Clinical Examination and Procedural Skills

This document outlines the clinical examination and procedural skills that are anticipated from an advanced paramedic in primary care. Paramedics may progressively acquire additional capabilities as they advance along their educational and training journey. The degree to which paramedics engage in each element of this document will be influenced by factors such as population demand, the time allocated for paramedic development, and the availability of supervision.

Cardiovascular system

1. Indicative presentations:
    a. Chest pain/discomfort, orthopnoea, palpitations, irregular pulse, oedema, blood pressure issues, shortness of breath, transient loss of consciousness.

2. Take a structured and appropriate history, including the recognition of red flags, for a patient presenting with a cardiovascular condition.

3. Perform appropriate cardiovascular assessment:
    a. Inspection to include recognition of cyanosis, anaemia, pallor, sweating, dyspnoea, orthopnoea, finger clubbing, splinter haemorrhages, koilonychias, leukonychia, peripheral oedema, tar staining, xanthomata, arachnodactyly fingers, surgical scars and raised jugular venous pressure.
    b. Auscultation of the four heart valves (including accentuation manoeuvres)
    c. Palpation to confirm presence of major pulses, identify any heaves/thrills and confirm location of apical impulse.

4. Identify the need for and initiate immediate treatment of people with obvious cardiovascular emergencies.

5. Undertake key clinical investigations (where available):
    a. Physiological observations;
    b. Request and interpretation of bloods (FBC, U&E, haematinics, TFT, ESR/CRP, lipid profile, HbA1c, BNP/NT-proBNP);
    c. Undertake and interpret electrocardiographs (ECGs) for common presentations of cardiac problems (e.g. tachyarrhythmias, bradyarrhythmia, conduction and bundle branch blocks, ST elevation, atrial fibrillation, flutter etc)
    d. Use of risk factor calculators.

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Chest X-Ray;
    b. Electrocardiograph (ECG);
    c. Echocardiogram (Echo);
    d. Doppler ultrasonography;
    e. 24-hour BP monitoring;
    f. 24-hour ECG monitoring;
    g. Routine, urgent and 2 week wait referral criteria.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common conditions:
    a. Acute coronary syndromes
    b. Arrhythmias
    c. Cardiovascular disease prevention (primary prevention and secondary prevention)
    d. Cardiovascular system infections (antibacterial therapy)
    e. Chronic heart failure
    f. Cardiopulmonary resuscitation
    g. Diuretics

9. Demonstrate an understanding of a range of cardiovascular interventions including angioplasty, CABG, valve replacements, and cardiac implants (including pacemakers, internal defibrillators, ILR implant).

10. Recognise the effect that the environment, lifestyle, and genetics can have on the cardiovascular system and provide lifestyle and health promotion advice or referral, such as weight loss, exercise, and smoking cessation etc.

Dermatology

1. Indicative presentations:
    a. Changes in pigmentation, itching, infestation, nail issues/changes, rash (localised and systemic), skin lesions/moles, spots.

2. Take a structured and appropriate history, including the recognition of red flags, of a patient presenting with a skin condition or wound.

3. Perform an appropriate skin examination.
    a. Inspection and description of complaint, to include anatomical location, colour, shape, size, and distribution, surface appearance and mobility.
    b. Palpation of skin and surrounding structures, including neurovascular status and motor function as required.
    c. Ability to recognise signs of wound infection
    d. Awareness of skin lesions potentially indicative of malignancy
    e. Knowledge of and ability to describe different types of skin lesion including macules, papules, patches, plaques, nodules, wheals, vesicles, bullae, pustules.

4. Identify dermatological emergencies and rashes indicative of serious underlying illness including erythroderma, necrotising fasciitis, toxic epidermal necrolysis, Stephens Johnson syndrome, and the non-blanching rash in meningococcal disease.

5. Undertake key clinical investigations (where available):
    a. Physiological observations
    b. Request and interpretation of bloods (FBC, ESR, calcium, LFT, CRP, TFT, haematinics)
    c. Clinical photography
    d. Skin/nail scraping/sample

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Biopsy
    b. Wound management
    c. Routine, urgent and 2 week wait referral criteria.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common dermatological presentations:
        i. Eczema
        ii. Emollient and barrier preparations
        iii. Skin cleansers, antiseptics and desloughing agents
        iv. Skin conditions, management
        v. Skin infections, antimicrobial therapy
        vi. Topical corticosteroids
        vii. Topical local antipruritics
        viii. Warts and calluses

9. Recognise the effect that the environment, lifestyle, and genetics can have on the skin and consider risk factors for delayed wound healing, ulcer formation and the impact of the condition on mental health. Provide information, lifestyle and health promotion advice or referral, including vaccination advice.

Eyes

1. Indicative presentations:
    a. Red eye, painful eye, visual disturbance acute loss of vision, eye discharge, eye injury, swollen eyelid.

2. Take a structured and appropriate history, including the recognition of red flags, for a patient presenting with an eye condition.

3. Perform appropriate ocular and visual examination / assessment.:
    a. Inspection of the external structures of the eye,
    b. Visual acuity (distance: Snellen chart; near: fine print reading), visual fields, pupillary reflexes (direct pupillary reflex; consensual pupillary reflex; swinging light test; accommodation reflex), eye movements and fundoscopy.

4. Identify the need for and initiate immediate treatment of people with obvious eye emergencies.

5. Undertake key clinical investigations (where available):
    a. Physiological observations;
    b. Foreign body removal (local anaesthetic, fluorescein staining);
    c. Conjunctival swabs.

6. Identify the need for additional clinical and professional support such as emergency and urgent referral, second opinion and need for specialist consultation.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common presentations:
    a. Eye infections (antibacterial therapy)
    b. Eye allergy and inflammation

9. Instruct service users in the use of drug administration for eye treatment.

10. Recognise the effect that the environment, lifestyle (including contact lens wearing) and genetics can have on the eye and provide information, lifestyle and health promotion advice or referral.

Gastrointestinal (GI)

1. Indicative presentations:
    a. Difficulty swallowing, poor appetite, excessive thirst, abdominal pain, abdominal distension, abdominal mass/swelling, constipation, diarrhoea, change in bowel habit, nausea/vomiting, hematemesis, indigestion, rectal pain, rectal bleeding, stoma issues

2. Take a structured and appropriate history, including the recognition of red flags, of a patient presenting with an abdominal, pelvic or associated condition.
    a. Including a thorough sexual history where appropriate

3. Perform appropriate abdominal examination/assessment including:
    a. Inspection to include recognition of dehydration, poor nutrition, anaemia, pallor, jaundice, sweating, lymphadenopathy, finger clubbing, peripheral oedema, surgical scars, peristalsis, striae, dilated veins, spider naevi, asymmetry, masses / hernias or distension, vomiting / haematemesis.
    b. Auscultation to identify bruits and assess bowel sounds (presence, hyper/hypoactivity).
    c. Percussion to identify hepato/splenomegaly, tympany, dullness, ascites and peritoneal irritation.
    d. Light palpation to confirm presence of rigidity, guarding and rebound tenderness. Deep palpation to identify organomegaly and masses. Additional tests to include palpation of liver and spleen.
    e. Rectal examination

4. Identify the need for and initiate immediate treatment of people with obvious emergencies.

5. Undertake key clinical investigations (where available):
    a. Physiological observations;
        a. Request and interpretation of bloods (FBC, LFT, U&Es ESR, CRP, coeliac screen, haematinics, amylase, hepatitis, HIV)
    b. Stool sample (culture and sensitivity, faecal calprotectin, helicobacter-pylori testing, FIT testing or FOB)
    c. Urinalysis

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Abdominal ultrasound
    b. Gastroscopy
    c. Endoscopy
    d. Routine, urgent and 2 week wait referral criteria.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common presentations:
    a. Anal fissure
    b. Antispasmodics
    c. Constipation
    d. Diarrhoea
    e. Gastro-intestinal system infections, antibacterial therapy
    f. Gastro-oesophageal reflux disease
    g. Gallstones
    h. *Helicobacter pylori* infection
    i. Haemorrhoids
    j. Protein pump inhibitors
    k. Stoma care

9. Demonstrate an understanding of a range of interventions including stomas, bariatric surgery.

10. Recognise the effect lifestyle that the environment, lifestyle and genetics can have the GI and hepatic systems and provide preventative advice regarding high-risk behaviours, importance of screening and immunisations along with information, lifestyle and health promotion advice or referral, such as substance misuse or weight loss etc.

Genitourinary System (GU)

1. Indicative presentations:

    a. Loin pain, groin pain, haematuria, urinary symptoms, recurrent infections, testicular pain and/or swelling, inability pass urine profuse vaginal bleeding, genital rashes/irritation, penile pain, penile discharge, groin swelling, breast symptoms, pelvic pain/mass

2. Take a structured and appropriate history, including the recognition of red flags, of a patient presenting with an abdominal, pelvic or associated condition.
    a. Including a thorough sexual history where appropriate
    b. Including a history to determine disease risk factors specific to anatomy.
    c. Using appropriate language to ask questions about trans history ("Can we talk about your trans history?") where appropriate.

3. Perform appropriate abdominal examination/assessment including:
    a. Inspection to include recognition of dehydration, sweating, lymphadenopathy, self-mutilation, surgical scars, striae, dilated veins, spider naevi, asymmetry, masses/hernias or distension.
    b. Percussion to identify tympany, dullness, urinary retention and peritoneal irritation.
    c. Light palpation to confirm presence of rigidity, guarding and rebound tenderness. Deep palpation to identify organomegaly and masses. Additional tests to include bimanual palpation of the kidneys, renal angle tenderness.
    d. Breast examination

e. Female genital examination (including speculum and bimanual examination)
f. Male genital examination
g. Prostate examination

4. Identify the need for and initiate immediate treatment of people with obvious emergencies.

5. Undertake key clinical investigations (where available):
    a. Physiological observations;
    b. Request and interpretation of bloods (FBC, LFT, U&Es ESR, CRP, coeliac screen, haematinics, amylase, hepatitis, HIV, ACR)
    c. Urinalysis

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Ultrasound kidneys, ureters, bladder (KUB)
    b. Gastroscopy
    c. Endoscopy
    d. Routine, urgent and 2 week wait referral criteria.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common presentations:
    a. Contraceptives, hormonal
    b. Emergency contraception
    c. Genital system infections, antibacterial therapy
    d. Heavy menstrual bleeding
    e. Macrolides
    f. Sex hormones
    g. Urinary-tract infections
    h. Urological pain
    i. Vaginal and vulval conditions

9. Demonstrate an understanding of a range of interventions including urinary catheters, vaginal pessary, and life-style adjustments (tucking/binding/prosthetics).

10. Recognise the effect lifestyle that the environment, lifestyle, and genetics can have the genitourinary system and provide preventative advice regarding high-risk behaviours, importance of screening and immunisations along with information, lifestyle and health promotion advice or referral, such as substance misuse or weight loss etc.

Head, Neck, Ears, Nose, Throat

1. Indicative presentations:
    a. Dizziness, otalgia, otorrhoea, sinus pain, nasal pain, nasal obstruction, mouth pain, neck swelling, sore throat, difficulty swallowing, hearing loss, voice changes.

2. Take a structured and appropriate history, including the recognition of red flags, for a patient presenting with a head, neck, ears, nose and/or throat condition.

3. Perform an appropriate HNENT examination/assessment:
    a. External ear inspection and otoscope examination to include visualisation of internal landmarks.
    b. Nasal inspection: position, symmetry, discharge. Visualisation and identification of nasal mucosa, septum and turbinates.
    c. Mouth & pharynx inspection: lips, symmetry and lesions, brief inspection of gums and dentition, tongue depression to assess position, hydration, lesions and movement. Uvula and oropharynx using tongue depressor to assess position, colour, symmetry, exudates and lesions.
    d. Palpation to include assessments of relevant lymph nodes, auricles, mastoid bone and nose and the frontal and maxillary sinuses.

4. Identify the need for and initiate immediate treatment of people with obvious HNENT emergencies.

5. Undertake key clinical investigations (where available):
    a. Physiological observations
    b. Request and interpretation of bloods (FBC, glandular fever screen, TFT)
    c. Otoscopy
    d. Foreign body removal
    e. Throat examination
    f. Swabs

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Hearing test
    b. Cerumen removal
    c. Routine, urgent and 2 week wait referral criteria.

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common presentations:
    a. Ear infections, antibacterial therapy
    b. Nose infections, antibacterial therapy
    c. Nausea and labyrinth disorders
    d. Oral ulceration and inflammation
    e. Oropharyngeal fungal infections
    f. Oropharyngeal infections, antibacterial therapy
    g. Oropharyngeal viral infections
    h. Sinusitis (acute)

9. Recognise the effect that the environment, lifestyle, and genetics can have and provide information, lifestyle and health promotion advice or referral.

Mental Health

1. Indicative presentations:
    a. Acute anxiety, bereavement, stress, panic, paranoia, suicidal ideation, self-harm, stress, substance misuse, visual/auditory hallucinations, post-natal mental health issues.

2. Take a structured and appropriate history, including the recognition of red flags, and assessment for a patient presenting with mental health issues.
    a. Assess the impact of the person's complaint on their daily life, including work life, home life, social life, dietary intake, sleep, illicit drug use, prescription drug misuse, thought of deliberate self-harm, and suicidal ideation.
    b. Risk assess the possibility of harm to self or others and refer appropriately.
    c. Consider underlying physical medical conditions that could be associated with the presentation.

3. Perform an appropriate mental health assessment:
    a. Use of formal risk assessment tools for suicide
    b. Formal depression and anxiety screening tools
    c. Screening for alcohol, smoking, and drug dependency/intake

4. Identify the need for and initiate immediate treatment of people with mental health emergencies.

5. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. Urgent and routine referral to secondary care
    b. Referral for counselling/psychotherapy
    c. Referral to crises team
    d. Referral to other agencies

6. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

7. Demonstrate knowledge of common treatment summaries used in care of mental health:
    a. Depression
    b. Mania and hypomania
    c. Psychoses and related disorders

8. Identify the need for additional clinical and professional support such as referral, second opinion and advice.
    a. Develop, maintain & utilise links with other agencies in support of people with mental health issues.
    b. Be aware of local guidelines & pathways for referral to other agencies to support this client group including psychiatry, counselling, support groups.
    c. Understand the need for multi-agency working for adult safeguarding and know how to make a referral when there are concerns.

9. Recognise the effect that the environment, lifestyle, and genetics can have on mental health and provide information, lifestyle and health promotion advice or referral.

Musculoskeletal System

1. Indicative presentations:
    a. Difficulty with movement/spasticity, minor injury, pain, redness, swelling, stiffness.

2. Take a structured and appropriate history, including the recognition of red flags, for a patient presenting with a musculoskeletal injury or condition.

3. Perform an appropriate musculoskeletal examination/assessment:
    a. Inspection and description of complaint, to include anatomical location, appearance and mobility. This should include mechanism of injury (if required). This may also include observation of gait.
    b. Palpation of the affected area, including the joint above and below.

c. Movement testing, including active, passive and resisted range of movement, muscle tone, strength and bulk to include.
d. Neurovascular: compare left to right assessing – capillary refill, pulse sites, dermatomal distribution, pain, temperature, and position and discrimination sensation.

4. Identify the need for and initiate immediate treatment of people with obvious musculoskeletal emergencies.

5. Undertake key clinical investigations (where appropriate):
    a. Physiological observations
    b. Request and interpretation of bloods (FBC, calcium, ESR, CRP, vitamin D, rheumatoid factor, anti CCP, urate, autoimmune antibodies)

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
    a. X-Ray
    b. Ultrasound
    c. CT Scan
    d. MRI scan
    e. Physiotherapy
    f. Occupational therapy
    g. Podiatry
    h. Orthotist
    i. Routine, urgent and 2 week wait referral criteria.

7. Demonstrate knowledge of common treatment summaries associated with common musculoskeletal presentations:
    a. Gout
    b. Musculoskeletal system infections, antibacterial therapy
    c. Non-steroidal anti-inflammatory drugs
    d. Low back pain and sciatica
    e. Pain, chronic

8. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

9. Demonstrate an understanding of a range of musculoskeletal interventions including internal fixation, joint replacements, prosthetics, mobility aids/assistance.

10. Recognise the effect that the environment, lifestyle, and genetics can have on the musculoskeletal system and provide information, lifestyle and health promotion advice or referral.

Neurological System

1) Indicative presentations:
   a) Altered level of consciousness, altered power, tone or sensitivity, altered gait, confusion, dizziness, facial palsy, headache, head injury, memory problems, speech changes, sleep issues, TLOC, tremor, tired all the time.

2) Take a structured and appropriate history, including the recognition of red flags, for a patient presenting with a neurological condition.

3) Perform an appropriate neurological examination/assessment:
   a) Mental status: observe general appearance and behaviour to include level of consciousness (GCS), orientation, posture, dress, grooming, personal hygiene, environment, facial expression, emotional state and interaction with others.
   b) Cranial nerves: assess cranial nerves I – XII as required. To include use of Snellen chart, fundoscopy, PEARRLA and cardinal positions of gaze.
   c) Motor System: assess muscle tone, strength and bulk to include passive, active and resisted range of movement.
   d) Co-ordination tests, (cerebellar function) – rapid alternating movements, point to point movements, heel to shin, Pronator Drift, Romberg test and gait.
   e) Sensory: compare left to right assessing – dermatomal distribution, pain, temperature, light touch, vibration, and position and discrimination sensation.

f) Reflexes: Assess biceps, triceps and brachioradialis, patellar, ankle and plantars (Babinski).

4) Identify the need for and initiate immediate treatment of people with obvious neurological emergencies.

5) Undertake key clinical investigations (where available):
   a) Physiological observations
   b) Request and interpretation of bloods (ESR, U&E, B12, drug levels, e.g. anticonvulsants)
   c) Use of screening tools (e.g. MMSE, 6CIT, GPCOG) for assessment of cognitive ability.

6) Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:
   a) CT scan
   b) MRI scan
   c) TIA clinic
   d) Routine, urgent and 2 week wait referral criteria

7) Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8) Demonstrate knowledge of common treatment summaries associated with common neurological presentations and conditions:
   i) Cluster headache and other trigeminal autonomic cephalalgias
   ii) Corticosteroids, general use
   iii) Dementia
   iv) Migraine
   v) Pain, chronic
   vi) Stroke

9) Recognise the effect that the environment, lifestyle, and genetics can have on the nervous system and provide information, lifestyle and health promotion advice or referral.

Respiratory System

1. Indicative presentations:
    a. Cough (including haemoptysis), pain on breathing, pallor/cyanosis, shortness of breath, suspected or recurrent infection, wheeze.

2. Take a structured history, including the recognition of red flags, for a patient presenting with a respiratory condition.
3. Perform appropriate respiratory assessment:
    a. Inspection to include recognition of: accessory muscle use, tracheal tug/deviation, inter/sub costal recession, chest asymmetry, sputum production, cyanosis, respiratory distress, anaemia, pallor, sweating, dyspnoea, orthopnoea, finger clubbing, hand tremor, peripheral oedema, surgical scars, respiratory rate, temperature.
    b. Auscultation, linking findings from percussion to identify: stridor, vesicular, broncho-vesicular, bronchial and tracheal breath sounds. Understanding of adventitious sounds: fine/coarse crackles, wheezes, rhonchi related to pathology of the respiratory system.
    c. Percussion to identify: resonance, hyper-resonance and dullness in relation to presence of air, fluid or consolidation
    d. Palpation to assess chest expansion, tactile fremitus, tender areas, presence of lymphadenopathy and age-related changes

4. Identify the need for and initiate immediate treatment of people with obvious respiratory emergencies including life-threatening asthma and anaphylaxis.

5. Undertake key clinical investigations (where available):
    a. Physiological observations
    b. Peak flow rate assessment
    c. Request and interpretation of bloods (FBC, ESR, Iron studies)

6. Identify the need for additional clinical and professional support such as clinical discussion with other healthcare professionals, second opinion or referral for additional clinical investigations:

a. Chest X-Ray
b. CT scan
c. FeNO testing
d. Spirometry
e. Electrocardiograph (ECG);
f. Respiratory nurse referral
g. Routine, urgent and 2 week wait referral criteria

7. Integrate personalised care principles into the treatment planning process, ensuring that clinical interventions are tailored to the individual needs, preferences, and circumstances of each patient.

8. Demonstrate knowledge of common treatment summaries associated with common respiratory presentations and conditions:
    i. Asthma, acute
    ii. Asthma, chronic
    iii. Chronic obstructive pulmonary disease
    iv. Corticosteroids, general use
    v. Covid-19
    vi. Croup
    vii. Respiratory system infections, antibacterial therapy
    viii. Respiratory system, inhaled drug delivery

9. Recognise the effect that the environment, lifestyle, and genetics can have on the respiratory system and provide lifestyle and health promotion advice or referral, such as smoking cessation etc.

Diagnostics, Procedures and Therapeutics

1. Be competent in the use of, and interpretation of findings with the following core skills:
    - Deep tendon reflex hammer
    - Dermatoscope
    - Electrocardiograph (ECG)
    - Fundoscopy
    - Monofilament testing
    - Otoscopy
    - Peak flow meter
    - Pelvic examination (speculum use and bimanual examination)
    - Pregnancy tests
    - Prostate examination
    - Random blood glucose monitor
    - Rectal examination
    - Requesting and interpretation of bloods
    - Requests for imaging (IR(ME)R)
    - Skin/nail scraping
    - Stethoscope use
    - Swabs (vaginal; ears and throat)
    - Thermometer
    - Transcutaneous oxygen saturation monitor
    - Urine dipstick
    - Venepuncture and blood culture sampling
2. Supply, and/or administer or prescribe appropriate therapies when indicated in agreement with the patient. seeking confirmation when the drug, dose or route of administration are unclear, or where the medication/instruction as written is outside standard practice.
3. Recognise the impact of the presenting problem on the lifestyle and day to day living of the person and seek/ identify ways to positively support them.
4. Provide well evidenced differential diagnosis and suggested management plan, using a shared decision-making approach with the patient.
5. Be able to write a comprehensive and appropriate referral letter.