

## Supplementary data – Questionnaire

### A. Nurse in the ward

#### Question 1

What is your rank as a nurse in this hospital?

- Enrolled nursing assistant
- Enrolled nurse
- Registered nurse
- Other, specify

#### Question 2

i. How long have you been working as a nurse?

Years                      Months

ii. And how long have you been managing stroke patients as a nurse on the ward at this hospital? *[To be excluded if less than 6 months]*

Years                      Months

#### Question 3

i. Besides your nursing training, have you received any special training in the management of stroke patients?

Yes                              No

ii. If yes, how long ago did you last receive the training in management of stroke patients?

Years                      Months

iii. Describe the last training you received in stroke patient management.

#### Question 4

i. Do you have seminars or tutorials that focus on the management of stroke patients organised by the health professionals working at this hospital?

Yes                              No

ii. If yes, how often are these seminars or tutorials held?

#### Question 5

i. Does your ward have written protocols on the management of stroke patients?

Yes                      No

- ii. If yes, where are these protocols placed?
- iii. Are these protocols accessible to all health professionals who want to use them?  
*[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

**Question 6**

- i. Are you familiar with the term stroke unit?

Yes                                  No

- ii. If yes, what is a stroke unit?
- iii. Do you have a designated area in the hospital where hospital beds are reserved specifically for the management of stroke patients?

Yes                                  No

- iv. If no, in which ward/s are stroke patients admitted in this hospital? *[Note if respondent gives more than one response]*

General medical ward  
 Intensive care unit  
 Other, specify

**Question 7**

- i. When a patient is admitted onto the ward with a diagnosis of stroke, how often do you usually conduct observations on them in the first 24 hours?
- ii. Which of the following observations do you conduct on the stroke patients? *[Tick all that apply]*

Routine:    Body temperature  
               Blood pressure  
               Level of consciousness  
               Pulse rate  
               Respiratory rate  
               Oxygen saturation  
 Other:      Blood sugar  
               Fluid input and output

- iii. Does the frequency of observations change after patients have been admitted in the ward for more than 72 hours? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree



**Question 10**

- i. Are the patients and their relatives currently involved in the patient's discharge plans? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

- ii. If you agree, how are they involved?

- iii. What issues are discussed during these meetings? *[Tick all that apply]*

Patient and relative education:  
Medication for secondary prevention  
Lifestyle modification  
Rehabilitation exercises  
Home safety  
Mobilisation of the patient  
Psychological problems  
Other, specify

- iv. Do you have standardised guidelines with a list of topics that are discussed with the patients and their relatives?

Yes

No

**Question 11**

What difficulties have you encountered in managing stroke patients in your hospital?

**Question 12**

In your opinion, what interventions can be put in place to improve the care of stroke patients in this hospital?

## **B. Doctor in the ward**

### **Question 1**

Are you a:

- Medical officer
- Medical registrar
- Other, specify

### **Question 2**

- i. How long have you been working as a medical doctor?

Years                      Months

- ii. How long have you been managing stroke patients in this hospital?  
*[To be excluded if less than 6 months]*

Years                      Months

### **Question 3**

- i. Have you receive any special training on the management of stroke patients since qualifying?

Yes                      No

- ii. If yes, how long ago did you receive this training?

Years                      Months

- iii. Describe the kind of training you received.

### **Question 4**

- i. Do you have any scheduled seminars or tutorials on the management of stroke patients for all health professionals involved in stroke care at this hospital?

Yes                      No

- ii. If yes, how often are these seminars or tutorials held?

- iii. Who conducts these seminars or tutorials?

- iv. How is a decision made on which topics to cover?

### **Question 5**

- i. Does your ward have written protocols for the management of stroke patients?

Yes                      No

- ii. If yes, where are they placed?
- iii. Are these protocols currently accessible to all health professionals who want to use them? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree 2 Disagree 3 Undecided 4 Agree 5 Strongly agree

**Question 6**

- i. Are you familiar with the term stroke unit?

Yes

No

- ii. If yes, what is a stroke unit?
- iii. Do you have a designated area in the hospital where hospital beds are reserved specifically for the management stroke patients?

Yes

No

- iv. If no, in which ward or wards are stroke patients admitted in this hospital? *[Note if respondent gives more than one response]*

General medical ward  
Intensive care unit  
Other, specify

**Question 7**

- i. Are you familiar with the National Institutes of Health Stroke Scale (NIHSS)?

Yes

No

- ii. Do you currently score each stroke patient admitted using NIHSS? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree 2 Disagree 3 Undecided 4 Agree 5 Strongly agree

**Question 8**

- i. Up to how many hours after the onset of an acute ischaemic stroke can a patient receive intravenous thrombolytics?

Hours

ii. Can an acute ischaemic stroke patient receive intravenous thrombolytics at this hospital?

Yes

No

iii. If no, why?

iv. Are you able to transfer patients to tertiary hospitals if they are suitable candidates for thrombolysis?

Yes

No

### Question 9

i. Do you have the following diagnostic tests at this hospital?

CT scan	yes	no
MRI scan	yes	no
Chest X-ray	yes	no
Electrocardiogram	yes	no
Echocardiogram	yes	no
Carotid Doppler	yes	no

ii. Among the diagnostic tests that you have available, which are available 24 hours a day?

CT scan  
MRI scan  
Chest X-ray  
Electrocardiogram  
Echocardiogram  
Carotid Doppler

iii. Do you have health professionals available to interpret the CT scans?

Yes

No

iv. If yes, are they available to interpret the scans after working hours?

Yes

No

### Question 10

i. Are meetings held by the health professionals responsible for stroke patient care to discuss the management and progress of patients?

Yes

No

ii. If yes, often are they held?

iii. Do the ward doctors attend these meetings? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

iv. Who else attends these meetings?

Nurses  
Physiotherapists  
Speech and language  
therapists  
Occupational therapists  
Dieticians  
Psychologists  
Social workers  
Other, specify

### **Question 11**

i. Are the patients and their relatives currently involved in the patients' discharge plans?  
*[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

ii. If you agree, how are they involved?

iii. What issues are discussed during these meetings? *[Tick all that apply]*

Patient and relative education:  
Medication for secondary prevention  
Lifestyle modification  
Rehabilitation exercises  
Home safety  
Mobilisation  
Psychological problems  
Other, specify

### **Question 12**

What are the difficulties you have encountered in the management of stroke patients in your hospital?

### **Question 13**

In your opinion, what interventions can be put in place to improve the care of stroke patients in this hospital?



### C. Emergency unit doctor

#### Question 1

Are you a:

- Medical officer
- Medical registrar
- Other, specify

#### Question 2

- i. How long have you been working as a medical doctor?

Years

Months

- ii. How long have you been working in the emergency unit at this hospital? *[To be excluded if less than 6 months]*

Years

Months

#### Question 3

- i. Since qualifying, have you received any training in the management of patients with acute stroke in the emergency unit?

Yes

No

- ii. If yes, how long ago did you receive this training?

Years

Months

- iii. Describe the kind of training you received.

#### Question 4

Are strokes currently treated as an emergency in the emergency unit of this hospital?  
*[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

#### Question 5

- i. Does the emergency unit have written protocols on the management of stroke patients?

Yes

No

- ii. If yes, where are they placed?

- iii. Are these protocols currently accessible to all health professionals who want to use them? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

**Question 6**

- i. Are you familiar with the term stroke unit?

Yes

No

- ii. If yes, what is a stroke unit?

- iii. Do you have a designated area in the hospital where hospital beds are reserved specifically for the management of stroke patients?

Yes

No

- iv. If no, in which ward/s are stroke patients admitted in this hospital? *[Note if respondent gives more than one response]*

General medical ward

Intensive care unit

Other, specify

**Question 7**

- i. Are you familiar with the National Institutes of Health Stroke Scale (NIHSS)?

Yes

No

- ii. Do you currently score each stroke patient treated in the emergency unit using NIHSS? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

**Question 8**

Are the following investigations conducted on a patient with a suspected stroke?

Blood glucose (rapid test using dextrostix)	yes	no
Full blood count	yes	no
Urea, creatinine and electrolytes	yes	no
Erythrocyte sedimentation rate (ESR)	yes	no
C-reactive protein (CRP)	yes	no
Oxygen saturation	yes	no

**Question 9**

- i. In your hospital, is a swallow test routinely performed on acute stroke patients before they are allowed to eat or drink? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

- ii. Who does the swallow test in the emergency unit of this hospital?

- iii. If you have to do it, have you been taught how to do the swallow test?

Yes

No

- iv. How is a swallow test performed at this hospital?

- v. Is the method used to perform a swallow test at this hospital standardised? *[Please indicate your degree of agreement or disagreement with the statement using the scale below in your response]*

1 Strongly disagree    2 Disagree    3 Undecided    4 Agree    5 Strongly agree

**Question 10**

- i. Up to how many hours after the onset of an acute ischaemic stroke can a patient receive intravenous thrombolytics?

Hours

- ii. Can an acute ischaemic stroke patient receive intravenous thrombolytics at this hospital?

Yes

No

- iii. If no, why?

- iv. Are you able to transfer patients to tertiary hospitals if they are suitable candidates for thrombolysis?

Yes

No

**Question 11**

- i. Do you have the following diagnostic tests at this hospital?

CT scan	yes	no
MRI scan	yes	no
Chest X-ray	yes	no
MRI scan	yes	no
Electrocardiogram	yes	no
Echocardiogram	yes	no
Carotid Doppler	yes	no

ii. Among the diagnostic tests that you have available, which are available 24 hours a day?

- CT scan
- MRI scan
- Chest X-ray
- Electrocardiogram
- Echocardiogram
- Carotid Doppler

iii. Do you have health professionals available to interpret the CT scans?

Yes    No

iv. If yes, are they available to interpret the scans after working hours?

Yes    No

**Question 12**

What is the average estimated time period (minutes or hours), in your opinion, between the arrival of the suspected acute stroke patient in the emergency unit and obtaining an interpreted CT or MRI scan?

Hours

Minutes

**Question 13**

Describe the difficulties you have encountered in the management of stroke patients in this hospital.

**Question 14**

In your opinion, what interventions can be put in place to improve the care of stroke patients in this hospital?