Supplementary File 3: Module questions

1. **Main module**

**Hyper-acute questions**

1. Which of the following is not a component of B.E.F.A.S.T

a) Aphasia

b) Ataxia

c) Hemianopsia

d) Hemiparesis

e) Facial Droop

**f) Headache**

2. Which of the following symptoms corresponds to a subcortical stroke

a) Hemianopsia

b) Aphasia and hemiparesis

c) Decrease conciseness

**d) Pure hemi motor and sensory symptoms**

e) Painless vision loss

3. In the National Institutes of Health Stroke Scale (NIHSS) a score of zero indicates that there is no stroke:

1. True
2. **False**

4. The National Institutes of Health Stroke Scale is in favor of which of the following strokes:

**a)** **Anterior left hemisphere stroke for right-handed individuals**

b) Anterior right hemisphere stroke for right-handed individuals

c) Posterior circulation strokes

d) Both anterior and posterior circulation strokes

5. What's the correct dose of tPA administration?

a. 0.25 mg/kg for a max dose of 100 mg administered 10% in a bolus and 90% as infusion

b. 0.40 mg/kg for a max dose of 90 mg administered as infusion

c. 0.9 mg/kg for a max dose of 90 mg administered as infusion

**d. 0.9 mg/kg for a max dose of 90 mg administered 10% in a bolus and 90% as infusion**

6. What's the correct dose of tenecteplase?

**a. 0.25 mg/kg for a max dose of 25 mg administered in a bolus**

b. 0.25 mg/kg for a max dose of 25 mg administered 10% in a bolus and 90% as infusion

c. 0.40 mg/kg for a max dose of 25 mg administered as bolus

d. 0.40 mg/kg for a max dose of 40 mg administered 10% in a bolus and 90% as infusion

e. 0.9 mg/kg for a max dose of 90 mg administered as infusion

7. Which if the following is not part of the TOAST subtype classification of acute ischemic stroke?

A. Small vessel occlusion

B. Large artery atherosclerosis

**C. Hemorrhagic transformation**

D. Cardioembolic

E. Stroke of Undetermined etiology

**Acute care questions**

8. Which of the following statements on blood pressure management in ischemic stroke is true:

a. Blood pressure should be lowered to <120/80mmHg in patients with acute ischemic stroke

b. Blood pressure should be measured every 12 hours within the first 72 hours

**c. In patients undergoing thrombolysis or thrombectomy, blood pressure should be lowered to <180/105mmHg**

**9.**  Which of the following statements are true?

**a. Fever, Sugar and Neuro Status should be monitored at least every six hours for the first 72 hours after stroke**

b. In temperature management, aim for a temperature below 36.0°C in ischemic stroke patients

c. Hyperglycemia in non-diabetic stroke patients increases the likelihood of a good or excellent outcome

10. What is the target systolic blood pressure in acute intracerebral hemorrhage?

A.<180 mmHg

B.<160 mmHg

**C.<140 mmHg**

D.<120 mmHg

11. Which is not a component of intracerebral hemorrhage bundle of care?

A. Blood pressure reduction

B. Glycaemic control

C. Treat fever

**D. Oxygen supplementation**

12. What is the target blood glucose level for non-diabetic intracerebral hemorrhage patients?

A. 4.1-6.0 mmol/L

**B. 6.1-7.8 mmol/L**

C. 7.8-10.0 mmol/L

D.10.1-12.0 mmol/L

13. Primary goal achieved by stroke units include all except:

1. Early detection of complications
2. Facilitating early mobilization
3. Vital signs monitoring
4. **Administering surgical interventions**

14.What is a potential psychological complication for stroke survivors post-discharge, and how can healthcare professionals address it?

1. **Social isolation; promote engagement in community support groups.**
2. Excessive exercise; recommend rigorous physical activity for mental well-being.
3. Dependency on medication; increase dosage to manage emotional distress.
4. Avoidance of medical appointments; reduce follow-up visits to alleviate stress.

15.How do discharge checklists benefit stroke patients and their caregivers?

1. Discharge checklists ensure a quicker hospital discharge process.
2. They minimize the need for follow-up appointments, reducing stress.
3. **Discharge checklists provide a comprehensive guide for post-discharge care.**
4. They primarily focus on medication management, neglecting other aspects of care

16. What is a key nutritional recommendation for stroke patients at discharge to support their recovery?

1. Limiting fluid intake to prevent fluid overload.
2. Encouraging a high-sodium diet for electrolyte balance.
3. **Emphasizing a diet rich in fruits, vegetables, and whole grains.**
4. Avoiding protein-rich foods to minimize strain on the kidneys.

**Post-acute questions**

17. Blood pressure target should be higher under which of the following conditions?

1. Unilateral severe carotid stenosis
2. **Bilateral severe carotid stenosis**
3. Intracranial stenosis
4. Blood pressure should be treated to a target of less than 130/80mmHg in all scenarios

18. For most patients with an acute ischemic stroke in the setting of atrial fibrillation, it is reasonable to initiate oral anticoagulation between 4 and 14 days after the onset of neurological symptoms.

1. **true**
2. false

19. In Tanzania, modifiable risk factors such as hypertension, diabetes mellitus, obesity, dyslipidemia, cigarette smoking, alcohol consumption and psychosocial stress have contributed to:

* 1. Less than 10% of stroke causes.
  2. **More than 90% of stroke causes.**
  3. Cardiovascular risk but no association with stroke.
  4. More than 10% of stroke causes.

20.In relation to diet and nutrition, which of the following interventions would you not recommend for stroke prevention?

* 1. High intake of whole grains, fruits, vegetables, nuts, lentils, beans, olive oil/canola oil
  2. Water as the drink of choice for hydration and avoid sugary drinks.
  3. **High intake of animal fleshes every day, mainly red meat.**
  4. Collaborate with nutritionists and food specialists for the composition of recipes easily accessible.

1. **Nursing module questions**

1. The ischemic penumbra:

1. Is best defined as a circumscribed volume of brain tissue within which all cellular components are rendered non-viable
2. Is the volume of ischemic brain tissue measurable by non-contrast CT
3. **Is a halo of potentially viable brain tissue surrounding the core infarction**
4. Is the result of luxury perfusion and time

2. The number one cause for symptomatic intracerebral hemorrhage in patients treated with intravenous tPA is:

* 1. Administration of tPA to patients with diagnoses mimicking stroke.
  2. **Failure to control the blood pressure during and after the infusion is complete.**
  3. Selection of patients that have subtle hemorrhages (microbleeds) that are only apparent on MRI.
  4. Treatment of patients that are greater than 80 years of age

3. Which of the following is true about management of hemorrhagic stroke?

a) **Routine administration of anticonvulsants is not indicated without evidence of seizures.**

b) Second tier intracranial pressure treatment includes opening the ventriculostomy to drainage.

c) Moderate hypothermia (33o C) for 24 hours has been shown to improve 3-month outcome.

d) Surgical evacuation of deep basal ganglia hemorrhages has been shown to reduce mortality and improve functional outcome at 3 months compared to conservative management.

4. Which nursing intervention helps reduce the post-stroke complication of aspiration pneumonia?

**a) Performing a swallowing assessment before oral medications or food are given**

b) Placing a feeding tube immediately

c) Administering IV nutrition instead of orally

d) Keeping the patient NPO for the first 48 hours

5.Which nursing intervention is essential for preventing complications in stroke patients in the early days of admission to the stroke unit?

**a) Regularly turning and repositioning the patient**

b) Encouraging family visits for emotional support

c)Administering anticoagulant medications

d)Initiating speech therapy exercises

6.When should the supplemental oxygen be given to the patients with acute stroke?

a)oxygen saturation <90%

b)oxygen saturation <91%

**c)oxygen saturation <92%**

d)oxygen saturation <93%

7. What is the major risk factor of intracerebral haemorrhage?

1. smoking
2. alcohol assumption
3. **hypertension**
4. diabetes mellitus

1. Which one is the major cause of subarachnoid stroke?
2. arteriovenous malformations
3. **rupture of an intracranial aneurysm**
4. intracranial neoplasm
5. use of anticoagulants
6. What are the initial cares for patients with hemorrhagic stroke?
7. Determining the cause of the bleeding
8. **Controlling the blood pressure**
9. Stopping any medication that could increase bleeding (eg, warfarin or another blood thinner, aspirin).
10. Rehabilitation therapy
11. Your patient's MRI shows multiple infarcts in various vascular territories.  Given this finding, the MOST important monitoring to ensure during admission is?
12. Blood pressure
13. Pulse oximetry
14. **Cardiac Monitoring**
15. Blood glucose
16. **Rehabilitation module questions**
17. Which of the following is **true** regarding early mobility training after stroke
18. Mobility training should be delayed for 7-days after stroke
19. **Starting intensive out-of-bed activities within the first24 hours of stroke is not recommended**.
20. Early mobility training is only provided by physiotherapists to ensure
21. It is recommended early mobility training should occur at high exercise intensity for short duration
22. Regarding the amount of physiotherapy and occupational therapy rehabilitation which of the following are true
23. **Rehabilitation should be structured to provide as much occupational and physiotherapy scheduled therapy as possible**
24. **Group circuit class should be used to increase scheduled therapy time**
25. **Independent or semi-supervised task-specific practice should be encouraged to supplement scheduled therapy time**
26. The amount of therapy is not important for people recovering from stroke
27. Regarding strength training after stroke which of the following are correct:
28. **Progressive resistance training should be provided to improve strength**
29. Strength training increases spasticity and tone and should therefore be avoided in people with spasticity after stroke
30. **For stroke survivors with leg weakness task specific training, repetitive practice using cycling or electrical stimulation may be used to improve leg strength**
31. For stroke survivors which of the following is true:
32. Cardiorespiratory fitness training should be avoided until >12months after stroke
33. **Sensory specific training may be provided**
34. **Individually tailored exercise interventions to improve cardiorespiratory fitness are recommended**
35. Sensory specific training should be avoided until >12months after stroke
36. To address activity limitations after stroke the following are true:
37. For those with difficulty sitting exercises involving reaching beyond arm’s length while sitting should be avoided at all times
38. **For those who have difficulty standing from a chair practice of this task should be undertaken**
39. For those who have difficulty standing activities that challenge balance should be avoided
40. For those at falls risk avoid functional exercise should be avoided
41. People after stroke with walking limitations should
42. **Undertake tailored repetitive practice of walking as much as possible**
43. Tailored repetitive practice for 45min per day is optimal
44. **Treadmill training should be avoided**
45. Consider including circuit classes with a focus on overground walking practice in as part of their therapy
46. Any stroke survivors with arm activity limitations should
47. Should be provided opportunity to intensive constraint-induce movement therapy
48. **Intensive constraint-induced movement therapy should involve a minimum of 2 hours of active therapy per day for 2 weeks, plus restraint for at least 6 hours per day.**
49. Repetitive task-specifiv training may be used to improve arm and hand function.
50. Hand and wrist orthoses (splints) should be used as a part of routine practice to improve pain, function and range of movement
51. The following is recommended regarding communication therapy:
52. **All stroke survivors should be screened for communication deficits using a screening tool that is valid and reliable**
53. **Those stroke survivors with suspected communication difficulties should receive formal, comprehensive assessment by a specialist clinician to determine the nature and type of the communication impairment**
54. For stoke survivors with aphasia do not benefit from therapy within the first 6 months
55. The following is recommended regarding communication training:
56. **Communication partner training should be provided to health professionals who interact with people with aphasia after stroke.**
57. Communication and partner training is unnecessary for health professionals
58. **Communication partner training may be provided to carers or family members of people with aphasia after stroke**
59. **Communication partner training should be provided to volunteers who interact with people with aphasia after stroke**
60. The following is recommended regarding acute dysphagia assessment and management
61. **People with acute stroke should have their swallowing screened, using a validated screening tool, by a trained healthcare professional.**
62. **All stroke patients who fail a swallow screening or who deteriorate should have a comprehensive assessment of swallowing performed by a speech pathologist.**
63. Swallowing screening should not occur before being given any oral food, fluid or medication.
64. **Swallowing screening should occur within four hours of arrival at hospital**