

All About Strokes

All About Strokes - Pre-Conference Workshop (Repeated)

Thursday, 20 June 2013

Start 8:30am

Start 11:00am

Duration: 120mins

Duration: 120mins

Skellerup

Skellerup

All About Strokes

Overview of stroke services in NZ John Fink

Primary prevention Chris Ellis

New oral anticoagulants Gordon Royle

Acute stroke treatment Alan Barber

Secondary stroke prevention Peter Wright

Rehabilitation Ajay Kumar

Q and A panel



  **Rotorua GP CME 2013**

General Practice Conference & Medical Exhibition

20-23 June 2013 | Energy Events Centre | Rotorua

Stroke Services In New Zealand

Dr John N Fink
Christchurch Hospital

Introduction / Disclosures

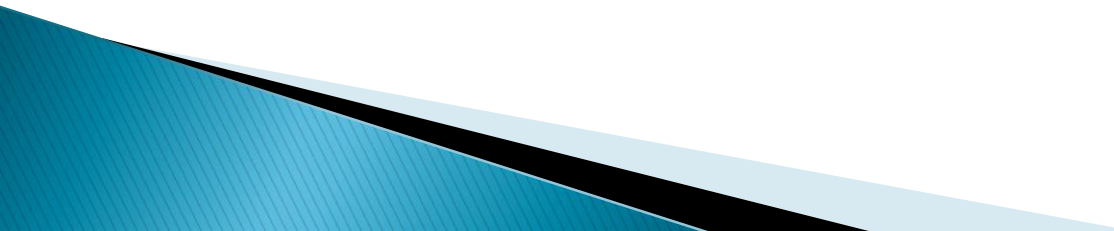
Canterbury

District Health Board

Te Poari Hauora o Waitaha



Outline

- ▶ History:
 - Development of Stroke Services in NZ
 - ▶ Level of Expectation of DHB Stroke Services
 - ▶ Interface of General Practice with Secondary Care Stroke Services
 - TIA management
- 

Why Stroke?

- ▶ #3 cause of death in NZ after all cancer and heart disease
 - ▶ #1 cause of long-term adult disability
 - ▶ 9000 New Zealanders have a stroke each year
 - 24/day
 - 2500 stroke deaths/year
 - ▶ ¼ strokes in NZ (>2000/y) occur <65y age
 - ▶ 5% of hospital admissions, 12% hospital beds
- 

History

- ▶ 2001
 - Stroke Rehab Unit Christchurch
 - Stroke Ward MMH
 - Stroke thrombolysis becoming available at Auckland and Christchurch only
 - NZ Stroke GL 1996 – ignored





21



3

Stroke Service Opens @ Lakes



JUNE 2013

New Stroke Unit Follows Move into Redeveloped OPRS

Patients and staff moved into the new Older Persons and Rehabilitation Service (OPRS) redeveloped facility in the Elderly Services Building on the morning of Wednesday 29 May.

The building has been redeveloped, with new roofing and cladding, and was officially opened mid-May by Lakes DHB Chair Deryck Shaw and Ngati Whakaue kaumatua Pihopa Kingi. The temporary relocation of OPRS stretched out to 14 months, due to the reroofing and re-cladding required to fix leaky building issues.

The redeveloped facility has outpatient clinic areas, a new reception area and a new lift to the basement which will take equipment used in the community to a cleaning, resource and storage area. Features of OPRS include:

- An increase in beds from 16 to 21

with the potential to increase to another four beds in the future.

- A special room with a bariatric hoist and hoists have been added to an additional five bed spaces.
- Ensuited added to three three-bedded rooms and six one-bedded rooms
- An assessment flat upgrade.

A fortnight after OPRS moved into its new premises, the stroke unit that has been an integral part of planning for the redeveloped OPRS will open, on Monday 10 June.

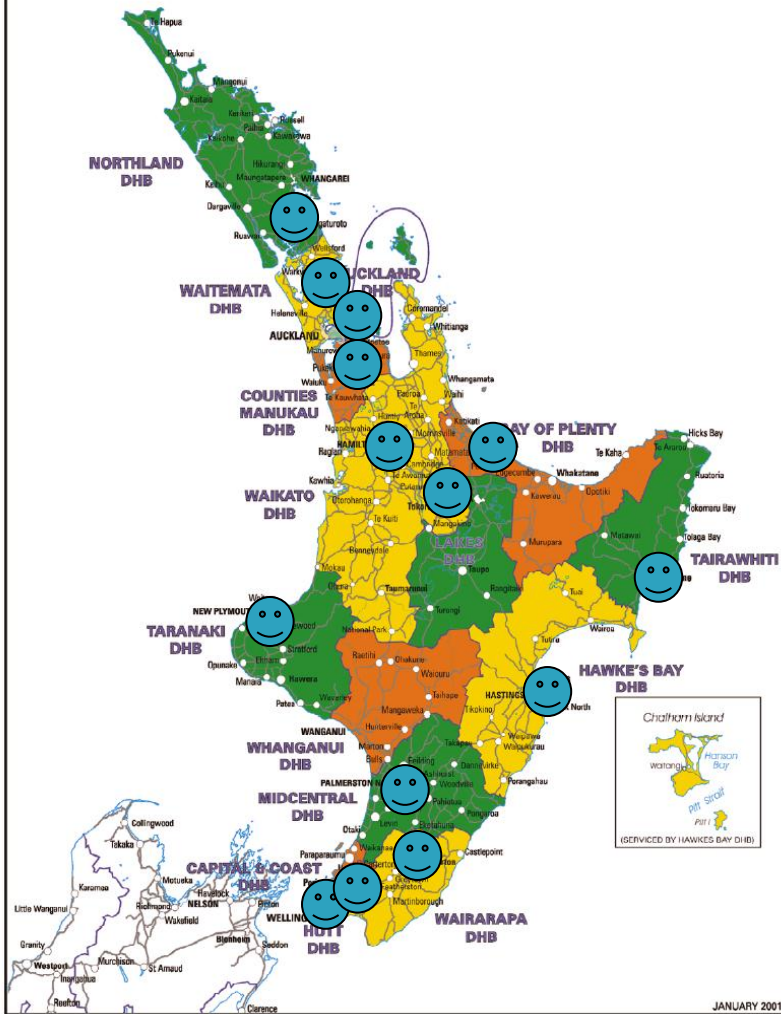
*Stroke Project team:
Rosemary Viskovic
(back left), CNM Johanna Spaans (back right),
Dr David Silverman and Chinta Charteris.*



Inside this issue:

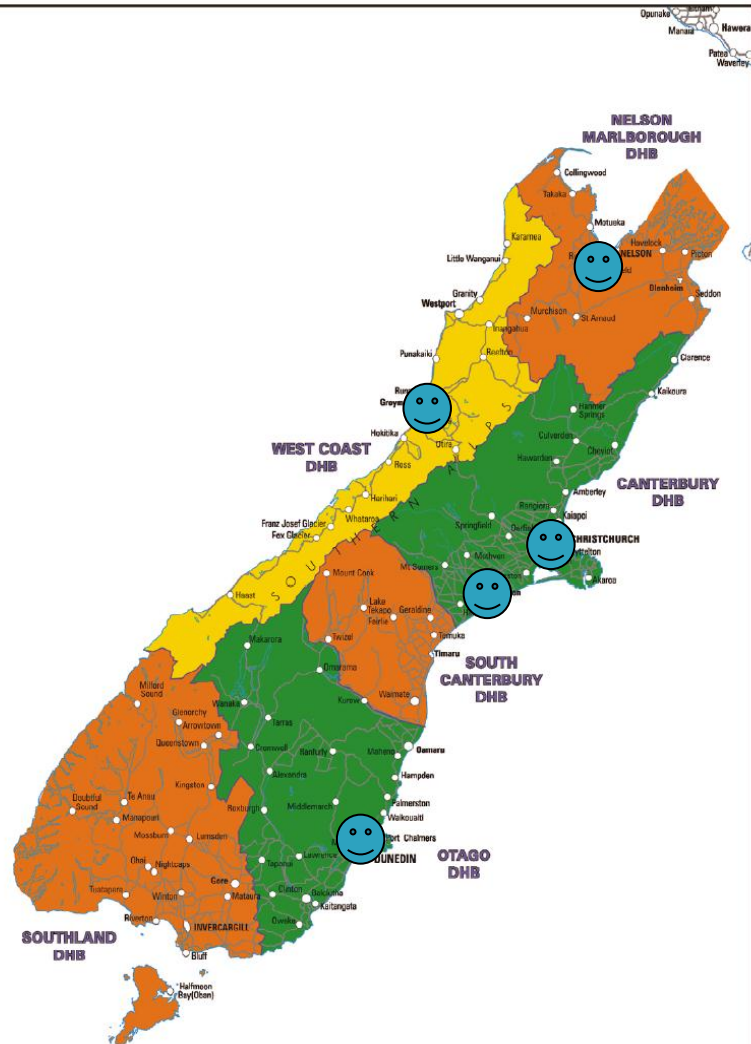
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MINISTRY OF
HEALTH



JANUARY 2001

MINISTRY OF
HEALTH
MAANAD KUTUBA



JANUARY 2001

Stroke Networks

- ▶ Stroke Network National Leadership Group
 - Workstreams:
 - TIA project
 - Stroke Thrombolysis
 - Rehabilitation
 - Best practice resource project
- ▶ Regional Stroke Networks
 - Northern
 - Midland
 - Central
 - South Island

Expectations of DHB Stroke Services

- ▶ All DHBs should provide organised stroke services

Box 1: Definition of organised stroke services

- All people with acute stroke are the responsibility of, and are managed by, services specialising in stroke and rehabilitation.
- The organisation has a 'lead clinician' for stroke services.
- Care is provided and coordinated by an interdisciplinary team skilled in stroke and rehabilitation.
- All people with stroke or transient ischaemic attack (TIA) have a comprehensive assessment and appropriate secondary prevention measures are provided.
- Systems exist to identify people with stroke and TIA not admitted to hospital and to ensure that they receive all necessary services, particularly prompt assessment, treatment and secondary prevention.

Expectations of DHB Stroke Services

▶ Acute Stroke

- “All” patients with acute stroke should be admitted to hospital for immediate investigation and management
- Target = 80% of stroke patients will be admitted to a stroke unit.

Expectations of DHB Stroke Services – Thrombolysis

- ▶ All large and medium DHB's should provide a stroke thrombolysis service
 - Target = 6% ischaemic strokes
 - How to achieve?
 - 1: Hospital Services / Stroke Teams
 - 2: Ambulance Services
 - 3: Public Awareness



Face

Smile - is one side drooping?



Arms

Raise both arms - is one side weak?



Speech

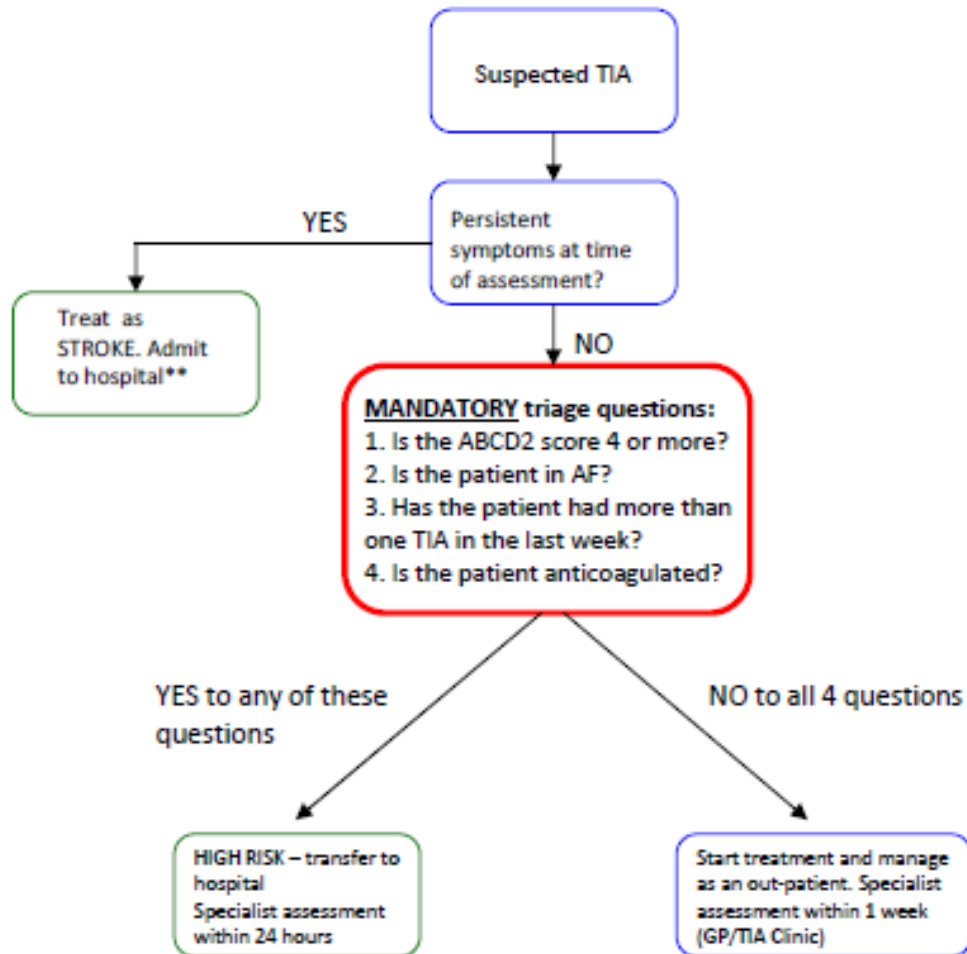
Speak - unable to? Words jumbled, slurred?



Time

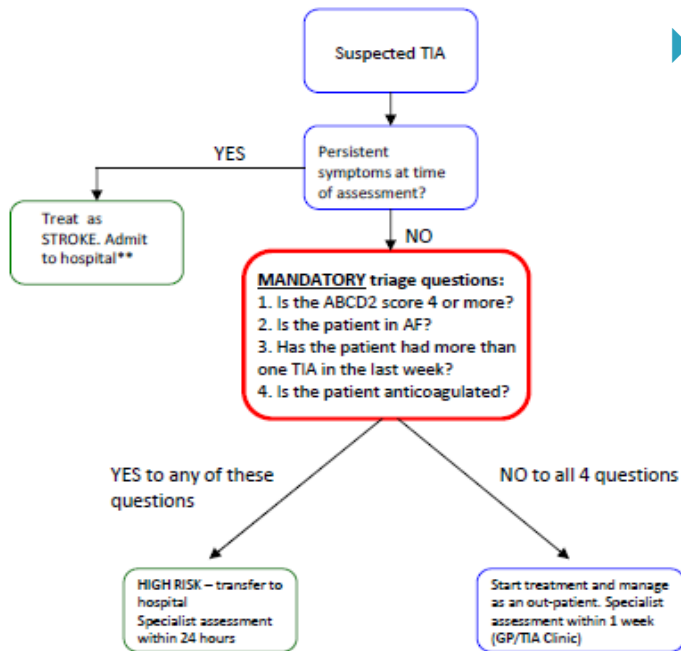
Act fast and call 111! Time lost may mean brain lost.

Expectations of DHB Stroke Services – TIA



- >7d from onset = 'lower risk'
- Immediate treatment for all patients

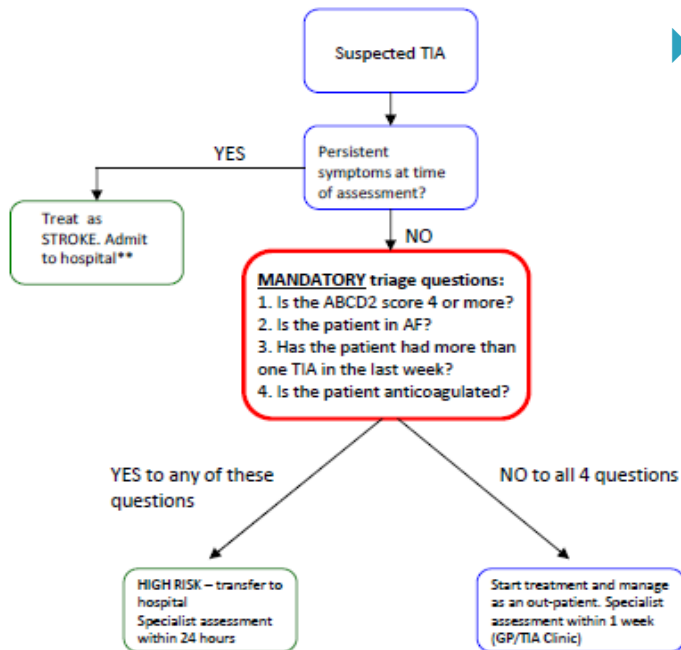
Interface of General Practice with Secondary Stroke Services – TIA



► Questions:

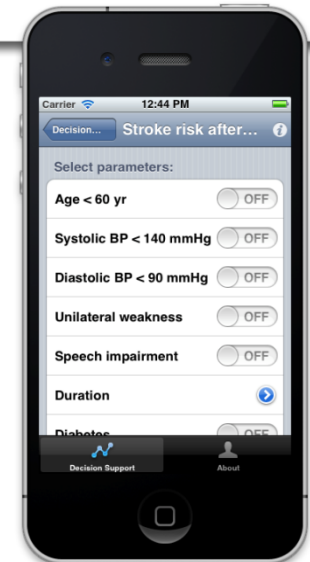
- How do we achieve this?
 - 1. Accurate diagnosis and triage
 - 2. Correct immediate Rx
 - 3. Access to specialist services
 - 4. Access to investigations
- Regional networks are focusing on implementation of DHB–appropriate pathways

Interface of General Practice with Secondary Stroke Services – TIA

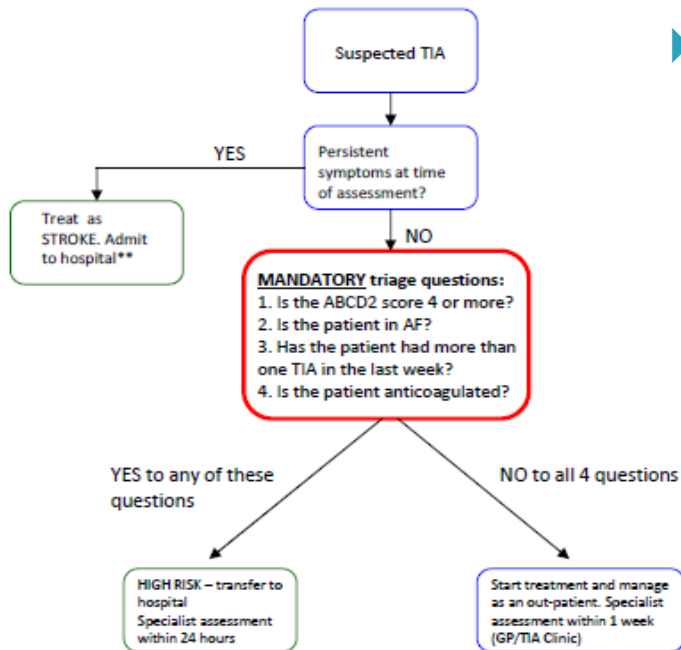


- Questions:
 - What is the ABCD2 score?

ABCD ²	Risk Factor	Criteria	Score
A	Age	>60 years	1
B	Blood Pressure	SBP>140, DBP>90	1
C	Clinical features	Unilateral weakness Speech disturbance only	2 1
D	Duration	>60min 10-59min	2 1
D2	Diabetes	Present	1



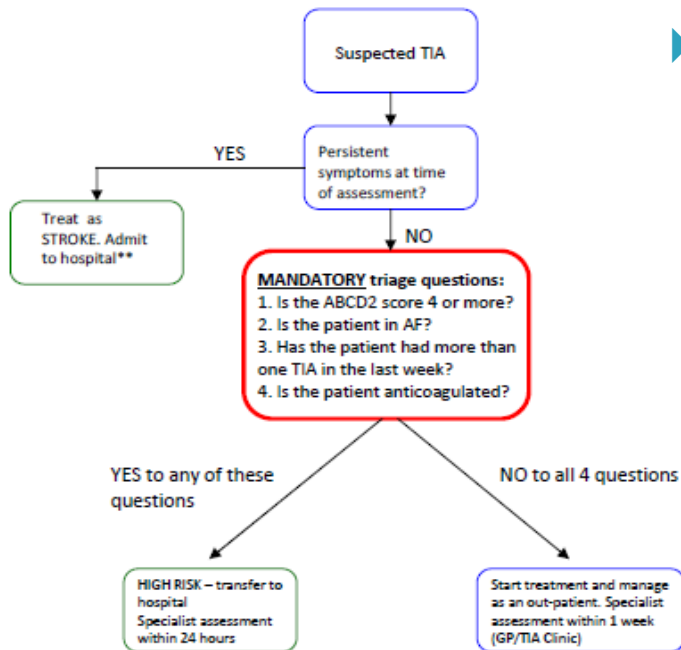
Interface of General Practice with Secondary Stroke Services – TIA



► Questions:

- What is the ABCD2 score?
- Does your DHB have a clear referral pathway for
 - High risk TIA?
 - Lower risk TIA?
 - Specialist assessment
 - Imaging – eg Carotid U/S

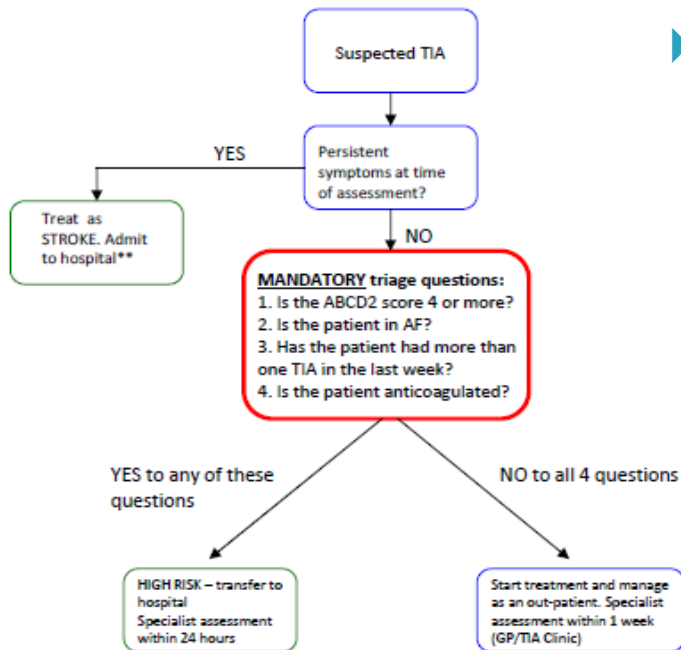
Interface of General Practice with Secondary Stroke Services – TIA



► Questions:

- What is the ABCD2 score?
- Does your DHB have a clear pathway for
 - High risk TIA?
 - Lower risk TIA?
- What is the best immediate treatment?

Interface of General Practice with Secondary Stroke Services – TIA



► Questions:

- What is the ABCD2 score?
- Does your DHB have a clear pathway for
 - High risk TIA?
 - Lower risk TIA?
- What is the best immediate treatment?
 - antiplatelet: aspirin or clopidogrel
 - BP lowering: eg ACEi
 - Statin: eg atorvastatin 80mg

TIA Electronic Decision Support (EDS) Software for GPs

» Dr Anna Ranta, Neurologist
Palmerston North

TIA Electronic Decision Support (EDS) Software for GPs

- Helps to make an accurate diagnosis
- Stratifies patients into high and low risk
- Prompts immediate medication initiation
- Grants access to rapid CT/U/S if indicated
- Links to patient information leaflets
- Links to appropriate Rx in GP PMS
- Generates referrals (ED/TIA/lab/radiology)
- Gives feedback/help w/ test interpretation

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Stroke / TIA

bestpractice
DECISION SUPPORT FOR HEALTH PROFESSIONALS

Page 2 Data Resources Park Main Menu Send Feedback Logout

History & Examination Patient Details

Onset

Date of TIA/Stroke (dd/mm/yyyy) 05/05/2013

Stroke/TIA events over past week ☒ One ☐ Two or more

Symptoms resolved

☐ Yes ☒ No

Time of symptom onset

(ie. last seen well)

☐ Over 4.5 hours ago ☒ Less than 4.5 hours ago

STOP! This patient may be having a stroke and is within the thrombolysis window*. Refer patient to ED immediately for consideration of thrombolysis.

Once ambulance has been called both ED and/or medical registrar on call should be alerted

Message from webpage



You selected symptoms that do not fall into a single anatomic location. Please double check the boxes that you checked and if indeed correct consider a diagnosis other than TIA or possibly multiple TIAs if symptoms occurred at different times. You should also consider specialist input for further advice

OK

Examination

Blood Pressure 135 / 85 Rate Not examined ☒

Regular heart rhythm ☒ Yes ☐ No ☐ Not examined

Murmur ☒ No ☐ Yes ☐ Not examined

Carotid bruit ☒ None ☐ Right ☐ Left ☐ Bilateral ☐ Not examined

Neurological exam findings Normal

History & Examination Patient Details

ATTENTION: If you need to Park this module to obtain further information or to facilitate clinician review, please do so on this page before selecting 'Continue'. If the module is parked after this page further review/data entry of History and Examination will not be possible.

Continue

Stroke / TIA


Page 2
Data
Resources
Park
Main Menu
Send Feedback
Logout

History & Examination
Patient Details

Onset

? **Date of TIA/Stroke** (dd/mm/yyyy) 05/05/2013

Stroke/TIA events over past week
☒ One
☐ Two or more

Symptoms resolved
☒ Yes
☐ No

? **Symptoms came on suddenly**
☒ Yes
☐ No

Symptoms

? **Unilateral weakness** ☐

? **Unilateral numbness** ☐

? **Visual symptoms** ☐

? **Communication / speech problems** ☒

? Problem 'finding' words ☐
? Problem 'understanding' people ☐

? Slurring of speech ☒
☒ Total loss (mute) ☐

? **Common posterior circulation symptoms** ☐

? **Other stroke symptoms** ☐

? **Other symptoms** ☐

History - Notes

Vascular risk factors

☐ Prior TIA
☐ Prior Stroke
☒ Hypertension

☐ Atrial Fibrillation
☒ IHD
☐ PVD

☐ Diabetes
☐ Dyslipidaemia

☐ Smoker
☐ Family history of vascular disease

☐ Warfarin/Dabigatran
☐ DVT/hypercoagulability conditions/OCP use

Alcohol consumption units/week

Other Factors

☐ Terminal illness
☐ Severe underlying disability/dementia

Examination

Blood Pressure 135 / 85 Rate Not examined ☒

Regular heart rhythm ☒ Yes ☐ No ☐ Not examined

Murmur ☒ No ☐ Yes ☐ Not examined

Carotid bruit ☒ None ☐ Right ☐ Left ☐ Bilateral ☐ Not examined

Neurological exam findings Normal

History & Examination
Patient Details

ATTENTION: If you need to Park this module to obtain further information or to facilitate clinician review, please do so on this page before selecting 'Continue'. If the module is parked after this page further review/data entry of History and Examination will not be possible.

Continue

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Triage

Management

Your patient may have suffered from a TIA and the estimated seven day **stroke risk** is Low

You have two management options:

a) Refer to [TIA Clinic](#) AND (before patient leaves surgery):

Initiate/continue **ALL** of the following Medications:

[Clopidogrel](#) OR [Aspirin](#) +/- [Dipyridamole](#) (UNLESS patient is on [Warfarin](#) or D

AND

[Statin](#) AND [Antihypertensive](#)

AND

Counsel patient on [Smoking Cessation](#) AND No [Driving](#) for minimum of 1 month.

[Print TIA Information Leaflet](#)

OR

b) Arrange comprehensive TIA/stroke work-up in t

TIA Risk Calculation (ABCD₂)

- Age: 1 pts (age >= 60)
- Blood Pressure: 0 pts (BP < 140/90)
- Clinical Features: 1 pts (Speech affected without weakness)
- Diabetes on medication / insulin: 0 pts (does not apply)
- Symptom Duration: 0 pts (Duration of TIA < 10 min)

Your patient's ABCD₂ score is: 2

TIA Risk Assessment

High Risk	Low Risk
• ABCD ₂ score >4	• ABCD ₂ score <3
• >2 events over 7 days	• >7 days since last event
• Atrial Fibrillation	
• Anticoagulation	

Based on ABCD₂ score alone (excluding other high risk indicators) see table below for estimated stroke risk in %:

ABCD ₂ score	0-3	4-5	6-7
-------------------------	-----	-----	-----

Land Transport Recommendations:

1. **Private license (Class 1 and 2)**
 - Single TIA: no driving for minimum of 1 month.
 - Multiple TIAs: no driving for minimum of 3 months provided the condition has been adequately investigated and treated.
2. **Vocational license (Classes 2-5 and/or a P,V,I or O license endorsement)**
 - Single TIA: no driving for a minimum of 6 months and then only if cause has been identified and satisfactorily treated, including a specialist assessment. Note that these individuals may resume private driving after a minimum of 1 month.
 - Multiple TIAs: people should not return to vocational driving. However the Director of Land Transport may consider granting a license 12 months after the last attack if an appropriate specialist report supports such an application.

stein AL, Sidney S.
Transient ischaemic attack.

A CP, Mente Z.
After transient ischaemic attack.

rd. During 1991 to 2003.

ATTENTION: Please ensure that all referrals are handed to the patient - this software is intended as a tool to support, but not replace practitioner clinical judgement.

Continue

Triage

Management

GP work-up and management in the community without specialist referral - Anterior circulation TIA

Your patient may have suffered from a TIA and symptoms are suggestive of anterior circulation vascular compromise

Hover/click on the following links to view information, print referrals, prescriptions, and patient leaflets.

1. Investigations

- Check [ECG](#) within 24 hours to exclude atrial fibrillation.
- Arrange for outpatient non-contrast [Head CT](#) to be done within 7 days (If **high risk** 48 hrs) or if direct GP access to CT is not available in your region please contact hospital specialist on call to discuss/arrange.
- Arrange for urgent outpatient [Carotid Ultrasound](#) to be done within 7 days. (If **high risk** 48 hrs).
- Only consider referral for [Echocardiogram](#) if there are **risk factors** for a non-AF cardioembolic source.
- Check the relevant [Laboratory Tests](#).

2. Prescribe ALL the following Medications:

[Clopidogrel](#) OR [Aspirin](#) + / - [Dipyridamole](#)

AND

[Statin](#) AND [Antihypertensive](#)

OR

[Dabigatran](#) OR [Warfarin](#) IF patient has atrial fibrillation AND expedited head CT has excluded

intracranial haemorrhage. For [more information](#) is advised.

3. Counsel patient and print information

[Lifestyle advice](#) / [Driving](#) / [Smoking](#)

4. Instruct patient to present to TIA clinic within 72 hours; explain to patient that TIA can be considered if he/she has

5. Interpreting test results:

- CT result
- Carotid Ultrasound result
- Echocardiogram result
- Lipids result

Triage

Carotid Ultrasound result:

- Ipsilateral* occlusion (i.e. 100% stenosis):** no further intervention required.
- Ipsilateral 70-99% stenosis:** contact neurology or vascular surgery consultant immediately via telephone if patient deemed good surgical candidate. Carotid endarterectomy is of maximal benefit if performed within 2 weeks of TIA.
- Ipsilateral 50-69% stenosis:** for some individuals surgery may be indicated. Contact neurologist/stroke specialist via telephone to urgently discuss the case.
- Ipsilateral <50% stenosis:** no intervention indicated and utility of follow-up ultrasound highly questionable except in very select individuals.
- Contralateral** stenosis:** depending on degree of stenosis surgery may be considered, but intervention is not urgent. It is suggested that such cases are discussed with a neurologist/stroke specialist. Alternatively the patient could be referred to the TIA clinic or a vascular surgeon for an opinion.

***Ipsilateral carotid disease** - e.g. Left sided stenosis in a patient with right sided weakness and dysphasia and thus left hemispheric dysfunction.

****Contralateral carotid disease** - e.g. Right sided stenosis in a patient with right sided weakness and dysphasia and thus right hemispheric dysfunction.

Referral Details

ABCD²Score

Clinical Details

Triage Advice

Patient Details

Family Name	Mouse	NHI	abc1234
First Name(s)	Mickey		
Address	11 Stroke Ave	Gender	☒ Male ☐ Female
	Nowhere	Date of Birth	11/11/1944 
Ethnicity	European - NZ		
Home Number		Work number	

Referrer Details

Name	Dr Anna Ranta	NZMC/NZNC	43200
Locum GP		NZMC	
Practice	MidCentral DHB		
Address	575 Main Street		
	Palmerston North		
Phone	(06) 350 4544		

Fax Referral Form To

Name	TIA Clinic, Neurology Department
Address	Palmerston North Hospital
	Private Bag 11 036
	Palmerston North
Phone Number	(06) 356 9169
Fax Number	(06) 350 8642

Referral Details

ABCD²Score

Clinical Details

Triage Advice

Print/Save/Fax

Save to PMS

Cancel

Stroke Services in NZ

- ▶ Are becoming more “organised”
- ▶ Expectations include:
 - Designated lead stroke physician
 - Thrombolysis service in most centres
 - Clear referral pathway for TIA
- ▶ Help facilitate improvements!
 - Engagement is needed between PHO's and Secondary Care stroke services