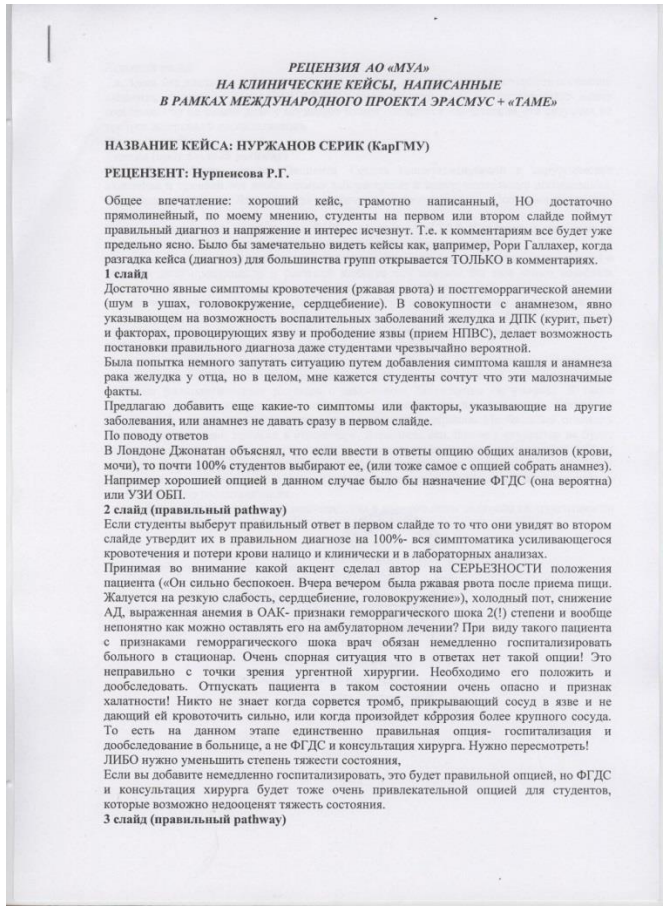
**AMU provided written external review for 6 cases. Sample of the review is seen below.**



***РЕЦЕНЗИЯ АО «МУА»***
***НА КЛИНИЧЕСКИЕ КЕЙСЫ, НАПИСАННЫЕ***
***В РАМКАХ МЕЖДУНАРОДНОГО ПРОЕКТА ЭРАСМУС + «TAME»***

**НАЗВАНИЕ КЕЙСА: НУРЖАНОВ СЕРИК (КарГМУ)**

**РЕЦЕНЗЕНТ: Нурпеисова Р.Г.**

Общее впечатление: хороший кейс, грамотно написанный, НО достаточно прямолинейный, по моему мнению, студенты на первом или втором слайде поймут правильный диагноз и напряжение и интерес исчезнут. Т.е. к комментариям все будет уже предельно ясно. Было бы замечательно видеть кейсы как, например, Рори Галлахер, когда разгадка кейса (диагноз) для большинства групп открывается ТОЛЬКО в комментариях.

**1 слайд**

Достаточно явные симптомы кровотечения (ржавая рвота) и постгеморрагической анемии (шум в ушах, головокружение, сердцебиение). В совокупности с анамнезом, явно указывающем на возможность воспалительных заболеваний желудка и ДПК (курит, пьет) и факторах, провоцирующих язву и прободение язвы (прием НПВС), делает возможность постановки правильного диагноза даже студентами чрезвычайно вероятной.

Была попытка немного запутать ситуацию путем добавления симптома кашля и анамнеза рака желудка у отца, но в целом, мне кажется студенты сочтут что эти малозначимые факты.

Предлагаю добавить еще какие-то симптомы или факторы, указывающие на другие заболевания, или анамнез не давать сразу в первом слайде.

По поводу ответов

В Лондоне Джонатан объяснял, что если ввести в ответы опцию общих анализов (крови, мочи), то почти 100% студентов выбирают ее, (или тоже самое с опцией собрать анамнез). Например хорошией опцией в данном случае было бы назначение ФГДС (она вероятна) или УЗИ ОБП.

**2 слайд (правильный pathway)**

Если студенты выберут правильный ответ в первом слайде то то что они увидят во втором слайде утвердит их в правильном диагнозе на 100%- вся симптоматика усиливающегося кровотечения и потери крови налицо и клинически и в лабораторных анализах.

Принимая во внимание какой акцент сделал автор на СЕРЬЕЗНОСТИ положения пациента («Он сильно беспокоен. Вчера вечером была ржавая рвота после приема пищи. Жалуется на резкую слабость, сердцебиение, головокружение»), холодный пот, снижение АД, выраженная анемия в ОАК- признаки геморрагического шока 2(!) степени и вообще непонятно как можно оставлять его на амбулаторном лечении? При виду такого пациента с признаками геморрагического шока врач обязан немедленно госпитализировать больного в стационар. Очень спорная ситуация что в ответах нет такой опции! Это неправильно с точки зрения ургентной хирургии. Необходимо его положить и дообследовать. Отпускать пациента в таком состоянии очень опасно и признак халатности! Никто не знает когда сорвется тромб, прикрывающий сосуд в язве и не дающий ей кровоточить сильно, или когда произойдет кóррозия более крупного сосуда. То есть на данном этапе единственно правильная опция- госпитализация и дообследование в больнице, а не ФГДС и консультация хирурга. Нужно пересмотреть!

ЛИБО нужно уменьшить степень тяжести состояния,

Если вы добавите немедленно госпитализировать, это будет правильной опцией, но ФГДС и консультация хирурга будет тоже очень привлекательной опцией для студентов, которые возможно недооценят тяжесть состояния.

**3 слайд (правильный pathway)**

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## 3.3 Zaporozhye State Medical University (ZSMU), Ukraine

Internal review comments:

**Case author: Bilai A. I.; Acute appendicitis.**

Report on the case Savin (O. Voloshyn)

| Node № | Comments | Advices |
|---|---|---|
| **3062** | There are no specific symptoms of appendicitis | The described clinical picture resembles rather dissection of thoracic aortic aneurysm… Perhaps several symptoms of appendicitis should be added. |
| **3065** | There are no specific symptoms of appendicitis on CT scan | Several symptoms of appendicitis should be added. |
| **3065** | The only one choice for further actions – laparoscopy | Case scenarios should be added: laparotomy and case monitoring |
| **3072** | The only one choice for further actions – laparoscopy | Case scenarios should be added: laparotomy and case monitoring |
| | The case should be enhanced through adding several case scenarios after the results of additional examinations are received | If possible |

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**Case authors: Voloshyn O. M. Mesenterial thrombosis**

Report on the case “V. F. Sagan” (reviewed by Bilai A. I.)

| Node № | Comments | Advices |
|---|---|---|
| 3174 | usatok | Gram. mistake |
| 3099 | pozvyvy | Gram. mistake |
| 3122 | neskIko | Gram. mistake |
| 3100 | Dvenadtsatipersnoi (one word) | Gram. mistake |
| 3100 | To add video or image of fibro-esophagogastroduodenoscopy | If possible |
| 3125 | laporoskopia | Gram. mistake |
| 3125 | Laporotomia, comma after “urgentno” | Gram. mistake |
| 3125 | konservatichnoie | Gram. mistake |
| 3127 | Laporotomia, comma after “urgentno” | Gram. mistake |
| 3127 | Sredinnaialaporotomia | Gram. mistake |
| 3127 | breggeechnoi | Gram. mistake |

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| | | |
|---|---|---|
| 3127 | breggeechnoi | Gram. mistake |
| 3127 | enetro-enteroanastomoz (one word) without a hyphen | Gram. mistake |
| 3127 | posleoperatsionne | Gram. mistake |
| 3244 | smezenteralnym (first line) | Gram. mistake |
| 3244 | bolobnnykh(third line) | Gram. mistake |
| 3128 | laporoskopia | Gram. mistake |
| 3128 | Laporotomia, comma after “urgentno” | Gram. mistake |
| 3128 | Konservatichnoiie | Gram. mistake |
| 3130 | laporoskopia | Gram. mistake |
| 3130 | Laporotomia, comma after “urgentno” | Gram. mistake |
| 3098 | pkrylas | Gram. mistake |
| 3173 | Add image X-ray of abdominal cavity | If possible |
| 3130 | Add image of ultrasound investigation | If possible |

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**Case authors: Kapshytar O. O. Acute intestinal obstruction**

Report on the case P. Shaliapin (Bilai A. I.)

| Node № | Comments | Advices |
|---|---|---|
| 3104 | postantsii | Gram. mistake |
| 3104 | Patient Shaliapin P. --- ShaliapinProkhor | |
| 3220 | The comments are given in Ukrainian, but the whole case is in Russian language. The explanation on the case solution difficulty is not given | Explain the difficulty of solution of the case |
| 3145 | Unit of measurement in the general blood analysis should be indicated | To read the laboratory results one should know the measurement units |
| 3152 | The dosage of platyphyllin should be indicated | The dosage is prescribed by the doctor individually on the ground of specific indications and age of the patient |
| 3207 | Videlaparoskopia | Gram. mistake |

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| | | |
|---|---|---|
| 3208<br>3231<br>3201 | Barium sulfate instead of “barium” | Barium is a chemical element with symbol Ba and atomic number 56 of the periodic table |
| 3151 | Unit of measurement in the Clinical and biochemical analyzes should be indicated | To read the laboratory results one should know the measurement units |
| 3181 | Repeating of word “ГЭК” | Expanding of the abbreviation is preferable |
| 3181 | “After conducting the X-ray of abdominal cavity you exclude surgical pathology” – perhaps, you should give brief description of X-ray without any hints at surgical pathology, and then give variants for further actions. | Give chance to students to think over and choose the right variant for further actions. |
| 3196 | Unit of measurement in the Clinical and biochemical analyzes should be indicated | To read the laboratory results one should know the measurement units |
| 3196 | Patogennyi | Gram. mistake |

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| | | |
|---|---|---|
| 3202 | Medical ambulance is called and you brought the patient to the surgical department. The acute surgical pathology is confirmed, operated, dismissed from hospital…", and then you give option of urgent surgery. | Perhaps the phrase "Acute surgical pathology is confirmed, operated, dismissed from hospital" should be deleted to avoid repeating and continue choosing |
| 3197 | Concerning "Diet" – the number according Pevsner should be indicated;<br>Etiotropic Treatment – the medicine should be described and dosage indicated. | The node needs to be revised and completed |
| 3177 | To add the dosage of the drugs | To read the laboratory results one should know the measurement units |
| 3221 | To add a photo of angiography | If possible |
| 3220 | Finalize the commentaries:<br>Students make their choices during the whole case. All their possible decisions should be described with explanation of right steps, best or good decisions, and inappropriate variants;<br>Simultaneously the errors that can be made should be described;<br>In case of wrong route – what consequences can be? | Consult Mr. Kostrovskyi |

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**Case authors: Bilai A. I. Perforated Ulcer**

Report on the case Eduard Ivanov (Voloshyn O.M.)

| Node № | Comments | Advices |
|---|---|---|
| **3108** | Heart rate =Ps ??/ | 92 /min – should be added |
| 3138 | irradiuret | Gram. mistake |
| 3135 | primnyipokoi | Gram. mistake |

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| | | |
|---|---|---|
| 3135 | preimuschestvennno… irradiuret… | Gram. mistake |
| 3116 | obvchno… | Gram. mistake |
| 3157 | In the cabinet of urinologist. After the patient has lost consciousness the urologist should resuscitate the patient and then the anesthesiologist for his transfer to the intensive care unit (OPIT – in Russian) - The abbreviation should be expanded. | Finalize the node |
| 3156 | In the general practice cabinet. After the patient felt bad you should add text – the patient should be delivered to the intensive care unit. Words – your actions OPIT are hardly understandable | Finalize the node |
| 3118 | To add to the actions – laparotomy and non-operative treatment | Finalize the node |
| 3115 | patsenta, nazancheny… | Gram. mistakes |
| 3121 | Clinics of the terminal disease should be explained in details | Finalize the node |

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**Case authors #5 Kapshytar A.A. Bacterial complications after surgery**

**Report on the case ZoiiaStrybok**

| Node № | Advices / Comments |
|---|---|
| 3256,3257, 3264, 3265 | Gram. mistake “paracetamol” |
| 3369 | The reference should be corrected, as according to this one the patient after the death is going to be treated in the Urology department.<br>Or you can amend the node |
| 3373 | The node should be deleted, and the content should be added to the nodes 3369 and 3363. |
| 3371 | To amend the node (there are no further references) |
| 3372 | Perhaps the reference to the surgeon should be deleted |
| 3386, 3387, 3388 | Gram. Mistakes<br>“Metolik”<br>“Skompromitirovannukh”<br>“Interpritatsii” |

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## Case authors # 6 Voloshyn O. M. Pulmonary embolism

Report on the case of N. Hurylev (A. Kostrovskyi, O. Furyk)

| Node № | Comments | Advices |
|---|---|---|
| | The introduction should start with the reviewing of patient, and the comments should be placed to the last node (for a tutorial No2) | |
| 3073 | Change “Rose inflammation” into “roge” | According to МКБ-Х |
| 3073 | Change “Patient H.” Into “MykolaiHurylev” | |
| 3073 | “Released from a hospital with a slight positive dynamics” change to “released on their own wish” or “left the hospital without permission” | It’s not clear why the patient is discharged |
| 3107 | physiology | Gram. mistake |
| 3082 | “Dezyntoxikationnaia”<br>“ pokazatelei” | Gram. mistake |
| 3082 | It is necessary to indicate the units of measurement of all laboratory indicators and clarify bilirubin 30/10 | To explain the point the measurement units should be added |

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| | | |
|---|---|---|
| 3088 | adrenaline--- indicate a dosage and administration way<br>Explain detoxification therapy and antibiotic therapy<br>Describe in detail the clinic of respiratory insufficiency | Finalize the node |
| 3081<br>3093 | Describe the clinic of gastrointestinal bleeding | Finalize the node |
| 3085<br>3076<br>3075 | Remain the phrase “Fibro-esophagogastroduodenoscopy is urgent”. The rest should be deleted | That students could think over and discuss |
| 3076 | To add video or image of fibro-esophagogastroduodenoscopy | If possible |
| 3085 | “nasyshcheniie” | Gram. mistake |
| 3078 | “perevedion”<br>“sostoianiie”<br>“control” | Gram. mistake |
| 3103 | “Ekho-priznaki” | Gram. mistake |
| 3103 | Add image of ultrasound duplex scanning | If possible |

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| | | |
|---|---|---|
| 3079 | “poslie” | Gram. mistake |
| 3079 | Why the medicine was prescribed, under what conditions?<br>Describe the clinics | Finalize the node |
| 3084 | “roentgen kartina” | Gram. mistake |
| 3103<br>3093 | “provedeniia” | Gram. mistake |
| 3087<br>3154 | Describe detailed clinics of respiratory insufficiency | Finalize the node |
| 3103 | Delete “ОГК” | Repeated word |
| | Finalize the commentaries:<br>Students make their choices during the whole case. All their possible decisions should be described with explanation of right steps, best or good decisions, and inappropriate variants;<br>Simultaneously the errors that can be made should be described;<br>In dead cases explain the cause of death in details.<br>(For example, “gold standard” – Actilise, - but in this case…) | Consult A. Kostrovskyi |

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## BSMU provided written external review for ZSMU's 6 cases. Samples of the review are seen below.

**Review**

of a case **Acute intestinal obstruction (Prokhir Shaliapin, 74 y.o.)**

*Level of novelty and originality of the case (patient, diagnosis, laboratory tests used, treatment methods)*

A patient is Prokhir Shaliapin with a diagnosis acute intestinal obstruction; abdominal cavity X-ray examination, Ultrasound examination of the abdominal cavity, complete blood test and clinical urine tests, Biochemical blood analysis, troponin, laparoscopy, laparotomy.

Medical errors covered: sloth, fixation, poor team working, insufficient skills, bravado, playing the odds.

Comments on a case form

| Weak spots of a case | What's recommended |
|---|---|
| Ultrasound of the abdominal organs (ОБП in Rissian) | Expand an abbreviation |
| Word "спазмолгон" | Medicine from aNon-Narcotic Analgesics group |
| Acute enterocolitis (ОЭК) in Russian) | Expand an abbreviation |
| In the past had appendectomy | Indicate period of life |
| Sowing feces on pathogenic staphylococcus | Sowing feces on conditionally pathogenic flora |
| Sowing feces on yersiniosis | It is recommended to change to serological blood tests, as the test is rarely used in practice due to the peculiarities of growth of the pathogen on nutrient media. |
| Dysuricphenomena over the past 8 years. | Specific patient complaints should be indicated |

*Conclusion*: after the abovementioned corrections, the case is recommended for a usage during tutorials.

Reviewer (signature) Oleh Khomiv (Name, surname, position, title) Ass prof Department of Patients Care

18/08 2017

**Review**

of a case **Sepsis (Zoia Strybok., 47 y.o.)**

*Level of novelty and originality of the case (patient, diagnosis, laboratory tests used, treatment methods)*

A patient is Zoia Strybok with a diagnosis sepsis after surgical treatment; fiberoptic esophagogastroduodenoscopy, abdominal cavity X-ray examination and chest X-ray examination, chest computed tomography, ultrasound examination of the abdominal cavity, complete blood and sputum test and clinical urine tests, biochemical blood analysis, procalcitonin, tumor markertests, excretoryurography.

*Medical errors covered*: fixation, poorteamworking, insufficient skills, bravado, playing the odds.

*Comments on a case form*

| *Weak spots of a case* | *What's recommended* |
|---|---|
| Gramstain | Gram-Weigertstain |
| Hyperthermia decreased for a short period of time | Time of temperature rising and period without fever should be indicated |
| Conservative therapy of acute pyelonephritis | 1. Aggravation of chronic pyelonephritis<br>2. Indicate exact groups of drugs, the group and the dose of antibacterial drugs depending on the clearance of creatinine |

*Conclusion*: After the abovementioned corrections, the case is recommended for a usage during tutorials.

Reviewer (signature) Andrii Palianytsa (Name, surname, position, title) Ass Prof. Department of General Surgery

22/05 2017

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### 3.4Bukovinian State Medical University (BSMU), Ukraine

Internal review comments:

Petrenko Oleksandr (case author – Viktoriia Khilchevska)

| № of node | Comments |
|---|---|
| | To add the place of body temperature checking |
| | Use international drug name – «drotaverin» |

Kosovan Maria (case author – Galyna Bilyk)

| № of node | Comments |
|---|---|
| | Change the option “Make X-ray, CT-scan” on only “Make  X-Ray of chest” |
| | Change the units of red blood cells in a common blood test |
| | change the photo with the patient's hands on the more successful (Raynaud's syndrome) |

Sydorenko Ivan  (case author – Uliana Marusyk)

| № of node | Comments |
|---|---|
| | Spelling mistake «фура семід» |
| | To correct results of glucose tolerance test |
| | To correct results of urea test in serum |

Gayduk Olena (case author – Nataliia Bogutska)

| № of node | Comments |
|---|---|
| | To add photo of palms of health person for compare |
| | Spelling mistake «ліко ваний» |

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Gerasymiuk Andriy (case author – Mykola Garas)

| № of node | Comments |
|---|---|
| | To add axillar temperature results |
| | Spelling mistake  for correct units use «мккмоль/л» |
| | Spelling mistake «менінгіальні» |

Polovchenko Oksana (case author – Sergii Sazhyn)

| № of node | Comments |
|---|---|
| | Use international drug name – «ibuprofen» |
| | Use international drug name – «salbutamol» and «prednisolon» |
| | Spelling mistake «а типовими» |

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**ZSMU provided written external review for BSMU's cases. Samples of the review are seen below.**

**Review**

of a **Case # 5 Systemic lupus erythematosus Maria Kosovan (case author – Galyna Bilyk)**

*Level of novelty and originality of the case (patient, diagnosis, laboratory tests used, treatment methods).*

Patient Maria Kosovan, 35 years old, looks a little tired, lofty. Mary complains of general weakness, rapid fatigability, periodic fever (37.0-37.2 C), anxiety, palpitations, periodic pain in small joints of the hands, swelling, frequent irritation.
Common blood test, biochemical blood test, common urine test, ultrasound examination of heart, electrocardiography, rheumatic tests, x-ray of hands, puncture of the knee joint, echocardiography, chest x-ray, ultrasound diagnosis of pulmonary sinuses, counseling by profile specialists.

*Medical errors covered*: Insuffience skills, bravado, poor team working, playing the odds.

*Comments on a case form* _____

| *Weak spots of a case* | *What's recommended* |
|---|---|
| Slide "At the doctor after 4 months" | It will be interesting to add in this slide independent treatment of the patient for consultation with the gastroenterologist in connection with abdominal pain and put the diagnosis biliary dyskinesia. |
| Slide "At the reception of a family doctor" (first slide) | Recommented to add information about social history (profession, social status, bad habits, etc.) |

*Conclusion:* after the abovementioned corrections, the case is recommended for a usage during tutorials.

Reviewer

18.08. 2017

**Review**

of a **Case # 3 Anemia Gayduk Olena (case author – Nataliia Bogutska)**

*Level of novelty and originality of the case (patient, diagnosis, laboratory tests used, treatment methods).*

Patient Olena Haiduk, 33 years old, housewife. Appeared in connection with the fact that when conducting a preventive general analysis of blood 2 months ago, there were changes (decrease in the amount of hemoglobin, red blood cells, increase in the number of leukocytes).
Common blood test, biochemical blood test, heart ultrasound examination, electrocardiography, fibrogastroduodenoscopy, endoscopy, rease test and immunochromatographic analysis for the qualitative determination of H. pylori antigens, counseling by profile specialists.

*Medical errors covered*: Fixation, system error, playing the odds.

*Comments on a case form* _____

| *Weak spots of a case* | *What's recommended* |
|---|---|
| дожильно | Correct on « внутрішньовенно» |
| Slide "Emergency Esophagogastroduodenophibroscopy" | It is recommended to add information about Gregerson's reaction. |
| Slide "Catheterization of central or peripheral veins, oxygen therapy, infusion of crystalloid boluses with reverse control and omeprazole roughly 80 mg bolus" | It is recommended to indicate vital indicators in an objective examination. |
| епнефрин | Correct a misprint «епінефрин» |

*Conclusion:* after the abovementioned corrections, the case is recommended for a usage during tutorials.

Reviewer

18.08. 2017

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## 3.5 Hanoi Medical University (HMU), Vietnam

Tetanus (case author – Nguyen Van Duyet)

| № of node | Comments |
|---|---|
| | Describe more detailed medical symptoms of the male patient |
| | Indicate more medical indicators |

HIV/AIDS (case author – Vu Quoc Dat)

| № of node | Comments |
|---|---|
| | Should add CT scan photo to be more comprehend and with the aim of help student to practice reading the CT results |
| | Describe more detailed medical symptoms of the male patient |
| | Indicate more medical indicators |

Typhoid fever (case author – Nguyen Thi Lien Ha)

| № of node | Comments |
|---|---|
| | Indicate more medical indicators |

Dengue hemorrhagic fever (case author – Nguyen Manh Truong)

| № of node | Comments |
|---|---|
| | Describe more detailed medical symptoms of the male patient |
| | Indicate more medical indicators |
| | Check the optional actions to be more appropriate |

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Viral hepatitis (case author – Nguyen Kim Thu)

| № of node | Comments |
|---|---|
| | Describe more detailed medical symptoms of the male patient |

Streptococcus suis infectious (case author – Le Thi Hoa)

| № of node | Comments |
|---|---|
| | Describe more detailed medical symptoms of the male patient |
| | Indicate more medical indicators, for example Glassgow |
| | Check the optional actions to be more appropriate |

**D.3.2 New cases identified and created**

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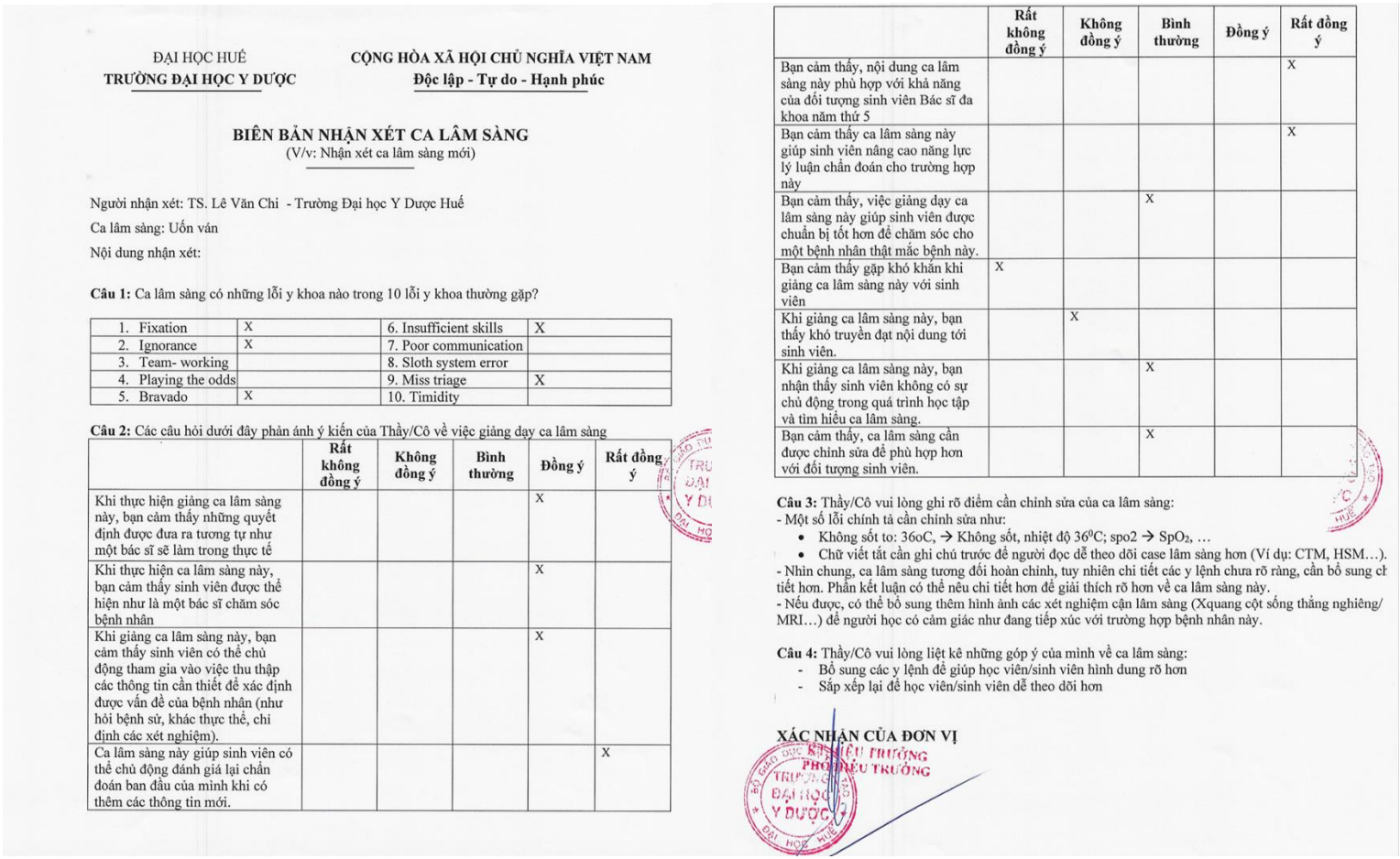
HUMP provided written external review for 6 cases. Sample of the review is seen below.



ĐẠI HỌC HUẾ
**TRƯỜNG ĐẠI HỌC Y DƯỢC**

**CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM**
**Độc lập - Tự do - Hạnh phúc**

**BIÊN BẢN NHẬN XÉT CA LÂM SÀNG**
(V/v: Nhận xét ca lâm sàng mới)

Người nhận xét: TS. Lê Văn Chi - Trường Đại học Y Dược Huế

Ca lâm sàng: Uốn ván

Nội dung nhận xét:

**Câu 1:** Ca lâm sàng có những lỗi y khoa nào trong 10 lỗi y khoa thường gặp?

| | | | |
|---|---|---|---|
| 1. Fixation | X | 6. Insufficient skills | X |
| 2. Ignorance | X | 7. Poor communication | |
| 3. Team- working | | 8. Sloth system error | |
| 4. Playing the odds | | 9. Miss triage | X |
| 5. Bravado | X | 10. Timidity | |

**Câu 2:** Các câu hỏi dưới đây phản ánh ý kiến của Thầy/Cô về việc giảng dạy ca lâm sàng

| | Rất không đồng ý | Không đồng ý | Bình thường | Đồng ý | Rất đồng ý |
|---|---|---|---|---|---|
| Khi thực hiện giảng ca lâm sàng này, bạn cảm thấy những quyết định được đưa ra tương tự như một bác sĩ sẽ làm trong thực tế | | | | X | |
| Khi thực hiện ca lâm sàng này, bạn cảm thấy sinh viên được thể hiện như là một bác sĩ chăm sóc bệnh nhân | | | | X | |
| Khi giảng ca lâm sàng này, bạn cảm thấy sinh viên có thể chủ động tham gia vào việc thu thập các thông tin cần thiết để xác định được vấn đề của bệnh nhân (như hỏi bệnh sử, khác thực thể, chỉ định các xét nghiệm). | | | | X | |
| Ca lâm sàng này giúp sinh viên có thể chủ động đánh giá lại chẩn đoán ban đầu của mình khi có thêm các thông tin mới. | | | | | X |
| Bạn cảm thấy, nội dung ca lâm sàng này phù hợp với khả năng của đối tượng sinh viên Bác sĩ đa khoa năm thứ 5 | | | | | X |
| Bạn cảm thấy ca lâm sàng này giúp sinh viên nâng cao năng lực lý luận chẩn đoán cho trường hợp này | | | | | X |
| Bạn cảm thấy, việc giảng dạy ca lâm sàng này giúp sinh viên được chuẩn bị tốt hơn để chăm sóc cho một bệnh nhân thật mắc bệnh này. | | | X | | |
| Bạn cảm thấy gặp khó khăn khi giảng ca lâm sàng này với sinh viên | X | | | | |
| Khi giảng ca lâm sàng này, bạn thấy khó truyền đạt nội dung tới sinh viên. | | X | | | |
| Khi giảng ca lâm sàng này, bạn nhận thấy sinh viên không có sự chủ động trong quá trình học tập và tìm hiểu ca lâm sàng. | | | X | | |
| Bạn cảm thấy, ca lâm sàng cần được chỉnh sửa để phù hợp hơn với đối tượng sinh viên. | | | X | | |

**Câu 3:** Thầy/Cô vui lòng ghi rõ điểm cần chỉnh sửa của ca lâm sàng:
- Một số lỗi chính tả cần chỉnh sửa như:
  - Không sốt to: 36oC, → Không sốt, nhiệt độ 36$^0$C; spo2 → $SpO_2$, …
  - Chữ viết tắt cần ghi chú trước để người đọc dễ theo dõi case lâm sàng hơn (Ví dụ: CTM, HSM…).
- Nhìn chung, ca lâm sàng tương đối hoàn chỉnh, tuy nhiên chi tiết các y lệnh chưa rõ ràng, cần bổ sung chi tiết hơn. Phần kết luận có thể nêu chi tiết hơn để giải thích rõ hơn về ca lâm sàng này.
- Nếu được, có thể bổ sung thêm hình ảnh các xét nghiệm cận lâm sàng (Xquang cột sống thẳng nghiêng/ MRI…) để người học có cảm giác như đang tiếp xúc với trường hợp bệnh nhân này.

**Câu 4:** Thầy/Cô vui lòng liệt kê những góp ý của mình về ca lâm sàng:
- Bổ sung các y lệnh để giúp học viên/sinh viên hình dung rõ hơn
- Sắp xếp lại để học viên/sinh viên dễ theo dõi hơn

**XÁC NHẬN CỦA ĐƠN VỊ**

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## 3.6 Hue University of Medicine and Pharmacy (HUMP), Vietnam

Abdominal pain, jaundice (case author – Le Minh Tan)

| № of node | Comments |
|---|---|
| Learning objectives | Change the learning objectives: add word “Applying” on objective 2, remove “Mornitoring” and add word “Evaluable” on objective 3. |
| 6382 | Add the sentence: “However, patients often go to the doctor near the house to be injected and given medicine when tired and fever”<br>Add the sentence: “One month ago, between two crops, patients went to Laos to work in an area adjacent to the border”<br>Add new choice: “D. Blood Drag find Plasmodium when fever” |
| 6383 | Add new choice: “A.4. Blood Drag find Plasmodium when fever” |
| 6387 | Add the sentence: “While waiting for consultation, you make aggressive rehydration, blood type test for blood transfusion”<br>Remove the sentence: “You are planning for the delivery of red blood cells, fresh plasma and 1 unit of platelets” |

Headache - subarachnoid hemorrhage (case author – Tran Thi Phuoc Yen)

| № of node | Comments |
|---|---|
| Learning objectives | Should combine some learning objectives.<br>List the learning objectives in order: knowledge, attitudes, practices<br>The learning objectives should begin with an action verb. |
| 6439 | Rewrite the sentence for clarity: “He said that this is the most intense headache he has ever had. At present the pain is reduced because he had to take a painkiller, but not significantly reduced, and still very painful”<br>Spelling mistake: Patients with a history of “migrain” → “migraine” |
| 6444 | Change from "X-ray room" to "Imaging Department"<br>Change from "cranial CT-positive" to "Intracranial Hemorrhages" |
| 6445 | Change from "cranial CT-positive" to "Intracranial Hemorrhages"<br>Change from “Diagnosis of subarachnoid hemorrhage is established” to “Diagnosed with subarachnoid hemorrhage” |

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Acute appendicitis (case author – Phan Dinh Tuan Dung)

| № of node | Comments |
|---|---|
| Learning objectives | Add action verb in learning objectives<br>Aggregate to 3 learning objectives |
| 6446 | Remove the phrase “for a patient with a condition” |
| 6450 | Remove the phrase “Ignoring the opinion of the patient's family”<br>Remove the phrase "no need to be transferred" |
| 6452 | Add more symptoms to use antibiotics |
| 6458 | Add more information of the wrong alternatives |

Gastrointestinal perforation (case author – Nguyen Doan Van Phu)

| № of node | Comments |
|---|---|
| Learning objectives | Additional the learning objectives and medical errors |
| 6466 | Add the sentence “Your decision?” |
| 6471 | Add the phrase “Prescription drugs for patients” |
| 6474 | Add the discussion |

Postpartum hemorrhage (case author – Nguyen Hoang Long)

| № of node | Comments |
|---|---|
| 5819 | Add the sentence “At 3 o'clock, you are tired and just have a nap, the midwife tells you that there is a case of women in the hospital” |
| 5820 | Add the sentence “However, at that time you find that the uterus is not good, red blood began to flow out” |

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| | |
|---|---|
| 5826 | Add the phrase “examined the placenta found no smooth surface”<br>Add the sentence “Blood pressure is 110/70 mmHg” |

Pre-eclampsia (case author – Nguyen Hoang Long)

| № of node | Comments |
|---|---|
| 6074 | Add the phrase “01 second year obstetric residency”<br>Change from “Pregnant women were shown to have a second pregnancy” to “Pregnant women were shown to have a third pregnancy” |
| 6075 | Add the phrase “and go to the office to have a nap because you are tired” |
| 6076 | Add the phrase “SGOT/SGPT: 17.6/12.8 U/l” |

**D.3.2 New cases identified and created**

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HMU provided written external review for 6 cases. Sample of the review is seen below.

TRƯỜNG ĐẠI HỌC Y HÀ NỘI
**VIỆN ĐÀO TẠO YHDP&YTCC**

**CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM**
**Độc lập - Tự do - Hạnh phúc**

**BIÊN BẢN NHẬN XÉT CA LÂM SÀNG**
(V/v: Nhận xét ca lâm sàng mới)

Người nhận xét: PGS. TS. Khương Văn Duy
Trường Đại học Y Hà Nội
Ca lâm sàng: Thủng dạ dày
Nội dung nhận xét:

Câu 1: Ca lâm sàng có những lỗi y khoa nào trong 10 lỗi y khoa thường gặp?

| | | | |
|---|---|---|---|
| 1. Fixation | X | 6. Insufficient skills | X |
| 2. Ignorance | X | 7. Poor communication | |
| 3. Team- working | | 8. Sloth system error | X |
| 4. Playing the odds | | 9. Miss triage | |
| 5. Bravado | | 10. Timidity | |

Câu 2: Các câu hỏi dưới đây phản ánh ý kiến của Thầy/Cô về việc giảng dạy ca lâm sàng

| | Rất không đồng ý | Không đồng ý | Bình thường | Đồng ý | Rất đồng ý |
|---|---|---|---|---|---|
| Khi thực hiện giảng ca lâm sàng này, bạn cảm thấy những quyết định được đưa ra tương tự như một bác sĩ sẽ làm trong thực tế | | | | X | |
| Khi thực hiện ca lâm sàng này, bạn cảm thấy sinh viên được thể hiện như là một bác sĩ chăm sóc bệnh nhân | | | | X | |
| Khi giảng ca lâm sàng này, bạn cảm thấy sinh viên có thể chủ động tham gia vào việc thu thập các thông tin cần thiết để xác định được vấn đề của bệnh nhân (như hỏi bệnh sử, khác thực thể, chỉ định các xét nghiệm). | | | X | | |
| Ca lâm sàng này giúp sinh viên có thể chủ động đánh giá lại chẩn đoán ban đầu của mình khi có thêm các thông tin mới. | | | | X | |
| Bạn cảm thấy, nội dung ca lâm sàng này phù hợp với khả năng của đối tượng sinh viên Bác sĩ đa khoa năm thứ 5 | | | | X | |
| Bạn cảm thấy ca lâm sàng này giúp sinh viên nâng cao năng lực lý luận chẩn đoán cho trường hợp này | | | | X | |
| Bạn cảm thấy, việc giảng dạy ca lâm sàng này giúp sinh viên được chuẩn bị tốt hơn để chăm sóc cho một bệnh nhân thật mắc bệnh này. | | | | X | |
| Bạn cảm thấy gặp khó khăn khi giảng ca lâm sàng này với sinh viên | | | X | | |
| Khi giảng ca lâm sàng này, bạn thấy khó truyền đạt nội dung tới sinh viên. | | | X | | |
| Khi giảng ca lâm sàng này, bạn nhận thấy sinh viên không có sự chủ động trong quá trình học tập và tìm hiểu ca lâm sàng. | | | X | | |
| Bạn cảm thấy, ca lâm sàng cần được chỉnh sửa để phù hợp hơn với đối tượng sinh viên. | | X | | | |

Câu 3: Mục tiêu học tập của ca lâm sàng (Thầy/Cô vui lòng liệt kê những nội dung lâm sàng cần chú ý khi thực hiện giảng ca lâm sàng này).
- Chẩn đoán được bệnh lý thủng dạ dày tá tràng
- Các điểm lưu ý trường hợp thủng đến muộn
- Một số lưu ý trong điều trị, theo dõi bệnh lý thủng dạ dày tá tràng

Câu 4: Thầy/Cô vui lòng liệt kê những góp ý khác của mình về ca lâm sàng này?
Cần đảm bảo có sự tương tác giữa giảng viên và sinh viên.

**GIÁM ĐỐC DỰ ÁN**

**D.3.2 New cases identified and created**

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**HANOI MEDICAL UNIVERSITY**
INSTITUTE FOR PREVENTIVE MEDICINE
AND PUBLIC HEALTH

**SOCIAL REPUBLIC OF VIETNAM**
**Independence - Freedom - Happiness**

## MINUTE OF EXTERNAL REVIEW
(Provide comments on new cases created)

Commentator: Assoc. Prof. Nguyen Duc Hinh
Hanoi Medical University
Case study's name: Postpartum hemorrhage
Comment's content:

Part 1: Which medical errors out of 10 errors does commonly have in this case study?

| | | | |
|---|---|---|---|
| 26. Fixation | X | 6. Insufficient skills | x |
| 27. Ignorance | x | 7. Poor communication | |
| 28. Team- working | | 8. Sloth system error | X |
| 29. Playing the odds | | 9. Miss triage | |
| 30. Bravado | | 10. Timidity | |

Part 2: Please reflect your opinion about teaching this case study?

| | Extremely disagree | Disagree | Neutral | Agree | Totally agree |
|---|---|---|---|---|---|
| When teaching this case, I found that I had made decisions similar to real doctors in reality | | | | x | |
| When teaching this case, I feel like I am a real doctor taking care of patients | | | | | x |
| When teaching this case, I found that students can actively join in gathering information to identify patients' health-related problems (such as medical record, diagnoses, examinations) | | | | x | |
| This case study helps students can self-reflect and re-assess their initial diagnosis when having new information | | | | | x |
| I found that this case study is appropriate for Year 5th Medical students' capacity | | | x | | |
| I found that this case study helps students improve their critical thinking skills, capacity to diagnosis | | | | x | |
| I found that teaching this case study helps students well preparation to take care of real patients dealing with this disease. | | | | x | |
| I found difficulties during teaching this case study | | x | | | |
| I found difficulties in communicating with students in teaching this case studies | | | x | | |
| When teaching this case study, I found that students inactively study during class | | x | | | |
| I found that this case study needs to be edited to be more appropriate for students | | | x | | |

Part 3: Learning outcomes this case study should be met (Please indicate detailed clinical outcomes when teaching this case study)

18. Signs of suspicion and standard criteria for diagnosing the postpartum hemorrhage
19. Causes and approaches of assessing the causes of the postpartum hemorrhage
20. Stages of dealing with the postpartum hemorrhage
21. Complications of the postpartum hemorrhage

Part 4: Please leave your another comments on this case study?

- Need to provide detail information and more appropriate with clinical reality.
- Require to add more options for student so they can have more critical thinking and making decision skills.

**Confirmation from Dean of IPMPH**
(Sign and full name)