NAC OSCE sample cases with answers

9 original NAC OSCE practice scenarios, each with the task, what a strong answer does and a model answer. They are free to read and to download.

Every scenario is original, with invented patients. It is not from any exam, and it is not official material. Check clinical details against current national guidance.

Chest pain at a clinic visit

Acute management · 11 minutes

The task

You are a family physician in a community clinic. Hassan Aziz, aged 58, has walked in with chest pain that began 50 minutes ago. A nurse has placed him in a room and attached monitoring. Assess and manage him. Take a brief focused history and decide what to do now. The examiner will report vital signs and test results when you ask for them. A colleague will carry out your instructions when addressed.

What a strong answer does

- Introduces themselves, confirms identity and quickly focuses the history on onset, character and risk factors.
- Obtains vital signs and a 12-lead ECG immediately, within minutes of presentation.
- Recognizes the ECG as an inferior ST-elevation myocardial infarction.
- **Safety:** Calls 911 immediately, requests an emergency transfer to a primary PCI centre and asks that the receiving team be told in advance.
- Asks about contraindications and gives chewed, non-enteric-coated aspirin, about 160 to 325 mg (or the clinic's dose), after confirming no allergy or bleeding risk.
- Recognizes that low blood pressure and bradycardia with inferior STEMI suggest right ventricular involvement or vagal tone and avoids nitrates; gives IV access and a small fluid bolus if appropriate.
- Gives analgesia and oxygen only if saturation is below 90 percent, and keeps him monitored with defibrillator pads available.
- Delegates tasks clearly to the nurse and keeps the patient informed.
- Gives an SBAR handover to the paramedics including ECG findings, treatment given and times.
- Offers to call his wife with his consent and records times and treatment.

Model answer

I introduce myself, confirm Mr Aziz's name and date of birth, and quickly take a focused history: a 9 out of 10 crushing central pain for 50 minutes, radiating to the left arm and jaw, with sweating, nausea and mild breathlessness. I ask about risk factors and learn of hypertension, hyperlipidemia, smoking, a father who died at 55 and no allergy or bleeding risk. I ask the nurse to record a 12-lead ECG, monitor him, obtain vital signs and apply defibrillator pads. His heart rate is 52 and blood pressure 94/58. The ECG shows ST elevation in II, III and aVF with reciprocal depression in I and aVL: an inferior STEMI. I tell him plainly that he is having a heart attack and that he needs emergency treatment at a hospital that can open the artery. I ask the nurse to call 911 and request transport to the nearest primary PCI centre with pre-notification of the team, because the aim is to open the artery as fast as possible, and the receiving team will decide on fibrinolysis if PCI cannot be reached in time. I give chewed, non-enteric-coated aspirin, about 160 to 325 mg, avoid nitrates because of hypotension and a possible right ventricular infarct, ask for right-sided leads if this does not delay transfer, establish IV access, and consider a small fluid bolus. I withhold oxygen because his saturation is above 90 percent and treat pain as needed. I give an SBAR handover to the paramedics covering the ECG, drugs and times. With his consent I arrange for his wife to be called, and I document the times of onset, ECG and treatment.

Explaining a diagnosis of Alzheimer disease

Breaking bad news · 11 minutes

The task

You are a family physician in a community clinic. Eleanor Hrynyk, aged 78, has had two years of worsening memory. Tests including blood work, a cognitive assessment and a brain MRI have been completed and are consistent with Alzheimer disease. She has come with her daughter, Natalie, to hear the results. Explain the results to Mrs Hrynyk and her daughter and plan the next steps. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms identity and sets up the discussion with both, asking what they understand and want to know.
- Gives a warning shot and then states the diagnosis clearly, in plain words, to the patient first.

- Explains the supporting evidence: the cognitive score, the MRI changes and normal reversible-cause tests.
- **Safety:** Responds to emotion with empathy, pauses and checks understanding; respects the patient's right to the truth when the daughter asks to soften it.
- Explains that the illness is progressive but that people live well for years with support, and avoids false hope or false doom.
- Discusses treatment options: a cholinesterase inhibitor can be considered, helps symptoms modestly and does not cure.
- Raises safety and driving: driving risk after getting lost and a collision, and the physician's duties under provincial rules.
- Advises planning while she can decide: power of attorney, wishes for care and finances; refers to the Alzheimer Society and community supports.
- Supports the caregiver, acknowledging her worries about work and cost, and arranges follow-up with the family.
- Gives a clear next-step plan and follow-up, and safety-nets for sudden changes such as new confusion, falls or thoughts of self-harm, including calling 911.

Model answer

I introduce myself to both women, confirm Mrs Hrynyk's name and date of birth, and ask what she understands and how much she wants to know. She asks for plain truth, while Natalie asks me to be gentle. I give a warning shot, then tell Mrs Hrynyk clearly that the memory test, a score of 17 out of 30, and the MRI showing shrinkage of the memory area point to Alzheimer disease, and that treatable causes such as thyroid and B12 problems have been excluded. I pause, acknowledge her feelings, and respect her right to be told while reassuring Natalie that I will be careful. I explain that the illness is progressive but that people can live well for years. I discuss treatment honestly: a cholinesterase inhibitor such as donepezil may help symptoms modestly and does not cure. I explore safety: she got lost driving and had a collision, so driving is a concern, and I explain that she needs a driving assessment or to stop, and my reporting duties under provincial rules. While she can still decide, I recommend setting up a power of attorney, discussing her wishes for care and finances, and linking with the Alzheimer Society for support. I acknowledge Natalie's burden, mention home care and respite services, arrange follow-up in about a month, and safety-net for sudden confusion, falls or thoughts of self-harm, calling 911 in an emergency.

Starting metformin after a diabetes diagnosis

Counselling & explanation · 11 minutes

The task

You are a family physician in a community clinic. Rajinder Gill, aged 49, was found to have type 2 diabetes after a blood test. His HbA1c is 8.1 percent, his eGFR is 88 and he has no complications known. He is alone. Explain the diagnosis, discuss starting metformin and lifestyle changes, and answer his questions. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms identity and starts by asking what he already knows and fears.
- Takes a brief history of symptoms, risk factors, lifestyle, family history and work including commercial driving.
- Explains the diagnosis in plain words using his HbA1c of 8.1 percent and says it is a long-term condition he can control.
- Addresses his fear of complications: what happened to his father is not inevitable, and controlling sugar, blood pressure and cholesterol and checking his feet lowers the risk. Is honest that some people need insulin later, and that this is not a failure.
- Explains metformin: start low, take with meals, common stomach side effects usually settle, low risk of hypoglycemia on its own.
- **Safety:** Gives safety advice: sick-day rules (pause metformin if vomiting, dehydrated or having contrast scans), kidney checks and not to drive if unwell.
- Advises practical lifestyle changes: 150 minutes a week of aerobic activity, resistance training, balanced meals and modest weight loss, working with his own foods and driving schedule.
- Sets targets and monitoring: A1C around 7 percent, blood pressure and cholesterol care, eyes, feet and kidney checks, referral to a diabetes educator.
- Discusses alcohol, smoking status and the commercial licence honestly.
- Checks understanding, invites questions and arranges follow-up in about three months, with earlier contact for red flags.

Model answer

I introduce myself, confirm Mr Gill's name and date of birth and ask what he already knows and worries about. I learn about his father's and brother's diabetes, his long-haul work, fast-food diet, two beers each night and weight of 105 kg, and his fears of ending up like his father and of losing his mother's cooking. I ask briefly about thirst, nocturia, vision and infections, and about his commercial driving licence. I explain in plain words that his HbA1c of 8.1 percent means his blood sugar has run high for months and that this is type 2 diabetes, a long-term condition he can

control. I address his fear about his father's foot: complications are not inevitable, and controlling sugar, blood pressure and cholesterol and checking his feet lowers the risk. Most people begin with lifestyle changes and tablets, and needing insulin later is not a failure. I explain metformin: begin at a low dose with meals, stomach upset usually settles, it rarely causes low sugars on its own, and his kidney function is fine. I give sick-day advice: pause the tablet when vomiting or dehydrated and call us. I advise at least 150 minutes of aerobic activity a week with resistance training, balanced meals adapted to his family's cooking, and a modest weight loss of 5 to 10 percent. I set an A1C target of about 7 percent, mention blood pressure and cholesterol care, yearly eye, foot and kidney checks, and refer him to a diabetes education program. I discuss alcohol and driving, check understanding, and arrange follow-up in three months.

A 15-year-old asks for contraception

Ethics, consent & capacity · 11 minutes

The task

You are a family physician in a community clinic. Zainab Hussain, aged 15, has asked to see you alone. She has not told her parents. Take a focused history, assess her understanding, and discuss what you can offer and what you would keep confidential. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms identity and sets up a private, non-judgemental conversation, explaining confidentiality and its limits at the start.
- Takes a sexual and menstrual history: partner age, consent, condom use, last unprotected sex, period dates and symptoms.
- **Safety:** Screens for coercion, abuse or exploitation, noting her partner's age and any power difference.
- Assesses her capacity and maturity by asking her to explain the options, benefits and risks in her own words.
- States that, in most of Canada, a capable minor can consent to treatment without a set age (Quebec sets the age at 14), and that this applies to her if she understands the risks.
- Offers emergency contraception now, explaining that the copper IUD is the most effective and that oral options are time-sensitive.

- Discusses ongoing contraception options (including LARC, pills, patch) and dual protection with condoms, including medical eligibility.
- Arranges STI screening, a pregnancy test follow-up in about 3 weeks, and offers support to involve a trusted adult without forcing it.
- Addresses confidentiality practicalities (how results, pharmacy receipts and contact will be handled) and the limits of confidentiality.
- Documents consent and the capacity assessment, and gives a clear follow-up plan and safe contacts.

Model answer

I introduce myself, explain confidentiality and its limits at the start, and confirm Zainab's name and date of birth. I take a sexual history in a non-judgemental way: a 16-year-old school boyfriend, eight months together, consensual, four episodes of intercourse, a condom break two days ago and no other partners. I screen for coercion and safety, and learn she feels safe and not pressured. I take a menstrual and medical history, check for migraine with aura, smoking and clot risk, and ask why she does not want her parents told. I assess her maturity and capacity by asking her to explain the options, benefits and risks, which she does clearly. I explain that in most of Canada there is no fixed age for consent to medical treatment, and in Quebec the age is 14, so a capable 15-year-old can consent. Because the condom broke two days ago I offer emergency contraception, explaining that a copper IUD is the most effective option and that oral emergency contraception works best the sooner it is taken. I discuss ongoing contraception, including the IUD, implant and combined pill, and stress condoms for infection protection. I arrange chlamydia and gonorrhea testing, a repeat pregnancy test in about three weeks and follow-up. I explain how I will protect her privacy, including contact by cell phone, and the limits of confidentiality: serious risk of harm or abuse. I encourage but do not force involving a trusted adult, document the capacity assessment, and arrange a safe plan, advising 911 for emergencies.

A cough that will not go away

History taking · 11 minutes

The task

You are a family physician in a community clinic. Tesfaye Alemu, aged 29, has come because of a cough that has lasted six weeks. He is alone. Take a focused history.

Then explain what you think may be going on, what needs to happen next and why, and answer his questions. There is no need to examine him. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms identity and asks an open question before focusing.
- Characterizes the cough: duration, sputum, blood, chest pain and breathlessness.
- Asks about fever, night sweats and weight loss.
- Takes an exposure and risk history: country of origin, time in Canada, living arrangements, contacts with cough, BCG, previous TB, HIV risk, smoking.
- Explores his fears about stigma and his study permit.
- States that tuberculosis needs to be ruled out and explains why, without claiming a definite diagnosis.
- Arranges a chest X-ray, three sputum samples for AFB smear, culture and NAAT, and offers HIV testing with consent.
- **Safety:** Interprets a cavitating upper lobe opacity as consistent with active pulmonary TB and says infection control is needed.
- Explains that public health will be notified, will help with contact tracing and treatment support, and keeps the information confidential.
- Reassures with accurate information that TB is curable with several months of treatment and gives a follow-up plan and safety-net.

Model answer

I introduce myself, confirm Mr Alemu's name and date of birth and invite him to describe the cough. I then characterize it: six weeks, productive, with two episodes of blood streaking and a right upper chest ache. I ask about fever, drenching night sweats and weight loss, and I build an exposure history: he came from Ethiopia 14 months ago, shares an apartment with three students, and one has a long-standing cough. I ask about BCG, previous TB, HIV testing, smoking, alcohol, medicines and allergies. I explore his fears about his study permit and his roommates. I summarize and explain that this pattern could be tuberculosis or another chest infection, and that we must test for TB. I arrange a chest X-ray, three sputum samples for acid-fast bacilli smear, culture and nucleic acid amplification, and offer an HIV test with his consent. I give him a surgical mask and place him in a separate room, because infection control starts before the diagnosis is confirmed. When the X-ray shows a cavitating right upper lobe opacity, I explain that this fits active pulmonary TB and that I will start the notification process with public health, which is required by law. I explain that public health nurses arrange treatment support and trace contacts,

that information is handled confidentially, and that TB is curable with a course of several drugs taken for months. I answer his questions about his roommates, school and permit honestly, and I safety-net for coughing large amounts of blood or severe breathlessness by calling 911. I arrange rapid follow-up.

A first-year student who cannot cope

Mental health · 11 minutes

The task

You are a family physician in a community clinic. Tyler Brandt, aged 19, a first-year college student, has come because he feels low and cannot cope. He is alone. Assess him, including any risk to himself, and plan with him what should happen next. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms identity and builds rapport with an open, non-judgemental approach.
- Takes a mood history and screens for depression: duration, sleep, appetite, interest and triggers.
- **Safety:** Asks directly and compassionately about suicidal thoughts, plan, intent, timing and means.
- Assesses risk factors and protective factors: previous attempts, family history, alcohol and cannabis, hopelessness, supports and reasons for living.
- Judges that his risk is high because of a plan, the means with him and daily thoughts, even though he says he has not fully decided, and tells him so.
- Secures the means: asks him to hand over the acetaminophen and discusses removing access.
- Arranges same-day emergency psychiatric assessment, ensuring he is not left alone, and calls 911 if he becomes unsafe or tries to leave.
- Collaborates and respects autonomy, involving his coach with his consent and explaining the limits of confidentiality when risk is high.
- Writes a safety plan with crisis supports including the 9-8-8 Suicide Crisis Helpline and arranges follow-up.
- Gives an SBAR handover to the emergency department team.

Model answer

I introduce myself, confirm Tyler's name and date of birth, and invite him to say how he is feeling. I take a mood history: three weeks of emptiness, poor sleep, poor

appetite, loss of interest and academic stress after a failed midterm. I ask directly and compassionately about suicide and learn he thinks about ending his life most days, with a plan to take acetaminophen after the weekend, and the bottle in his backpack. I ask about previous attempts, his uncle's suicide, heavy alcohol use, daily cannabis, psychotic symptoms, and what keeps him going: his sister, his dog and his coach. I conclude that his risk is high and tell him honestly, with care. I ask him to hand over the acetaminophen and explain that I want a same-day emergency assessment. I do not leave him alone. I respect his autonomy, offer to involve his coach with his consent, and explain the limits of confidentiality when his life is at risk. I discuss his fears of being locked up and explain what an assessment involves. I give an SBAR handover to the emergency department, arrange follow-up within days, and write a safety plan with warning signs, coping strategies and crisis supports including calling or texting 9-8-8 at any time, and 911 in an emergency.

Cardiovascular examination after near-fainting

Examination · 11 minutes

The task

You are a family physician in a community clinic. Walter Kowalski, aged 74, nearly fainted twice this month while climbing stairs. He is sitting on the examination couch, undressed to the waist. Perform a cardiovascular examination. Say aloud what you are doing at each step. The examiner will report the findings when you say what you are doing. At the end, summarize your findings, say what you think is going on and explain what should happen next.

What a strong answer does

- Introduces themselves, checks identity, explains the examination, gains consent and positions the patient appropriately.
- Inspects and assesses general features: breathlessness, cyanosis, pallor and the peripheries.
- Assesses the radial pulse for rate, rhythm and character, and measures blood pressure including pulse pressure.
- Palpates the carotid pulse for character and thrill and assesses the jugular venous pressure.
- Palpates the apex beat and for heaves or thrills.
- Auscultates all areas, including carotids, leaning forward in expiration, and describes the murmur.
- Completes the examination by checking lung bases and peripheral edema.

- Summarizes findings accurately: slow-rising pulse, narrow pulse pressure, heaving apex and ejection systolic murmur radiating to the carotids.
- Gives aortic stenosis as the leading diagnosis and links it to exertional chest tightness and near-syncope.
- **Safety:** Plans investigations and management: echocardiogram and ECG, urgent cardiology referral, advice to avoid strenuous exertion, and safety-netting to call 911 for fainting or chest pain at rest.

Model answer

I introduce myself, confirm Mr Kowalski's name and date of birth, explain that I will examine his heart and obtain consent. I position him at 45 degrees, exposed appropriately. I inspect from the end of the couch for breathlessness, cyanosis and pallor. I feel the radial pulse for rate, rhythm and character, noting a slow-rising small-volume pulse, and measure blood pressure, noting a narrow pulse pressure. I palpate the carotid pulse and find a slow-rising character with a thrill, then assess the jugular venous pressure. I palpate the apex, which is undisplaced and heaving. I auscultate all four areas and the carotids, then lean him forward in expiration, finding a harsh ejection systolic murmur at the right upper sternal border radiating to the neck with a soft second heart sound and no diastolic murmur. I check lung bases and for peripheral edema. I thank him and summarize: a slow-rising pulse, narrow pulse pressure, heaving apex and ejection systolic murmur radiating to the carotids, which together suggest severe aortic stenosis. I explain in plain language that one of the heart valves is narrowed, which accounts for the chest tightness and near-fainting when he exerts himself. I request an ECG, which shows left ventricular hypertrophy with strain, and I arrange an echocardiogram and an urgent cardiology referral for assessment of valve replacement. Until then I advise avoiding heavy exertion, such as snow shovelling, and I discuss driving cautiously. I give clear safety-netting: fainting, chest pain at rest or worsening breathlessness means calling 911.

Phone call about a five-week-old who feels hot

Telephone consultation · 11 minutes

The task

You are a family physician in a clinic. A father phones about his 5-week-old daughter who feels hot. You cannot see her. Take a focused telephone history, give clear

advice about what to do and explain why. Answer his questions. The examiner will not take part in the conversation.

What a strong answer does

- Introduces themselves, confirms the caller and the baby's name and date of birth, and obtains a callback number and location.
- Asks how and when the temperature was measured and the value.
- **Safety:** Assesses for features of serious illness: feeding, wet diapers, alertness, colour, breathing, rash, vomiting.
- Takes relevant history: gestational age, group B strep exposure, jaundice, medicines given and sick contacts.
- **Safety:** Recognizes that fever of 38.0 °C or higher in an infant under 3 months needs urgent same-night assessment in an emergency department.
- Gives clear instructions: she needs emergency care now, do not wait until morning, do not give more antipyretic, and tell the team when the acetaminophen was given.
- Because she is already harder to wake, pale and breathing quickly, tells him to call 911 now rather than drive, and to wake his wife.
- Explains what to expect: bloods, urine test and possibly a lumbar puncture, and why.
- Responds to the father's reluctance and worries with empathy and does not agree to wait and see.
- Calls the emergency department with an SBAR handover and confirms the father understands the plan by repeating it back.

Model answer

I introduce myself, confirm the baby's name and date of birth and the caller's number and location in case the call drops. I ask how the temperature was taken and learn that it was 38.4 °C rectally on two readings, three hours ago. I assess for serious illness, because I cannot see her: poor feeding with half bottles, one wet diaper in eight hours, sleepier and harder to wake, a little pale and breathing fast, with no rash. I ask about term birth, maternal group B strep, medicines given and sick contacts. I recognize that a fever of 38.0 °C or higher in an infant under three months is an emergency, and that she has features of serious infection. I tell the father calmly and clearly that she needs to be seen in an emergency department tonight, that waiting until morning is not safe, and that I will not recommend home treatment. Because she is already harder to wake, pale and breathing quickly, I ask him to call 911 now rather than drive, to wake his wife, to give no more medicine and to tell the paramedics when the acetaminophen was given. I explain that doctors will check blood, urine and possibly spinal fluid and start antibiotics early

because babies can deteriorate quickly. I respond kindly to his reluctance, call the emergency department with an SBAR handover, and ask him to repeat the plan back so that I know he understands.

Sudden weakness and trouble speaking

Acute management · 11 minutes

The task

You are a family physician in a community clinic. Gloria Ng, aged 71, has been brought in by her daughter because of sudden right-sided weakness and difficulty speaking. A nurse is available to help. Take a brief history from the daughter and patient, decide what to do now, and communicate with the patient and her daughter. The examiner will report findings when you ask for them.

What a strong answer does

- Recognizes a probable acute stroke on arrival and acts without delay.
- **Safety:** Calls 911 immediately and asks for a stroke code with transport to a stroke centre and pre-notification.
- Establishes the time last known well and the time of onset, and records it.
- Asks about anticoagulant use, recent surgery, bleeding, seizure and diabetes because these affect treatment and stroke mimics.
- Checks capillary glucose and vital signs, and performs a brief neurological assessment (face, arm, leg, speech).
- Does not give aspirin or food and drink, and does not lower blood pressure in the clinic.
- Explains to the patient and her daughter what is happening in clear, simple language and reassures the patient who can understand.
- Gives an SBAR handover to the paramedics with deficits, last known well time, medicines and glucose.
- Interprets findings: irregular pulse, glucose normal, blood pressure raised and the pattern consistent with a left hemisphere stroke.
- Supports the daughter and arranges for her to accompany the patient.

Model answer

On arrival I recognize a probable stroke from the face droop, arm weakness and speech disturbance and act immediately. I ask the nurse to call 911, state 'suspected acute stroke', give the last known well time of 9:50 and the

anticoagulant, and request transport to a stroke centre with pre-notification. I confirm the patient's name and date of birth, take a focused history from Susan, establishing onset at about 10:20 with last known well at 9:50, no head injury, seizure, headache or diabetes, and atrial fibrillation treated with apixaban taken this morning. I measure vital signs, finding an irregularly irregular pulse and a blood pressure of 176/98, check the glucose at 6.4 mmol/L to exclude hypoglycemia, and do a brief neurological exam: right facial droop with forehead sparing, right arm and leg weakness, and expressive aphasia. I do not give aspirin, food or drink, and I do not lower the blood pressure, because the patient needs a brain CT first and treatment decisions at hospital, including whether thrombolysis or thrombectomy is possible, depend on the last dose of anticoagulant and the time window. I speak to Mrs Ng directly, reassuring her that she is understood and that we are getting help. I give an SBAR handover to paramedics, support Susan, ask her to bring the medicines, and let her ride with her mother.