Welcome

- 2-Day Physical Health Training - Day 1

- Please sign the register
- Grab a pen if you don’t already have one

There is no such thing as a stupid question – nobody knows everything!

It doesn’t matter if you have not given a correct answer ….

It is all about learning and improving ☺

Feel free to take notes but slides will be sent to you

<u>Please get pen & paper</u>

Course objectives

- To understand the common health problems you will encounter, detect them and take appropriate timely action
- Understand the National directive and your duty of care for physical health as well as mental health
- To appreciate the need to act <u>early</u>

Course outline

- Epidemiology
- Common side effects with psychotropic medicines
- Vital signs, mental alertness, NEWS2
- Diabetes
- Falls
- Respiratory problems
- Cardiovascular problems
- Constipation

Group Activity

- Breakout room
- Nominate a spokesperson for your group to feedback
- 5-10 minutes

Global evidence continues to tell us that people with SMI have a reduced life expectancy (up to 20 years), predominantly due to physical health conditions

In the mental health setting, what physical illnesses are your clients more likely to get? Why?

What side effects from medicines do you know about?

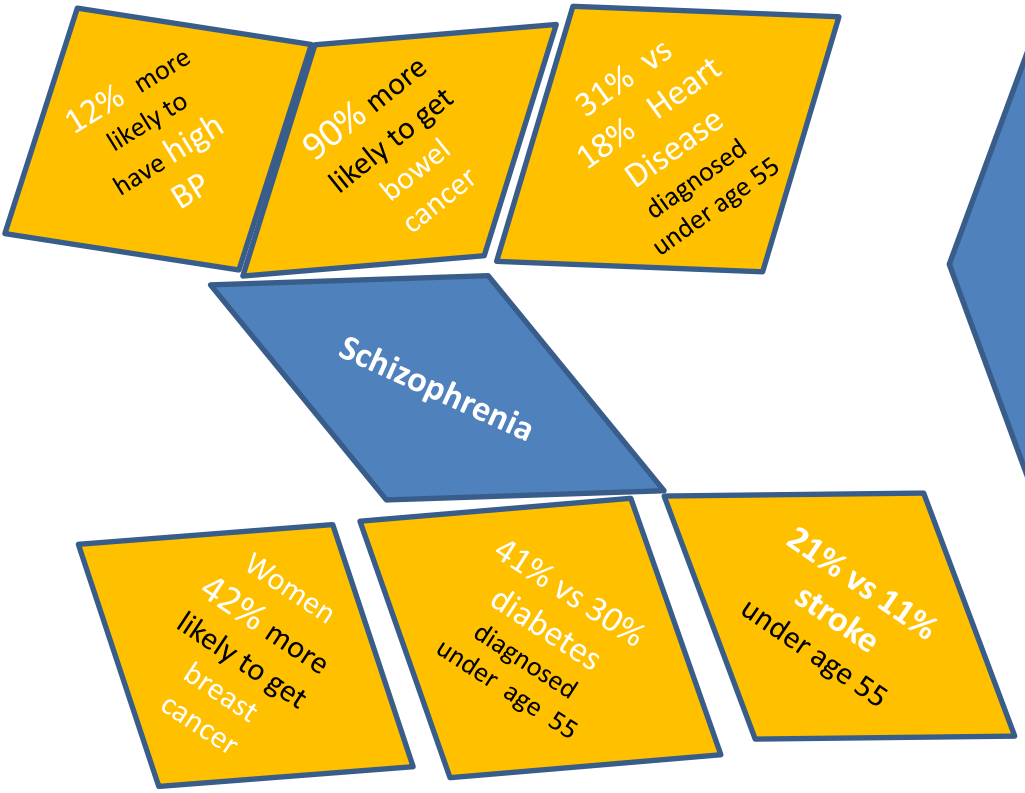
Feedback

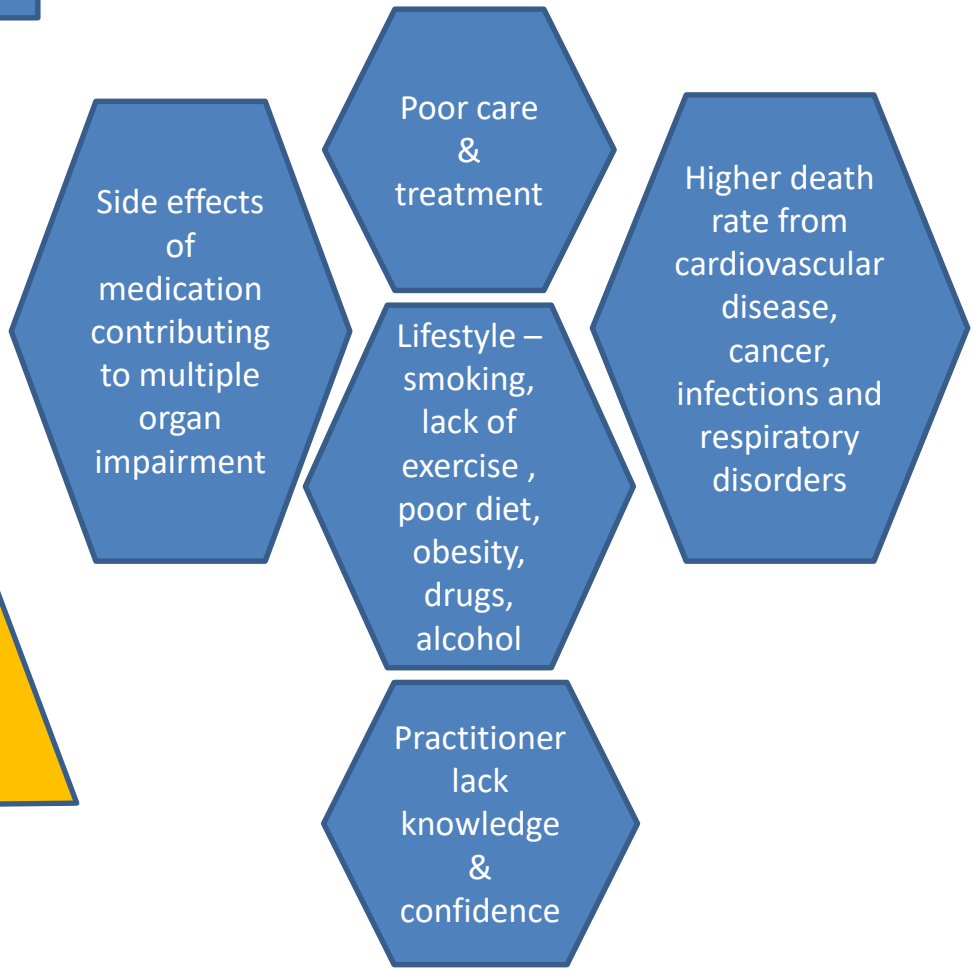
How are these monitored in clinical practice?

- thyroid
- COPD, infection, obesity hypoventilation, pulmonary embolus
- Breast cancer
- Liver damage
- Kidney damage
- Constipation, intestinal obstruction, bowel cancer
- Delirium, Coma, Stroke, brain tumour
- Angina, myocardial infarct, arrhythmia, myocarditis, endocarditis, heart failure
- Diabetes Mellitus
- Hypertension, DVT, agranulocytosis, anaemia, thrombocytopenia, neutropenia, electrolyte imbalance, sepsis

The Five Year Forward View for Mental Health (2016): focus on improving physical health outcomes in people with mental illness

Disability Rights Commission





- **Social exclusion - may be struck off GP lists for being too demanding**
- **Stress can be a risk factor for stroke**
- **Therapeutic nihilism -patients are not interested in, or have enough to worry about, without thinking about their physical health**
- **Physical illness seen as part of the mental illness**

Prognosis

- **22% of people with CHD who have schizophrenia have died**
- **15% of people with CHD who have bipolar disorder have died.**

compared with 8% of people with no serious mental health problems.

- **19% of people with diabetes and schizophrenia have died.**

compared with 9% of people with no serious mental health problems

- **28% of people with COPD and schizophrenia have died.**
- **24% of people with COPD and bipolar disorder have died.**

compared with 15% of people with no serious mental health problems

Psychiatric Medicines associated with.....

- Changes in conscious level & respiratory depression
- Obesity – increased risk of cardiovascular disease
- Hypertension
- Cardiac arrhythmia – abnormal and dangerous heart rhythms
- Diabetes
- Constipation
- Changes to the blood cells – infection/sepsis, anaemia, bleeding, clotting (32% greater risk of developing a blood clot)

level 4

- **High intensity interventions** - by specialist practitioners on a regualr basis e.g. smoking cessation advisors, health trainers, IAPT workers, and alcohol teams

level 3

- **Extended brief interventions** - By health and social care staff who regularly come into contact with people with complex needs or at risk of increased harm

level 2

- **Brief interventions (MECC L2)** - For staff who have the opportunity to encourage and support people who's health and wellbeing could be at risk and may involve record keeping or occur at a time of an assessment

level 1

- **Brief advice (MECC L1)** - For everyone in direct contact withthe general public. to raise awareness motivate and sign post to help them improve their health and well-being

Communication

Why might communication be difficult?

- Psychosis/Serious mental illness
- Non-English speakers
- Brain injury
- Dementia
- Learning Disabilities and Autism

LD/ASD

- Die on average 20 years earlier
- In 2021 49% of deaths found to be “avoidable” after investigation
- 60% of deaths in 2021 were under 65 (compared to 10% of general population)
- LeDeR found that 23% of deaths identified constipation as a long-term health problem
- Only 60% of DNACPR processes are followed correctly.

- Higher rates of: sleep problems, epilepsy, sensory impairments, allergies, cardiovascular disorders, autoimmune disorders, obesity, and more!
- Communication difficulties
- Different experiences of pain
- Reduced mobility
- Fluid and diet intake (dysphagia, restrictive diet, pica)

Toolkits for LD Service Users

Preventing urinary tract infections by recognising signs of dehydration

Complications of a UTI are not normally common, but can be serious for older people and can lead to kidney failure or septicemia. Complications can affect people with pre-existing health problems, such as Diabetes or weakened immune system. A sudden change in behavior is one of the best indicators of a UTI in older people.

Urine Colour Chart

- Good
- Good
- Fair
- Dehydrated
- Dehydrated
- Very Dehydrated
- Severely Dehydrated

If urine colour either of the first 2 colours on urine colour chart, with no symptoms of dehydration
No further action required

If urine colour matches either of the middle colours (3 and 4) on the urine colour chart, and person is starting to show symptoms of dehydration, offer more water or fluid to drink. Keep a fluid chart so you can observe fluid intake.
Monitor and Document

If urine colour matches the last 3 colours circled in red on the urine colour chart, and the person is showing symptoms of dehydration. The person needs to be encouraged to drink more fluids. Keep a strict fluid chart, document fluid intake and urine output
Seek additional support

Be aware some medications can change urine colour, so it is important look for symptoms of dehydration too.

http://www.enhertsccg.nhs.uk/sites/default/files/TDONTD%20NHS%20Poster_Oct20171.pdf

GREEN – ACTION – None ORANGE – ACTION – Monitor and Document RED – ACTION – REFER – Seek further support and advice 11

%20Look%20Care%20Bo

/acute-care-toolkit-16-

he Deteriorating Service User

ple being cared for is a really important skill. If they have any tions/ report changes.

ed below

	Yes	No
	Yes	No
	Yes	No
	Yes	No
	Yes	No
	Yes	No
	Yes	No
	Yes	No
or less)		
Is there any change in bowel habits	Yes	No
Are there any signs of skin infection or deterioration (i.e. redness, broken skin)	Yes	No
Any new skin damage	Yes	No
Any cough (i.e. change in the normal)	Yes	No
Any change in breathing (i.e. change from the normal)	Yes	No
Are they hot to touch (i.e. have they got a temperature)	Yes	No

Remember: Action is appropriate.

When to Report Changes
- A score of 15 or more?
- Any new or increase in symptoms
- Any change in symptoms
- Abnormal observations

Consider using the S.B.A.R tool when reporting changes

S **Situation** – Identify service user, concern, location of problem

B **Background** – Patient's Medical History & any background information

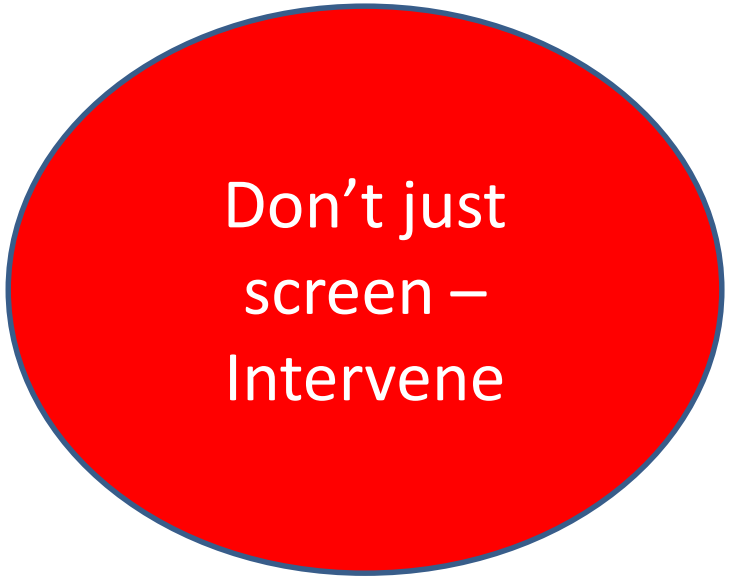
A **Assessment** – Concerns

R **Recommendations** – Explain what you need ie. seek advice/guidance from Health Care Professional

10 min break
Stay logged on

Get pen & paper

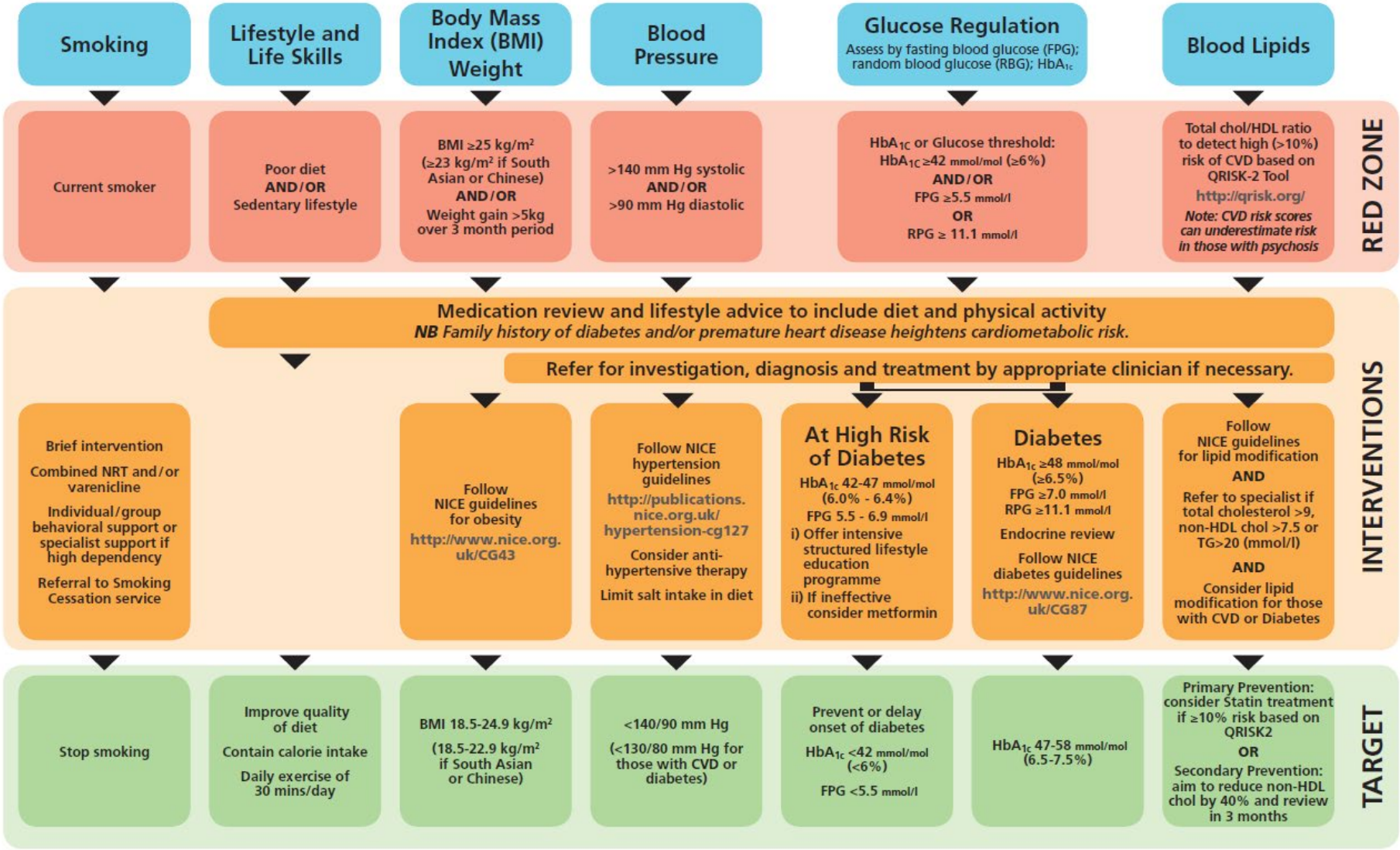
For better outcomes we need to identify **early** signs of disease/illness and intervene



Lester UK Adaptation | 2014 update

Positive Cardiometabolic Health Resource

An **intervention framework** for people experiencing **psychosis** and **schizophrenia**



FPG = Fasting Plasma Glucose | RPG = Random Plasma Glucose | BMI = Body Mass Index | Total Chol = Total Cholesterol | HDL = High Density Lipoprotein | TRIG = Triglycerides

VITAL SIGNS

Group Work – 5 mins
select a spokesperson to feedback

What are the vital signs?

How are you taking them and recording them?

What are the normal ranges and what might be the cause(s) if they are not ‘normal’?

Feedback

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

Step 1: Record vital signs (choose the correct saturation recording section) and add scores together to find overall NEWS2 score

Step 2: Check if any vital sign has a score of 3 (red score)

Step 3: Identify the correct clinical response and action. Any red score or score ≥ 5 Think! Could this be sepsis?

MEWS/MEWOS?

Record Vital Signs, Add scores for overall score, check if any parameter has score of 3, Identify the correct clinical response for the score

Score	Clinical Risk	Response
Aggregate Score 1-4 **Potential for deterioration**	Low	Ward-based response/review by GP/ANP/Community matron required **Minimum daily/4-6 hourly vital signs**
Red Score score of 3 in any parameter **Urgent response**	Low-Medium	Urgent Ward-based response *by clinician/ team with competence in assessment and treatment of acutely ill patients and recognising when escalation to A&E team appropriate* **Hourly vital signs Could this be sepsis?**
Aggregate Score 5-6 **urgent response**	Medium	Key threshold for **urgent response** *Response team must include staff with critical care skills including airway management* **Hourly vital signs, transfer to A&E** **Could this be sepsis?**
Aggregate score 7 or more **Emergency response**	High	**Key threshold for emergency response** *Response team must include staff with critical care skills including airway management* **Continuous monitoring of vital signs, transfer to A&E Could this be sepsis?**

Mrs Brown complains of feeling generally unwell. You take her vital signs (below). Record the vital signs on the NEWS2 chart

Resps (on air) 20/min

Sat 95%

BP 120/75

pulse 94/min regular

Conscious level: alert

Temp 38.3◦c

What is the NEWS2 score?
Are there any red scores?
At what level is the clinical risk?
How should you respond ?
How frequently should you record vital signs?

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

What could be wrong with Mrs Brown?

Mr Ali has suddenly become very agitated and appears confused. He has been incontinent of urine and it has an offensive smell. You take his vital signs (below). Record the vital signs on the NEWS2 chart

Resps (on air) 26/min

Sat – refuses

BP refuses

Pulse refuses

Consciousness confused

Temp 35.5◦c

What is the NEWS2 score?

Are there any red scores?

At what level is the clinical risk?

Could this be sepsis?

How should you respond?

How frequently should you record vital signs?

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

What could be wrong with Mr Ali?

Mr Soma suffers from COPD. He is on permanent oxygen via nasal cannula, 2 litres/min and his saturations are normally 90% on this oxygen. He has suddenly become very agitated and appears confused. He is coughing and sounds chesty. The nurses have increased his oxygen to 10L/min. You take his vital signs (below). Record the vital signs on the NEWS2 chart

Resps (on oxygen) 26/min

Sats – 97%

BP 98/60

Pulse 104 irregular

Conscious level: confused

Temp 35◦c

What is the NEWS2 score?

Are there any red scores?

At what level is the clinical risk?

Could this be sepsis?

How should you respond?

How frequently should you record vital signs?

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
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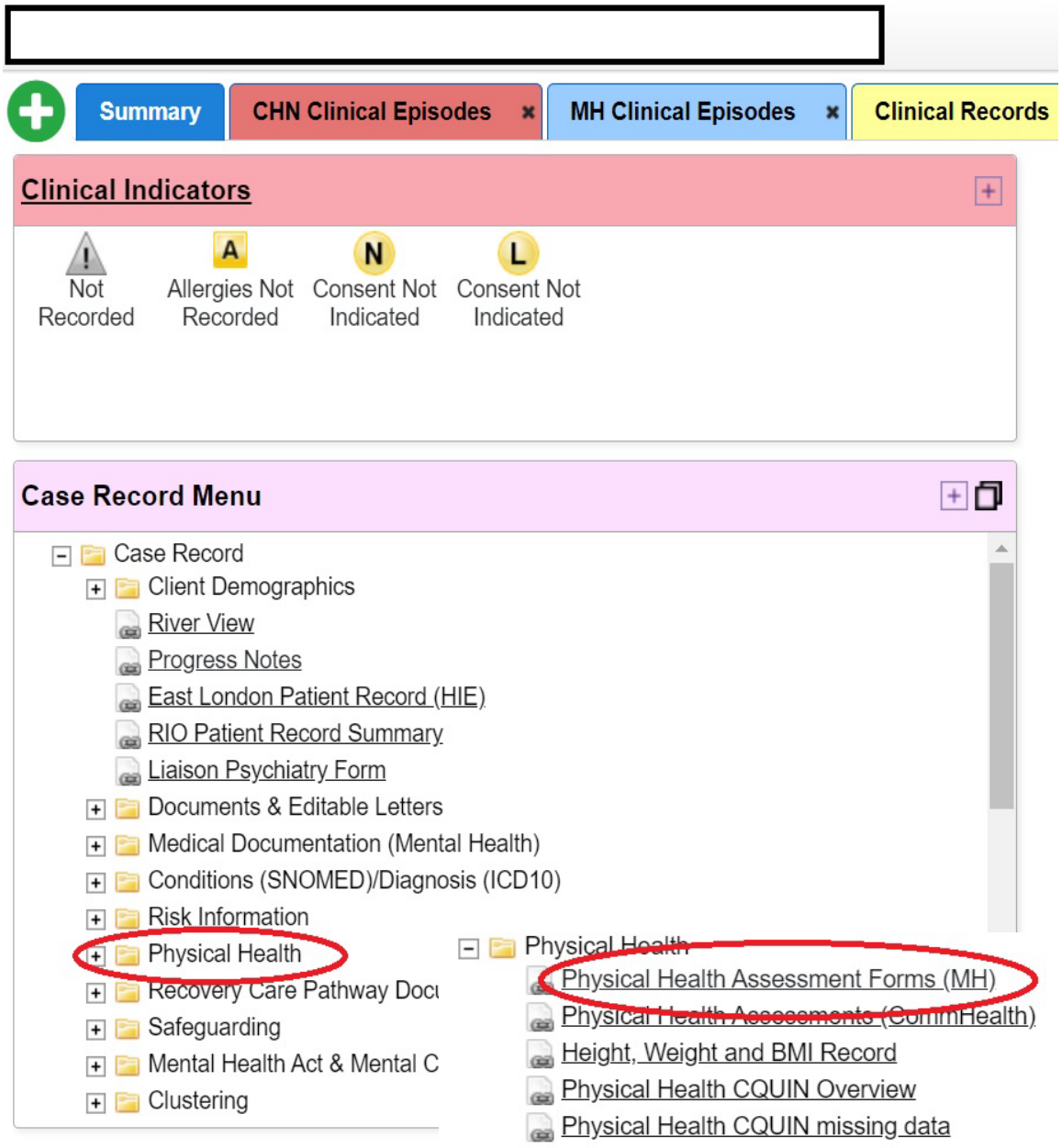
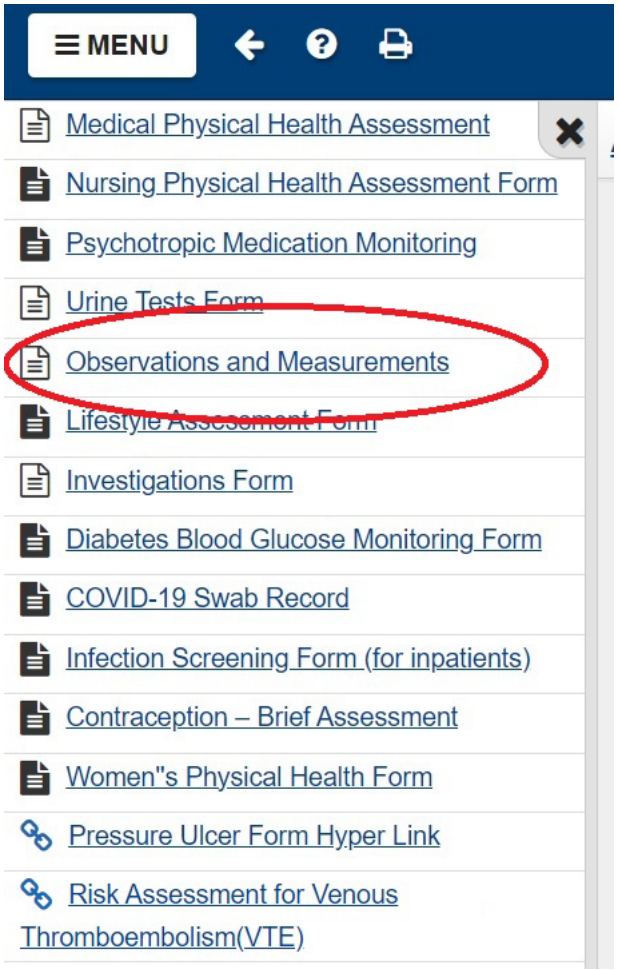
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

What could be wrong with Mr Soma?

NEWS on RiO


Summary
CHN Clinical Episodes
MH Clinical Episodes
Clinical Records
Clinical Indicators
Not Recorded
Allergies Not Recorded
Consent Not Indicated
Consent Not Indicated
Case Record Menu
Case Record
Client Demographics
River View
Progress Notes
East London Patient Record (HIE)
RIO Patient Record Summary
Liaison Psychiatry Form
Documents & Editable Letters
Medical Documentation (Mental Health)
Conditions (SNOMED)/Diagnosis (ICD10)
Risk Information
Physical Health
Recovery Care Pathway Docu
Safeguarding
Mental Health Act & Mental C
Clustering
Physical Health
Physical Health Assessment Forms (MH)
Physical Health Assessments (CommHealth)
Height, Weight and BMI Record
Physical Health CQUIN Overview
Physical Health CQUIN missing data


MENU
Medical Physical Health Assessment
Nursing Physical Health Assessment Form
Psychotropic Medication Monitoring
Urine Tests Form
Observations and Measurements
Lifestyle Assessment Form
Investigations Form
Diabetes Blood Glucose Monitoring Form
COVID-19 Swab Record
Infection Screening Form (for inpatients)
Contraception – Brief Assessment
Women"s Physical Health Form
Pressure Ulcer Form Hyper Link
Risk Assessment for Venous Thromboembolism(VTE)

Date/time

Reason for observations

Please Select

- Please Select
- Routine
- Rapid tranquilisation
- Increased monitoring for clinical reason
- Post-restraint
- Depot clinic
- Clozapine clinic

Is this patient a child?

TPR / NEWS2 Scoring

Leave items blank if not attempted

Respiratory rate (Normal range: 12-15 breaths per minute)

Oxygen saturation (Normal range: 96%-100%)

Tick the box below if scale 2 is being used. Scale 2 must ONLY be used under the direction of a qualified clinician if the target range is 88-92%, e.g. in hypercapnic respiratory failure.

Scale 2 used

Supplemental oxygen flow rate in litres/minute

0

Rio Clinical Information System - | Case Record

https://rio.eastlondon.servelec.thirdparty.nhs.uk/rio/CaseRecord/CaseRecordMainView.aspx?CLIENTID=1036427

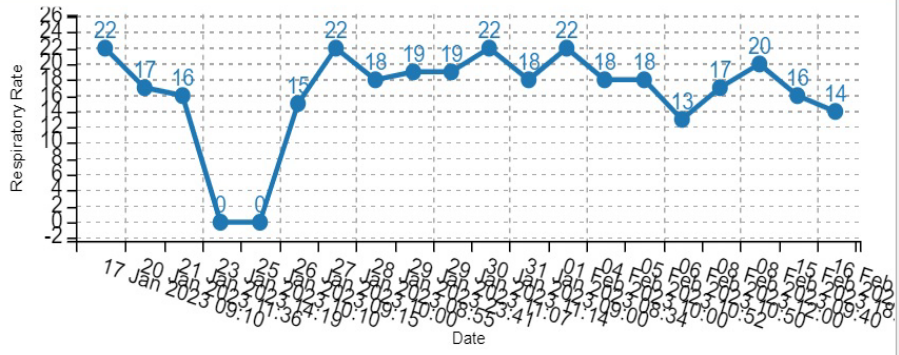
Actions | Overview

CHN Clinical Episodes | MH Clinical Episodes | Clinical Records | Involved in case | Child Health Summary | TPR | BP+O2 | BMI+BM

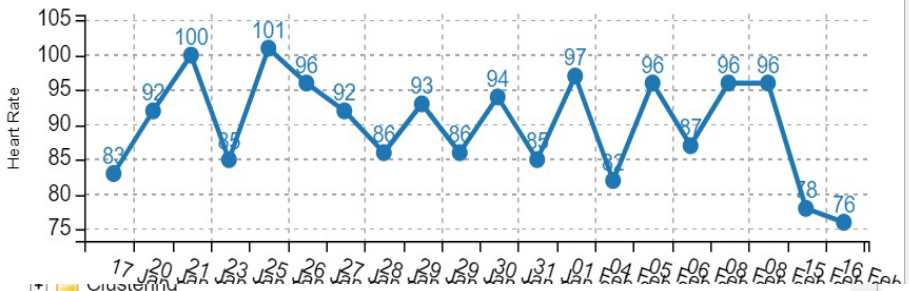
How to access total NEWS2 score

The NEWS2 total score is now viewable in the NEWS2 chart available for inpatients from the bed view. Please continue to use the TPR and BP+O2 tabs to view trends in these parameters in the community, and the BMI+BM tab to view trends in BMI, waist circumference, weight and fasting BMs for all patients.

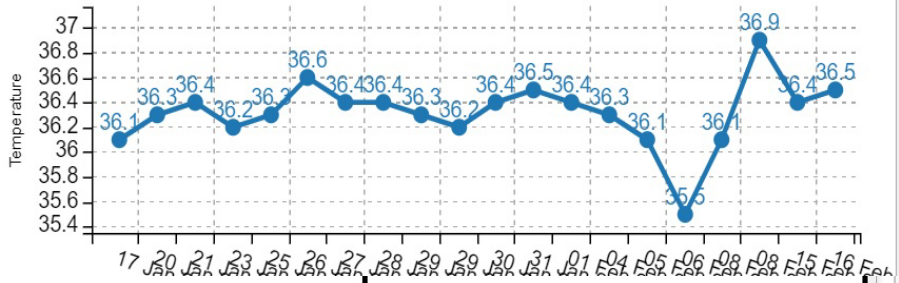
Respiratory Rate



Heart Rate



Temperature



Clustering
Client Referrals
Inpatient Management

Care Co-ordinator
Current Care Level

Non-Contact Vitals

- Sometimes patients refuse to have vitals taken, or they're in seclusion and it's not safe to go in.

- What can we do instead?
- **Respiration rate (also regular, shallow/deep)**
- **Respiratory distress (are they able to talk in full sentences? Are they gasping? Respiratory sounds? Use of accessory muscles?)**
- **Signs of cyanosis**
- **Level of consciousness (ACVPU)**
- **Hydration status**
- **Other (unsteady gait, dizzy, anything you see)**

Mental alertness

T P R

BP, BM

Sats

SBARD

Situation – This is Staff Nurse Maggie from XX ward; I am calling because I am concerned about Patient Y who has suddenly become very confused

Background - Mr Y has been a patient on the ward for 4 weeks, having been admitted for acute psychosis and was started on olanzapine. He has been well up to now

Assessment: I have managed to take his vital signs – his temperature is 38, pulse 102, resps 20, BP 120/80, saturations 96%. His NEWS2 score is 4, with a red flag for confusion

Recommendation: I need you to come and assess him straight away as the sudden confusion is very worrying

Decision: We have agreed you will come to the ward straight away. I will place the patient under constant observation

Always, Always, Always –
take the **vital signs + BM** and calculate **NEWS2, check for red flags, take the correct action**

Mental alertness

the first vital sign

Is it mental illness or physical illness?

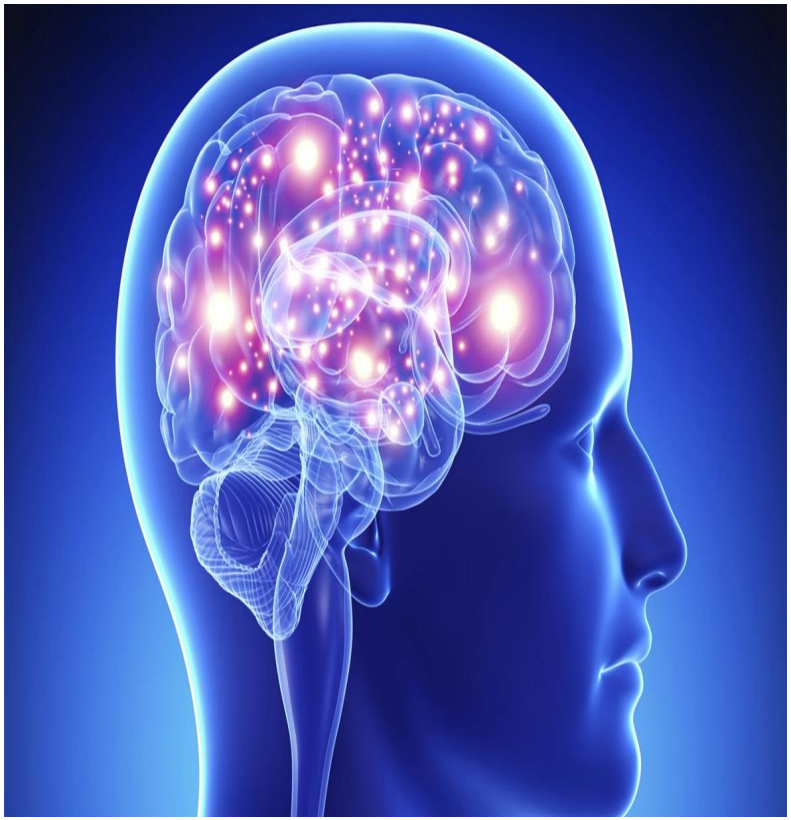
Delirium (acute confusion/altered consciousness) – a physical illness so severe that it affects brain function, causing confusion and drowsiness

ALL patients with a new confusion/ altered level of consciousness have delirium until proved otherwise

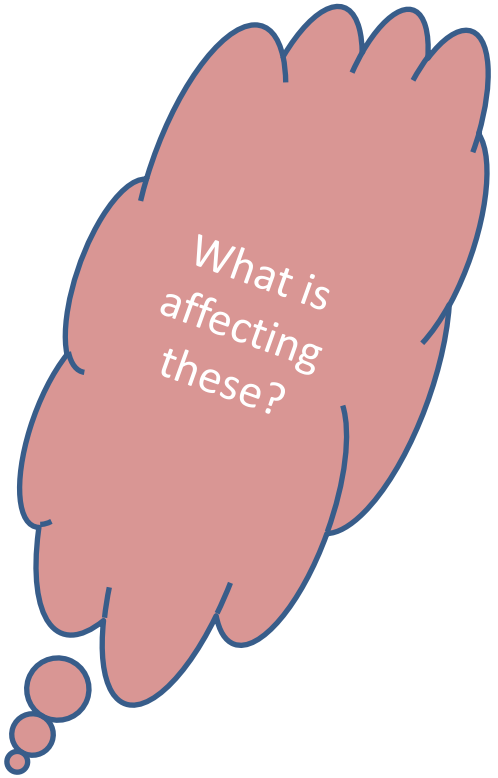
The moment you notice a change in someone's behaviour, ask them 'You don't seem yourself today, what's wrong?'

VITAL SIGNS + BM NEWS2

major control network for the body's functions and abilities: communication with our body and automatic operation of vital organs - receives information from the rest of the body, interprets that information, and then guides the body's response



Oxygen
Water
Glucose
Protein
Fats
Minerals
Electrolytes
Vitamins
Hormones
Neuro-transmitters
Cerebro-spinal fluid



Delirium – a medical condition so serious it disrupts normal mental and physical functioning

- **A MEDICAL EMERGENCY with poor outcomes: It is a sign of a serious underlying medical condition**

- Common clinical syndrome characterized by disturbed consciousness, cognitive function or perception which has an **acute onset and fluctuating course**
  (sudden/new confusion or drowsiness)

- Comes on quickly/suddenly

- Significant mortality – needs early recognition and treatment

All patients presenting with acute confusion/altered consciousness are delirious until proved otherwise, including those with mental illness

Can be difficult to distinguish between delirium and dementia or acute psychosis. If uncertainty exists....

Manage as delirium until physical cause is ruled out

All but the rarest causes of confusion can usually be identified based on complete history, medication review, physical examination, mental status evaluation and laboratory evaluation

NICE 2010 Clinical guideline 103 (reviewed but not changed 2020)
Delirium: Diagnosis, prevention and management
(not for alcohol misuse or children)

CAM (Confusion Assessment Method, short)

Feature 1 Acute onset and fluctuating course

This feature is usually obtained from a family member or nurse and is shown by positive responses to the following questions:

1. *Is there evidence of an acute change in mental status from the patient's baseline?*
2. *Did the (abnormal) behaviour fluctuate during the day, that is, tend to come and go or increase/decrease in severity?*

Feature 2 Inattention

This feature is usually obtained by interacting with the patient but may also be reported by the family members or staff and is shown by a positive response to the following question:

3. *Did the patient have difficulty focusing attention, for example being easily distracted or having difficulty keeping track of what was being said?*

Feature 3 Disorganised thinking

This feature is usually obtained by interacting with the patient but may also be reported by family members or staff and is shown by a positive response to the following question:

4. *Was the patient's thinking disorganised or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas or unpredictable switching from subject to subject?*

Feature 4 Altered level of consciousness

This feature is obtained by observing the patient and is shown by any answer other than 'alert' to the following question:

5. *Overall how would you rate this patient's level of consciousness?*
   - *alert (normal)*
   - *vigilant (hyperalert)*
   - *lethargic (drowsy, easily aroused)*
   - *stupor (difficult to arouse)*
   - *coma (unrousable)*

Scoring:

For a diagnosis of delirium by CAM, the patient must display:

1. Presence of acute onset and fluctuating discourse **AND** **2.** Inattention

+

3. Disorganized thinking **OR/AND** **4.** Altered level of consciousness

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention	√	
Feature 3 disorganised thinking	√	
Feature 4 altered conscious level	√	

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention	√	
Feature 3 disorganised thinking	√	
Feature 4 altered conscious level		X

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention	√	
Feature 3 disorganised thinking		X
Feature 4 altered conscious level	√	

Is this delirium?

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention	√	
Feature 3 disorganised thinking	√	
Feature 4 altered conscious level		X

Is this delirium?

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention	√	
Feature 3 disorganised thinking		√
Feature 4 altered conscious level	√	

Is this delirium?

	Positive	Negative
Feature 1 acute onset and fluctuating	√	
Feature 2 inattention		X
Feature 3 disorganised thinking	√	
Feature 4 altered conscious level	√	

Delirium is a sign of a serious underlying medical condition - so significant it affects brain function

Delirium is dangerous

Delirium is a medical emergency

Delirium can be – and has been – dismissed as mental illness leading to dire consequences

Delirium

- Hypoactive

  withdrawn, quiet, sleepy. Behaviourally not ‘difficult’ so more likely to be missed

- Hyperactive

  heightened arousal, restless, agitated, aggressive

- Mixed (both)

Indicators of delirium

- Recent (hours or days) changes or fluctuations in behaviour

- Be particularly vigilant for behaviour indicating hypoactive delirium

Indicator	Hyperactive	Hypoactive
Cognitive function	Confusion	Confusion Worsened concentration Slow responses
Perception	Visual or auditory hallucinations	
Physical function	Restlessness Agitation Sleep disturbance/altered sleep-wake cycle, Not eating/drinking	Reduced mobility Reduced movement Not eating/drinking
Social behaviour	Aggression Withdrawal Lack of co-operation with reasonable requests Alterations in communication, mood and/or attitude	

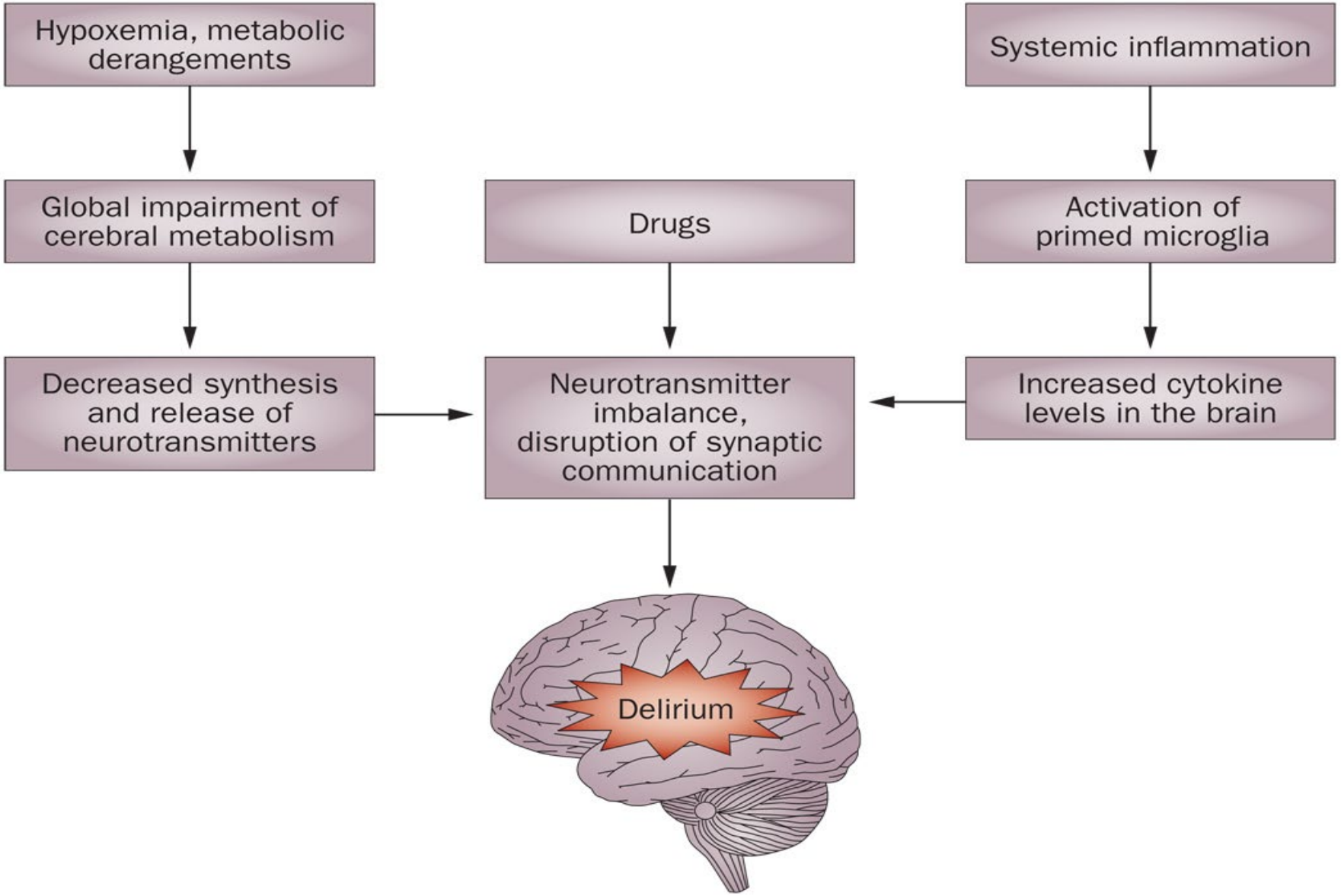
Differentiating features of conditions that mimic delirium

	Delirium	Alzheimer disease	Psychotic disorders	Depression
Descriptive features	Confusion and inattention	Memory loss	Loss of contact with reality	Sadness, anhedonia
Onset	Acute	Insidious	Acute or slow	Slow
Course	Fluctuating, often worse at night	Chronic progressive (but stable over the course of a day)	Chronic with exacerbations	Single or recurrent episodes, can be chronic
Duration	Hours to days	Months to years	Months to years	Weeks to months
Consciousness	Altered	Normal	Normal	Normal

Fong TG, Tulebaev SR, Inouye SK (2009), Delirium in elderly adults: diagnosis, prevention and treatment, Nature Reviews Neurology Apr 5(4) 210-220

The burden of delirium...

- Longer hospital stay (8 days) or critical care admission
- Resource intensive
- Increased incidence of dementia (within 2 yrs)
- Hospital acquired complications: falls, pressure sores, DVT & PE
- More likely to need long term care
- Twice as likely to die (four times more likely in ITU)



Fong TG, Tulebaev SR, Inouye SK (2009), Delirium in elderly adults: diagnosis, prevention and treatment, Nature Reviews Neurology Apr 5(4) 210-220

Causes of delirium

- **Fever/infection – UTI, chest infection, sepsis, covid-19**
- Alcohol or drug intoxication
- Stroke, brain haemorrhage
- **Myocardial infarction, CCF**
- **Hypoxia**
- Head injury
- **Faecal impaction**
- **Dehydration**
- **Electrolyte imbalance**
- **Acid-base disturbance (acidosis/alkalosis)**
- **Hypo/hyperglycaemia**
- **Thyroid dysfunction**
- **Medications – codeine, opiates, psychoactive/psychotropic drugs, anticholinergics, recently started, recently stopped/omitted**
- **Nutritional deficiency – niacin, thiamine, vit B12**
- Hypothermia
- Brain tumour
- Lack of sleep
- Environment change

Medicines associated with delirium

- Antihistamines
- antihypertensives
- Analgesics (codeine, tramadol, opiates)
- Anticonvulsants eg carbamazepine
- Antidepressants eg amitryptilline
- Anti-arrhytmics eg digoxin
- **Anticholinergic**
- **Anxiolytics**
- **Antidepressants**
- **Antispychotics**
- **Hypnotics**
- **Benzodiazepines eg lorazepam**
- Cimetidine
- **Dopamine agonists**
- Diuretics eg furosemide
- Corticosteroids eg prednisolone
- Oxybutinin
- **Lithium**
- Methyldopa

[neurotransmitters such as dopamine, acetylcholine and norepinephrine are thought to play a role in delirium]

Delirium is a sign of
a serious underlying medical condition

Delirium is dangerous

Any Questions?

Lunch break - 30 mins

Stay logged in ☺

THE UK SEPSIS TRUST

SEPSIS

THE UK SEPSIS TRUST

THE EDUCATION PROGRAMME

a **life-threatening** condition that arises when the **body's response** to an infection **injures** its own tissues and **organs**.

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Sepsis

is more common than

heart attacks,

more deaths than breast & bowel cancer combined

- Sepsis is a significant cause of death and disability in the UK
- Up to 500,000 cases per year in UK (and rising), around 40,000 deaths per year
- Any age – baby, child, adolescent, adult, older people
- **The most common causes of severe sepsis are pneumonia, bowel perforation, urinary infection and severe skin infections**
- **people with severe sepsis can be significantly more unwell than they appear**


this
morning
with phillip & holly

“I don’t feel well”

“I feel terrible”

“I feel like I’m dying”

Are there signs of infection?

Vital signs (NEWS2), Chest? Urine? WBC, CRP

(No? What else could be wrong?)

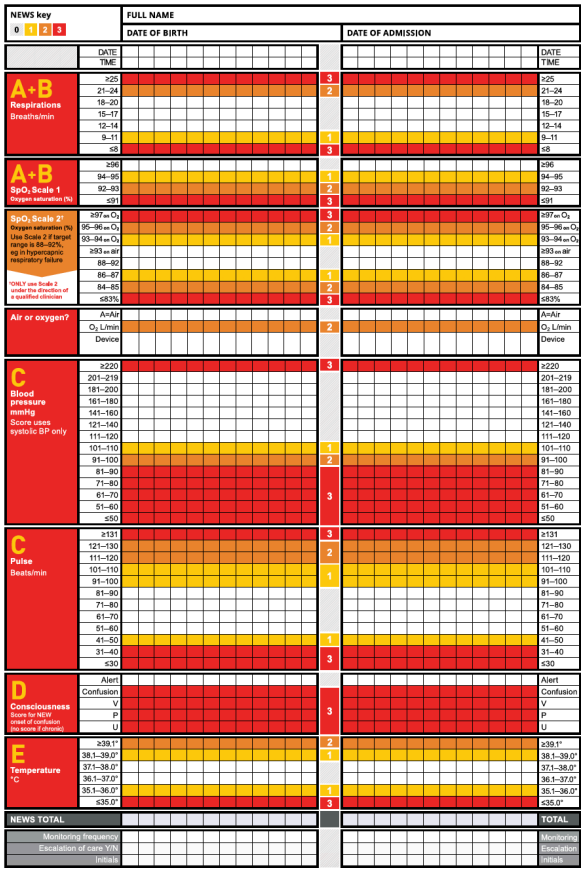
The following should prompt you to think sepsis

Temperature >38.3 or <36.0^{0}C	New confusion/drowsiness
Pulse >90/min	WBC >12 or <4.0 x 10^{9}/L
RR >20/min	Blood glucose >7.7 mmol/L (not if diabetic)

NEWS-2

Calculate the total score-are there any red scores?

‘**Think Sepsis**’ if any red score (3) or total NEWS-2 is 5 or above



04 ANY AMBER FLAG PRESENT?

NO

- ☐ Relatives concerned about mental status
- ☐ Acute deterioration in functional ability
- ☐ Immunosuppressed
- ☐ Trauma / surgery / procedure in last 8 weeks
- ☐ Respiratory rate 21-24
- ☐ Systolic BP 91-100 mmHg
- ☐ Heart rate 91-130 or new dysrhythmia
- ☐ Temperature <36°C
- ☐ Clinical signs of wound infection

YES

FURTHER REVIEW REQUIRED:

- SEND BLOODS AND REVIEW RESULTS
- ENSURE SENIOR CLINICAL REVIEW within 1HR

TIME OF REVIEW: ☐☐ : ☐☐

ANTIBIOTICS REQUIRED:

☐ Yes ☐ No

03 ANY RED FLAG PRESENT?

YES

- ☐ Objective evidence of new or altered mental state
- ☐ Systolic BP ≤ 90 mmHg (or drop of >40 from normal)
- ☐ Heart rate ≥ 130 per minute
- ☐ Respiratory rate ≥ 25 per minute
- ☐ Needs O_2 to keep SpO_2 ≥ 92%
- ☐ Non-blanching rash / mottled / ashen / cyanotic
- ☐ Lactate ≥ 2 mmol/l
- ☐ Recent chemotherapy
- ☐ Not passed urine in 18 hours (<0.5ml/kg/hr if catheterised)

YES

RED FLAG SEPSIS

START

SEPSIS SIX

THE EDUCATION PROGRAMME

The ‘Golden’ Hour

THE UK SEPSIS TRUST

SUMMARY: THE SEPSIS 6

1 GET SENIOR HELP

2 CORRECT HYPOXIA

3 ACCESS AND BLOODS

4 GIVE IV ANTIBIOTICS

5 CONSIDER FLUIDS

6 MONITOR

Around 40% of survivors of sepsis suffer at least one of a range of **physical**, **cognitive**, and **psychological** sequalae.

'I thought I was going to die as I couldn't catch my breath'

Tom Perry, 25, thought he was coming down with flu but his condition deteriorated rapidly . . leaving him fighting for life

When Tom Perry woke last Christmas morning feeling unwell, he had no idea how close to death he would come.
"I thought I was going down with flu," explains Tom, 25, from Salford. "I felt hot and cold, ached all over and had no appetite so I couldn't eat Christmas dinner.
"I thought if I just rested, I'd feel better. But I got worse."

Two days later his mum took Tom to the doctor's. A chest infection was diagnosed and he was given antibiotics. But that night he got so breathless he couldn't lie down. Kathryn called 111 and a rapid response paramedic was sent out.
"Everything happened really quickly," says Tom. "The paramedic said my **temperature was really high** and **I had tachycardia** (a very fast pulse) so I needed to **get to hospital immediately."**
At A&E, he was diagnosed with pneumonia and transferred to the Critical Care Unit.

As medics struggled to reduce Tom's temperature and heart rate and help him breathe, they also found he hadn't passed urine all day which meant his kidneys weren't functioning properly. He was put on life support. A CT scan revealed his lungs were filled with three litres of pus so chest drains were inserted to drain it away

Blood tests revealed he had sepsis - also known as septicaemia or blood poisoning

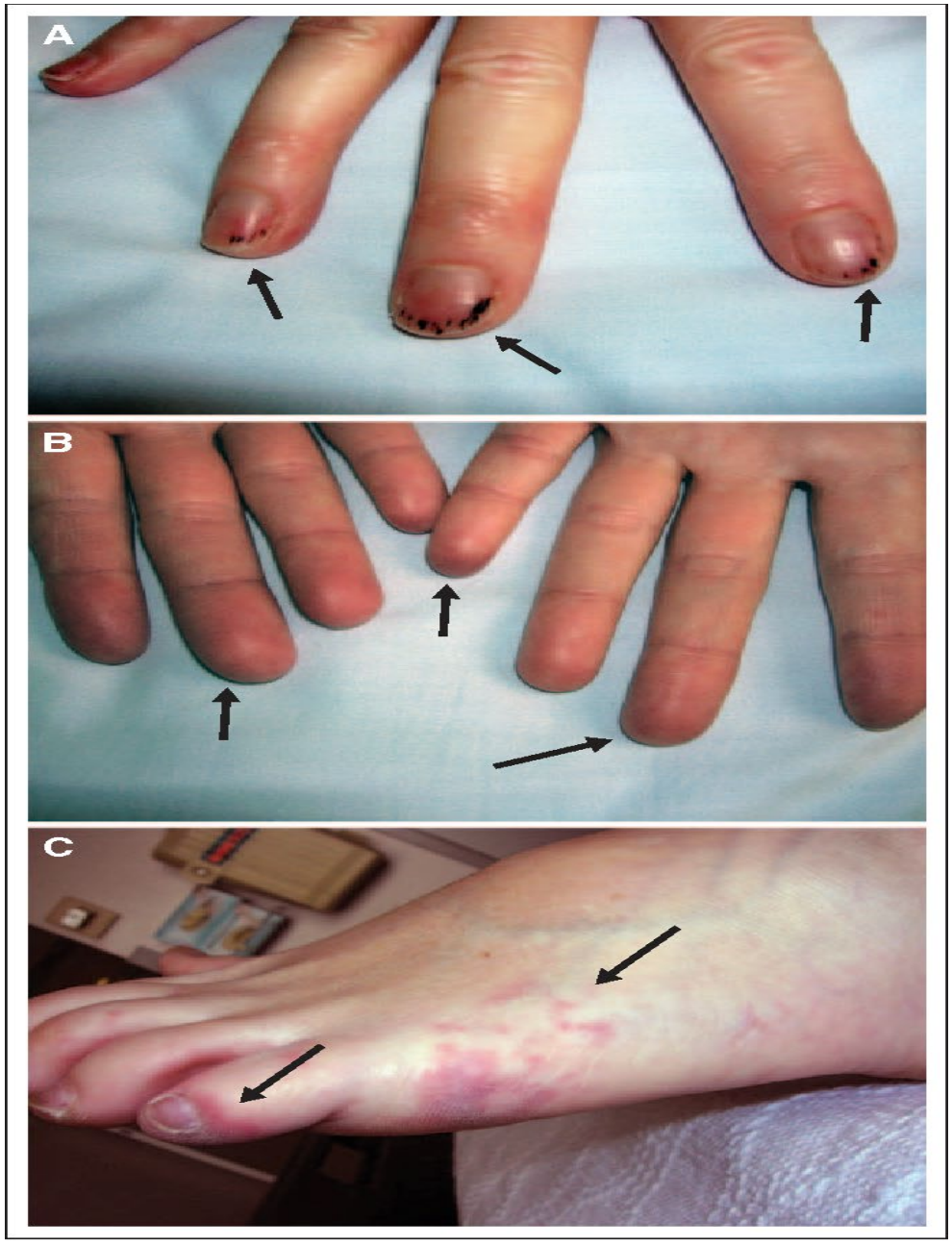
The condition can hit any age, can occur following a chest infection, childbirth or surgery or something as innocuous as a burn, sting or scrape. Undetected, it will lead to organ failure and is frequently confused with flu, gastroenteritis or a chest infection

Every second counts: **For every hour there is a delay in treatment, the risk of death rises 8%**

If you're not taken seriously, ask, 'How can you be confident I don't have sepsis?' If you've been sent home with antibiotics you should feel better after 48 hours. If you start to feel a lot worse, seek urgent medical help."

Despite daily physiotherapy, Tom's muscles were wasted. He was so weak he couldn't hold a drink.
Tom says: "I wanted to get out of bed but couldn't move a muscle."
He was discharged on February 11 with a Zimmer frame to help him walk. Nerve damage in his legs and hands means he still needs physiotherapy. "It's difficult to walk and I get really short of breath," he says. "I realise I'm lucky to be alive but I do get quite depressed."

Sepsis & Disseminated intravascular coagulation (DIC)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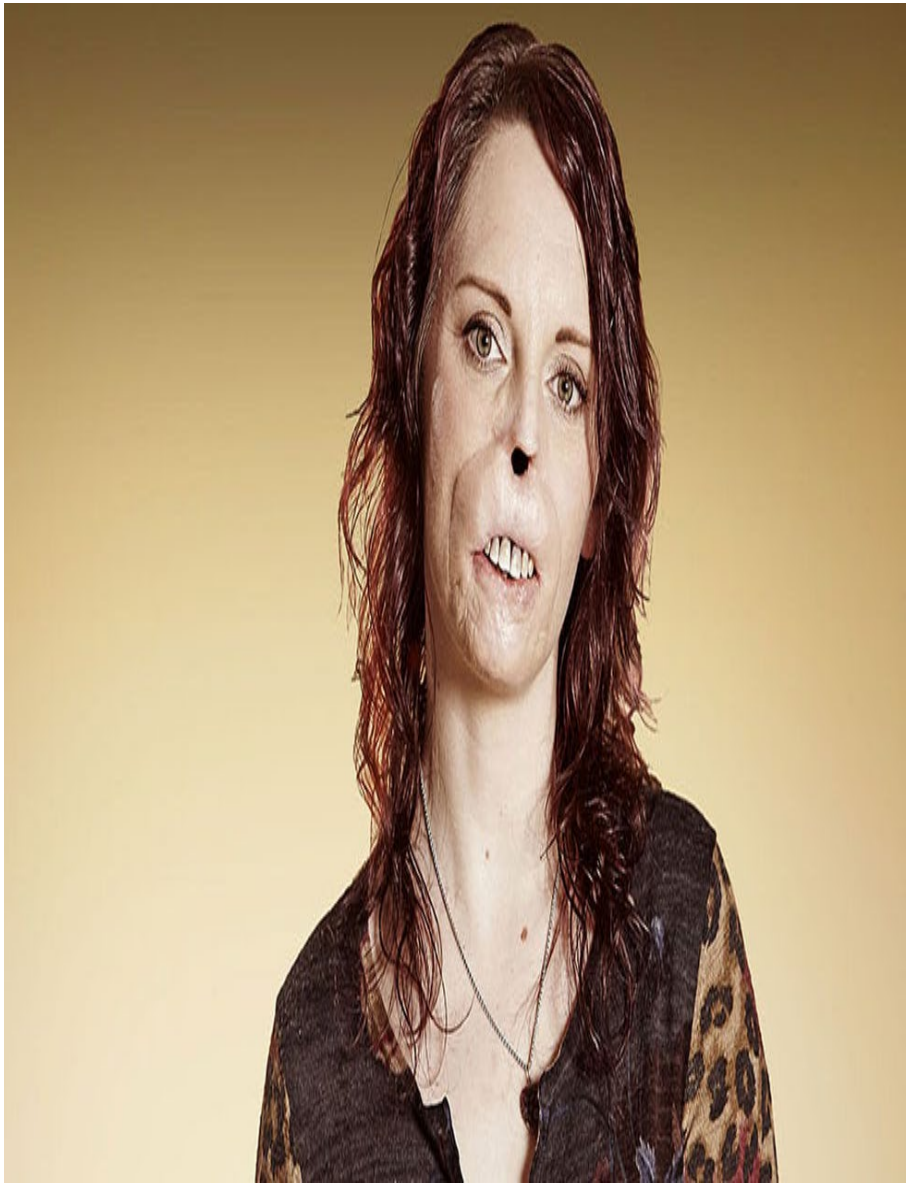


Oxford University Professor Elizabeth Frood,

Liz, who suffered multiple organ failure as a result of the infection, lost hearing in one ear, much of the functionality of her hands, and had to have her nose entirely reconstructed. She now wears prosthetic legs and is an ambulatory wheelchair user.

“I thought I had a stomach bug,”. Even now, she finds it hard to articulate her rapid deterioration: “It started out with shakes, and I initially tried to manage it like I had bad food poisoning. By the time I was struggling to breathe and telling my husband I was dying, it was almost too late.”


Good
Morning
Britain

Patients more at risk……

- **Communal living (ward, care home, prison)**
- **Immunocompromised - agranulocytosis**
- **Constipation → perforation/bowel necrosis**
- **Pneumonia, Covid-19**
- **UTI**
- **Poor dentition**
- **Meningitis**
- **Cellulitis, infected wound**

NEWS2 Sepsis Screen

VITAL SIGNS……

- Altered mental status
- Fever (> 38.3°C) or Hypothermia (temperature < 36°C)
- Heart rate > 90/min
- Tachypnoea (rapid breathing)
- Hypotension (SBP < 90 mm Hg, or an SBP decrease > 40 mm Hg in adults)
- Hyperglycaemia (plasma glucose 7.7 mmol/L) in the absence of diabetes
- Hypoxia (low oxygen)

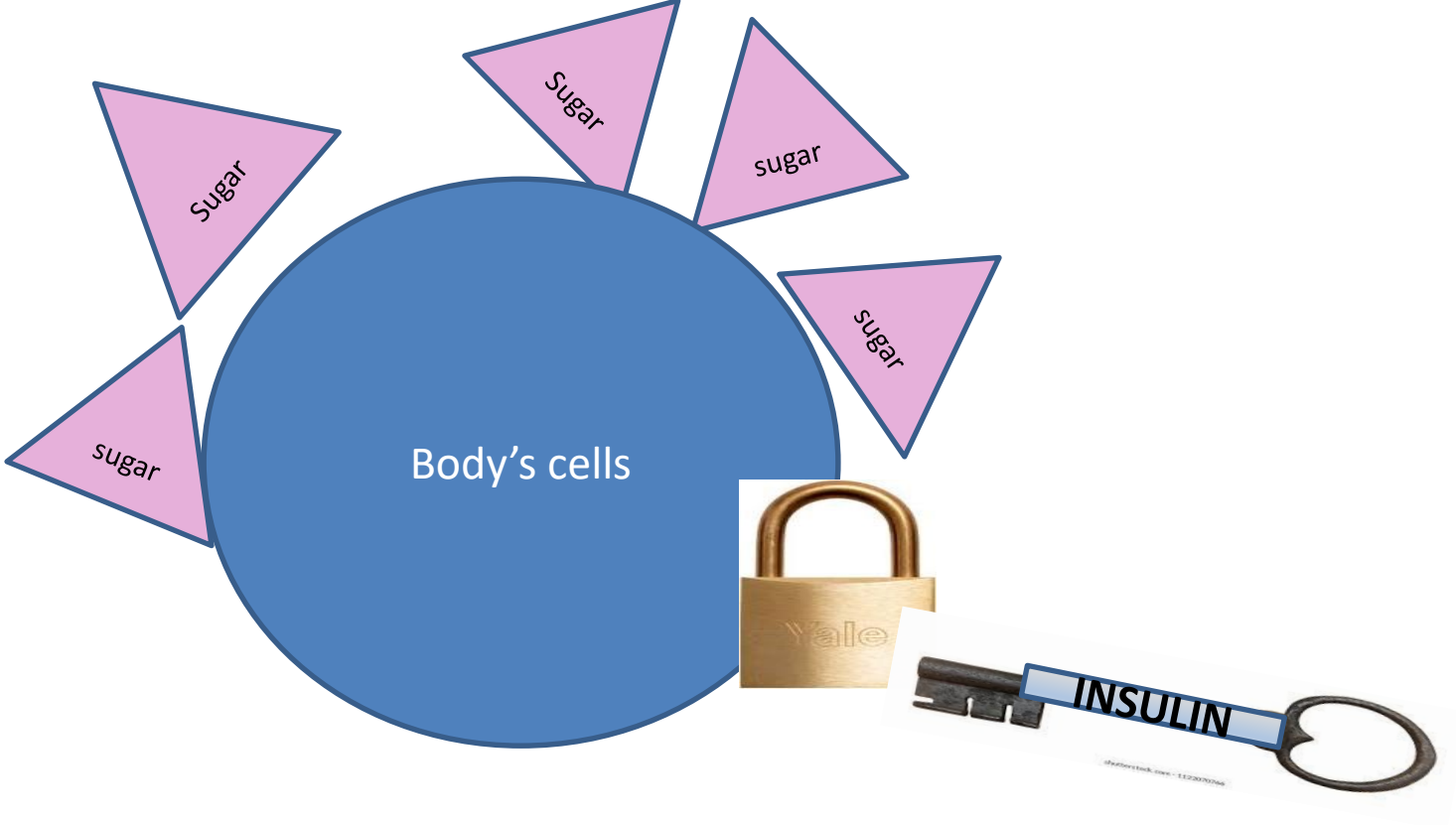
- Significant oedema or positive fluid balance (> 20 mL/kg over 24 hr)
- WBC count > 12
- WBC count < 4
- Plasma C-reactive protein more than 8 mg/L

Any questions?

break - 5 mins

Stay logged in ☺

Diabetes



- Diabetes mellitus occurs because the pancreas doesn't produce any, or not enough, insulin or the insulin that is produced does not work properly
- Insulin is needed to help glucose enter the body's cells for energy and nourishment
- Glucose comes from digesting sugar/ carbohydrate
- In DM, glucose builds up in the blood because there is insufficient insulin to help the glucose get into the body's cells
- 2 types of DM: Type 1 and Type 2

Diabetes Mellitus

- A common, life-long condition
- 3.2 million people in the UK (predicted 5m by 2025)
- Amount of glucose in your blood is too high because the body can not use it properly
- Blood glucose levels are outside the normal range of 4 – 7 mmol/l
- Metabolic syndrome (obesity, high blood pressure, high glucose)
- High cholesterol
- Medications used in SMI e.g. clozapine, olanzapine
- Complications: poor circulation – retina damage, leg ulcers, kidney damage, heart damage, stroke, depression

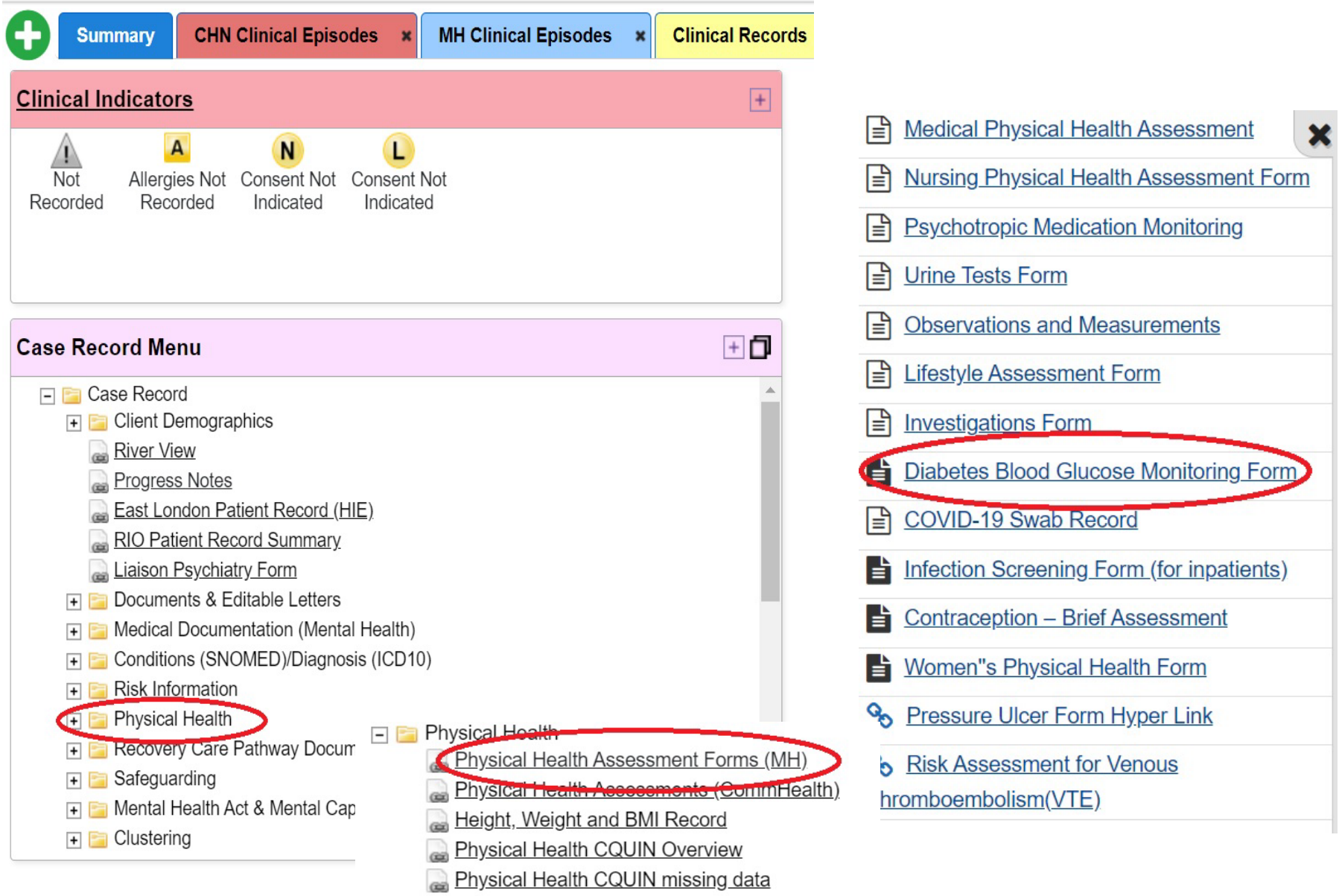
Type 1 Diabetes?

- Type 1 diabetes develops when the insulin-producing cells in the pancreas have been destroyed and no insulin is produced
- 10% of people with diabetes are Type 1
- Onset- young and sudden
- Total destruction of pancreas- autoimmune
- BMI- low to normal.
- Ethnicity- commonly white
- Treatment- **always insulin**, healthy diet & activity
- If BM>13, ketones in urine- if ++ admit to A&E.

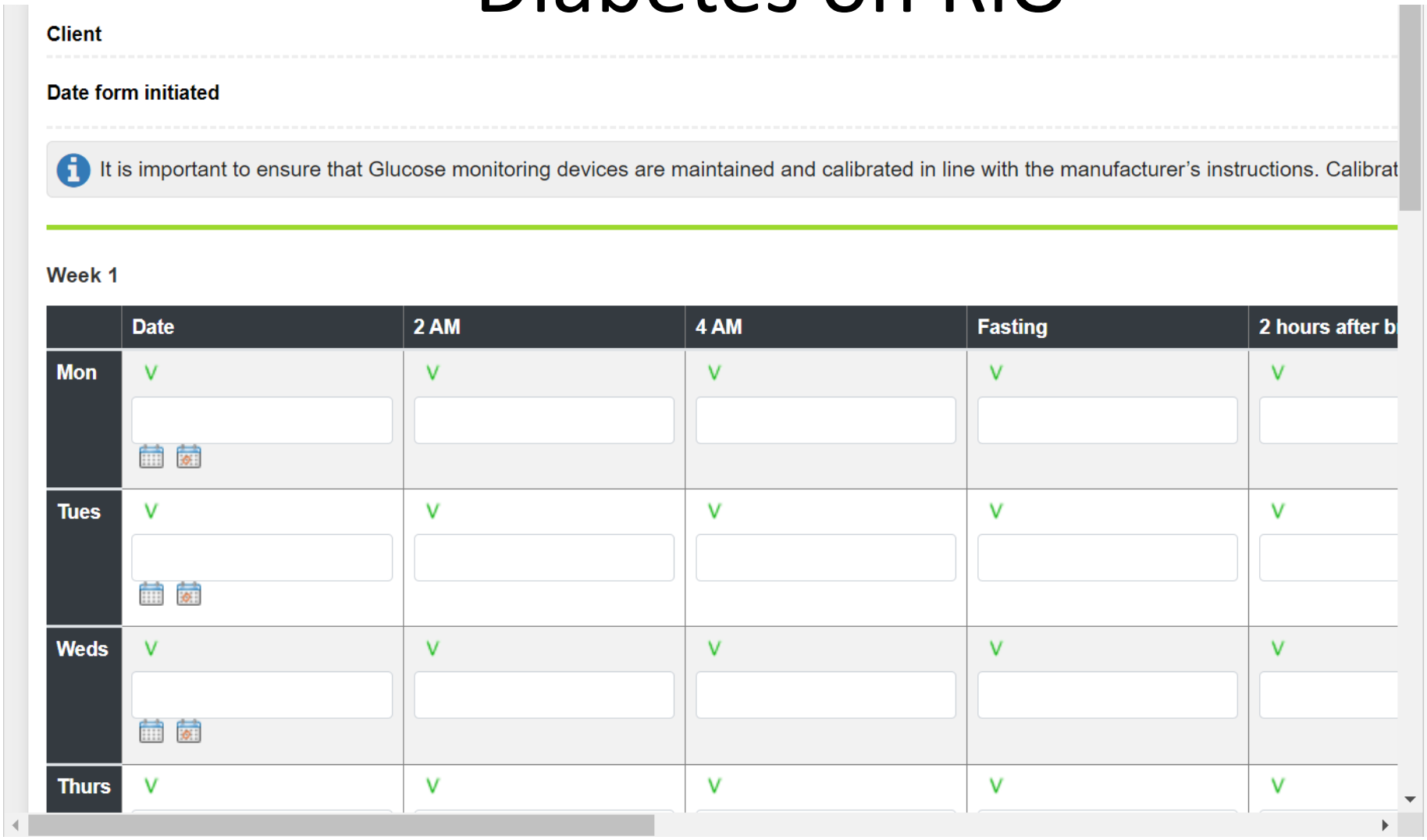
Type 2 Diabetes

- Type 2 diabetes develops when the insulin-producing cells in the pancreas don't produce enough insulin, or when the insulin does not work properly (known as insulin resistance)
- 85-90% of all cases of diabetes mellitus
- Typically onset- 40+ years old, gradual but can be triggered earlier by medicines and obesity
- BMI 25 +
- Ethnicity- 5x more common in South Asian and Afro-Caribbean
- Treatment - lifestyle, then oral meds, +/- insulin
- HHS (hyperglycaemic hyperosmolar state)

Diabetes on RiO



Diabetes on RiO



Client

Date form initiated

It is important to ensure that Glucose monitoring devices are maintained and calibrated in line with the manufacturer's instructions. Calibrat

Week 1

	Date	2 AM	4 AM	Fasting	2 hours after b
Mon	V	V	V	V	V
Tues	V	V	V	V	V
Weds	V	V	V	V	V
Thurs	V	V	V	V	V

Symptoms of Diabetes (hyperglycaemia)

People with diabetes often have typical complaints (symptoms):

- Thirst and frequent drinking (Polydipsia)
- More frequent urination, particularly at night (Polyuria), ketones
- Unexplained/unintentional weight loss
- Fatigue
- Blurred vision
- Frequent infections : skin, genital (thrush / balanitis)
- Recurrent UTI's
- Raised blood sugar

Hyperglycaemia

- Definition – blood glucose level above the target range for an individual person

- Target range in most cases blood glucose maintained between 4 - 8mmol/l.

Causes

- Medication omitted
- Oral hypoglycaemic's insufficient/ need review
- Too much carbohydrate taken
- Not enough activity/regular exercise
- Infection, injury
- Menstruation – progesterone and oestrogen affect insulin sensitivity

Signs & symptoms

- Similar to when first diagnosed if had symptoms:

- Sugar levels running high
- Increased urination (Polyuria), often at night
- Malaise, lethargy
- Increased thirst (Polydipsia)

Hypoglycaemia:

Blood Glucose <4 mmol

Signs & symptoms

- sweating, hunger, trembling, palpitations
- headache, difficulty concentrating, difficulty speaking/ slurred speech, vagueness, confusion, unusual/odd behaviour, aggression
- Motor- incoordination, visual disturbance, tingling
- Collapse/coma

Possible Causes

- Too little food or delayed meal or snack
- Extra / unplanned physical activity
- Illness

Danger signs

- Altered consciousness
- Confusion
- Vomiting – Check for Ketones

< than 0.6mmol/L is a normal reading

0.6 to 1.5mmol/L increased risk of DKA – 1-2 hourly check

1.6 to 2.9mmol/L DKA – medical intervention

- Abdominal/chest pain
- Altered respiration
- Infection
- Dehydration
- Hypotension (low BP)

Hypoglycaemia

Is the capillary blood glucose < 4mmol/L?

Yes

Is the patient conscious and able to swallow?

Yes

1. Inform medical staff
2. Give 15 grams of fast acting carbohydrate

15 grams is **one** of the following

a) 3 heaped teaspoons of sugar dissolved in water.
b) 4 Glucotabs
c) Glucogel 1 ½ tubes

3. Repeat capillary blood glucose in 15 minutes. N.B. follow this process **twice only** then seek medical assistance if blood glucose still not > 4mmol/L.

No

1. Put in recovery position and raise emergency alert, pull alarm, call Crash Team 2222 duty doctor if on site and London Ambulance Service 999 all areas except Hackney)

DO NOT LEAVE THE PATIENT ALONE

2. 1mg of glucagon S.C, or I.M. (if prescribed)

Then

3. Repeat capillary blood glucose in 10 minutes.

Glucagon may be ineffective in episodes of hypoglycaemia precipitated by the ingestion of alcohol.

1. Follow up with long acting carbohydrate i.e. 2 plain biscuits or 1 slice of toast or 200-300 mls of milk
2. A meal with carbohydrate if the next meal is due.

Long term management – medical review of insulin / diabetes medication / cause of repeated episodes of hypoglycaemia.

For further advice, refer to Diabetes Specialist Nurses:
Base – 020 8586 5240 or 079446 37120 or 07973508987

Hyperglycaemia

NO SYMPTOMS

Record physical observations

Check urine/blood for ketones

Determine if there is a reason for high blood sugar levels e.g. eaten extra sweet food in 2hrs, missed insulin or oral diabetic medicines, infection

Review Plan with medical colleagues

If no apparent reason for increase in blood glucose and ketones in urine, monitor vital signs and BM minimum 4 hourly

REFER TO SPECIALIST DIABETIC CLINIC IF:

Patient can be reviewed within 4 weeks

Newly diagnosed patient with presenting diabetic complications

Fluctuating/ poor controlled blood sugars> 15mmols for 1 week

SYMPTOMS PRESENT

- ☐ Excessive thirst
- ☐ Increased frequency in urination
- ☐ Nausea/vomiting
- ☐ Deep rapid sighing – short deep breaths
- ☐ Flushed appearance
- ☐ Poor co--ordination

INFORM MEDICAL STAFF

- ☐ Check Blood Glucose (BM)
- ☐ Check for Ketones
- ☐ **If Ketones 2+ >0.6** inform medical staff
- ☐ Record vital signs
- ☐ Monitor for deterioration
- ☐ **If Ketones 3+** or **1.6** and/or abdominal pain, vomiting deterioration in consciousness get immediate medical review
- ☐ Transfer to A&E

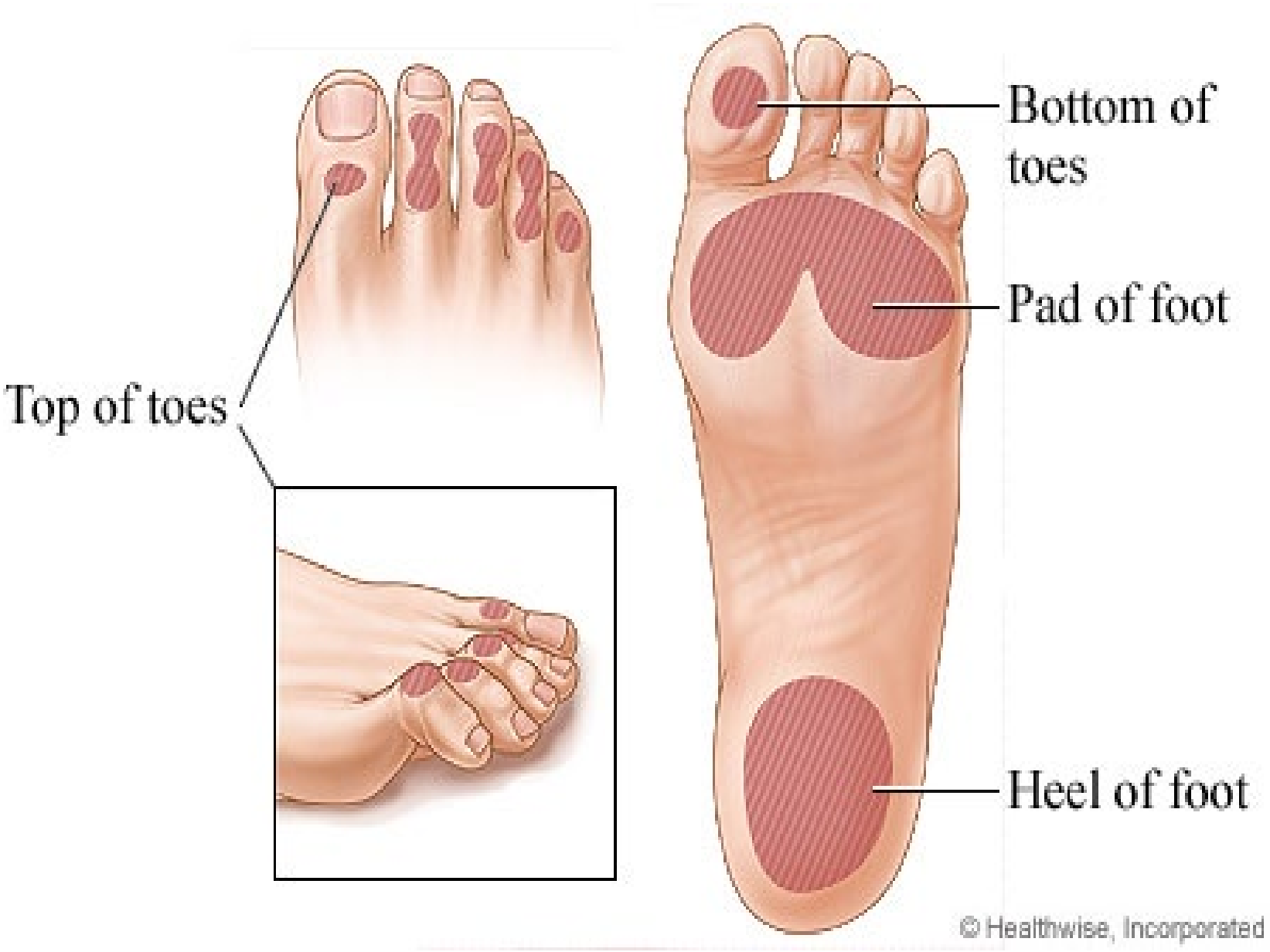
See Individual care plan relating to hyperglycaemia

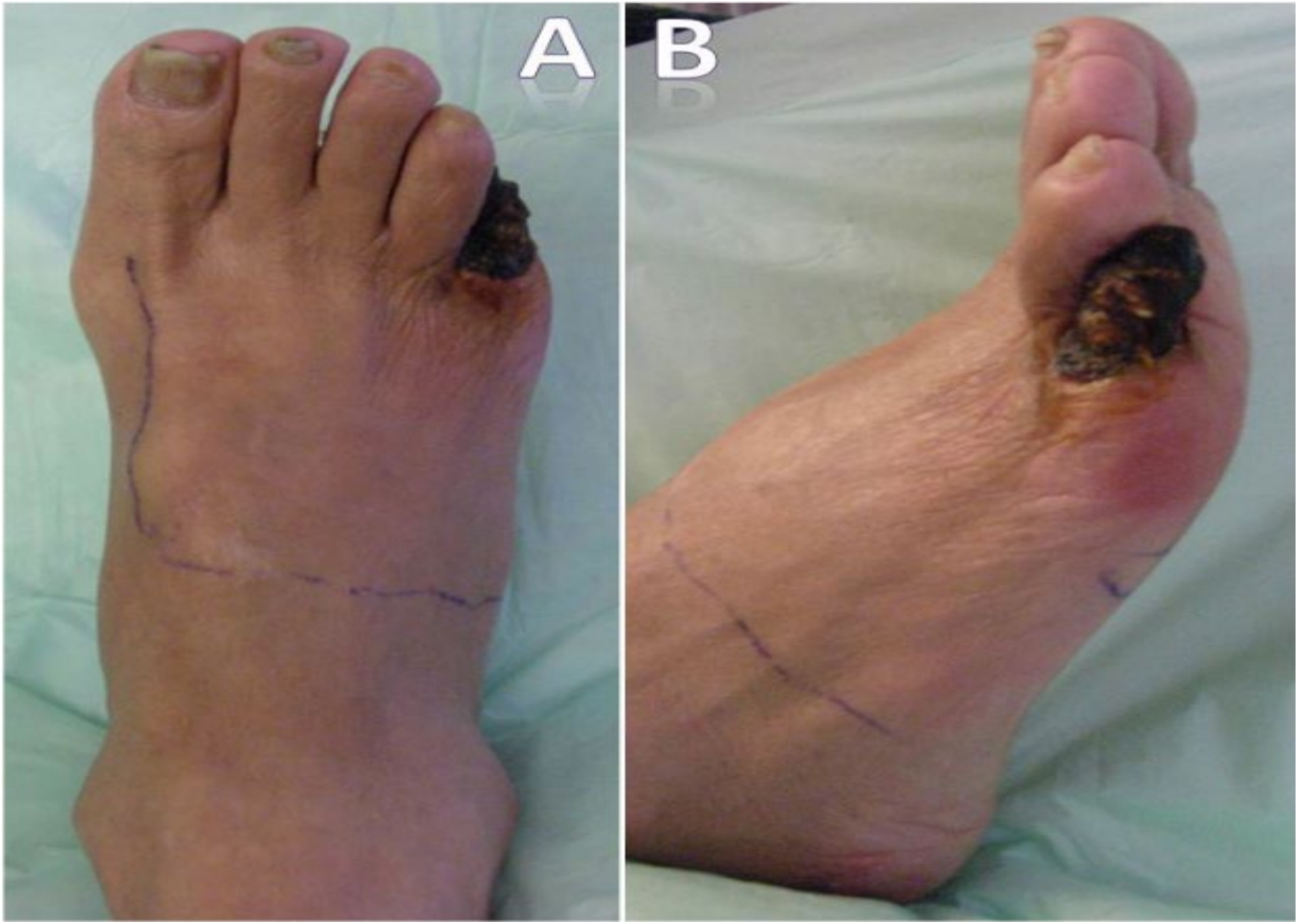
PRN ***NovoRapid** dosing as advised by Diabetes Specialist Nurse

Health risks associated with diabetes mellitus

- Hyper/hypo glycaemia – confusion, coma/death, blood pH can become acid
- Neuropathy, poor circulation (foot and leg ulcers)
- Deterioration of vision
- Cardiovascular disease (heart attacks and stroke)
- Kidney damage

- **Annually**: cardiovascular risk status, diabetic eye clinic, podiatry clinic, assessment of kidney function, assessment of neuropathic symptoms and complications, depression assessment


Top of toes
Bottom of toes
Pad of foot
Heel of foot
© Healthwise, Incorporated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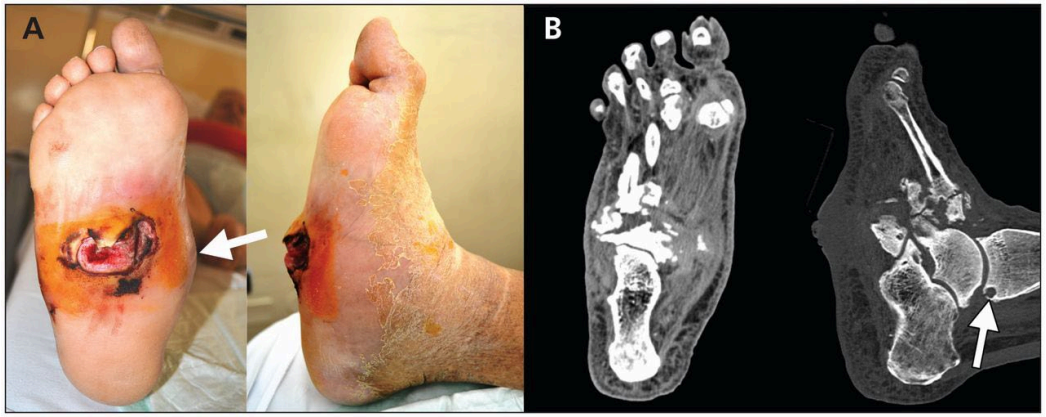
Charcots foot

Charcot foot develops as a result of neuropathy, which decreases sensation and the ability to feel temperature, **pain or trauma**. Because of diminished sensation, the patient will continue to walk causing acute localized inflammation that progresses to bone destruction, subluxation, dislocation, and deformity.



Any Questions?

Falls

Definitions

SLIP: A slip is to slide accidently causing the person to lose their balance; this is either corrected or causes a patient to fall

TRIP: A trip is to stumble accidently often over an obstacle causing the person to lose their balance, this is either corrected or causes the person to fall

FALL: A fall is an unintentional or expected loss of balance resulting in coming to rest on the floor, the ground or on an object below knee level (NICE 2015).

Slips Trips and Falls Management (Inpatient) Policy 6.0.pdf

- **All patients over the age of 65** must have a Falls Risk Assessment completed on admission.
- Where a risk is identified a falls prevention care plan must be completed.
- Consider carrying out a risk assessment if they have any physical health condition that could affect their mobility, balance or gait, if they are using a mobility aid.

- Complete the falls risk assessment
- Upload to RiO
- Refer to OT for further input

FALLS MULTI-FACTORIAL RISK ASSESSMENT

Service user name:	
NHS number:	
Ward:	

Notes to user of this tool:

1. To be completed on admission or transfer to the ward:

- ***If any risk factors are identified, please complete a falls prevention care plan***
- ***Please repeat the assessment: weekly if a risk is identified, monthly if no risk identified, after a fall and if the patient's presentation changes, in accordance with the Trust Policy on the Management and Prevention of Slips, Trips and Falls.***

No	Falls Risk Questions	Yes/No and comments
1	Does the person have a history of falls? If so, how many in the last year? How did you get this information?	
2	Does the person have a fear of falling?	
3	Does the person report or have any problems with gait?	
4	Does the person report or have any problems with balance?	
5	Does the person have any evidence or history of muscle weakness?	
6	Does the person have any limitations and/or mobility issues?	
7	Does the person use a mobility aid? Do they have it with them? (Comment on whether this is in good condition e.g. inspect ferrules)	
8	Does the person suffer from Postural Hypotension?	
9	Does the person suffer from dizziness/faintness (pre-syncope) or faints (syncope)?	
10	Does the person have any vision issues? Do they wear glasses? Do they have them with them?	
11	Is the person taking/prescribed 4 or more medications?	
12	Is the person fully orientated to time, place and person?	
13	Does the person have any problems with continence: urgency/frequency/incontinence?	
14	Does the person have any evidence of osteoporosis or known to have osteoporosis?	
15	Does the person have any problems with the condition of their feet?	
16	Does the person have appropriate footwear? (non-slip & securely fitted)	
17	Does the person have reduced appetite or dietary intake? Any signs of malnutrition or dehydration? Any difficulty eating or drinking?	
18	Any other comments/ considerations from the MDT or person assessed	
Is a falls prevention care plan indicated?		
Remember to upload this risk Ax to Rio and to document in progress notes. If a care plan indicated, please complete, hand over and document clearly in Rio.		
Assessor's signature & Designation: (please add everyone involved)		

Person Risk Factors

Age: People aged 65 and older have the highest risk of falling, with 30% of people older than 65 and 50% of people older than 80 falling at least once a year (NICE, 2013) .

Cardiovascular

Balance

- Proprioception
- Weak muscles
- Diseases
- Walking aids

Confusion

Bone health

Medication

Vision

- Clarity of vision
- loss of peripheral vision,
- Distinguishing outlines of the background
- Binocular vision

Toileting and Continence

Case study

65 year old Sam, not known to our services, is presenting with delusional ideations about his family. Family reported concerns around his mental health; chaotic, manic, unusual behaviour, poor sleep and poor dietary intake, he has lot a significant amount of weight. Sam has been prescribed 2mg of Diazepam, to help with settling him on to the ward. The team have discussed starting him on pharmalogical treatment; the ward consultant is planning to start him on Olanzapine.

Sam reported to live with his wife and niece. Sam is also an active member of the church and is a retired mental health nurse. In addition to his mental health he also has physical health needs - he has Rheumatoid Arthritis, can sometimes experience stiffness in his lower limb. He also has Type 2 diabetes and high blood pressure. Prior to his admission Sam's blood pressure is significantly high so his GP has placed him on Lisinopril, to lower his blood pressure. Sam has reported feeling dizzy lately but thinks it's nothing to worry about.

What are some of the patient risk factors identified in this case study?

Environmental Risk Factors

Journeys - Examining the patients journey is crucial as it could potentially be a risk factor. So potentially exploring the distance to places where they might spend a lot of their time. For example bedrooms being close to toilet areas. Good signage so places are easily located, to avoid people getting lost.

Lightning - Good lightning in areas to enable people to have a clear view of the environment.

Furniture - Examine comfort and height of chairs, when furniture's are not adjusted for good height it can often contribute to falls for the patient. Consider input of Occupational Therapist to see how adaptive or strategies to examine furniture's.

Footwear - Patients footwear can equally be a contributing factor to falls, it is important to have covered foot wear or grip socks especially on hospital falls.

Slip hazards & Trip hazards – hazards such as uneven surfaces, changes of floor surfaces between rooms or corridors, could also impact on falls. Take into account spillage within the environment or wet floors, for example cleaning methods should reduce instances of falls by putting signage.

Easy to reach – Another environment area to explore is placing items used frequently within reach of a patient who could already be falls risk. This way they are not having to overextend or think of other means to locate their items, this could result to a fall.

BEST PRACTICE GUIDELIN

BEFORE ASSISTING THE PATIENT TO F	
At all times maintain safe moving and h	
1	Assess the im
2	Communicate with client–Observe fall where possible.
3	Determine i
4	Question and observe the
5	Observe and then examine all limb and joint (workin
6	Observe and then
7	Observe and then examine the pati
8	Observe and then examine

N.B. IF A PATIENT RISES FROM THE FA PLACE OF COMFORT & PRIVACY. STE TO CARRY OUT ACTIONS FROM POINT

	ASS
IF THERE IS FULL MOVEMENT AND RO	
9	The patient must be assis
10	Examine the patent's level of weig
11	Re-examine for any evidence of re
IF PATIENT IS IN PAIN:	
12	If there is any evidence of pain (swelling and/or redness) then the & digni

DO NOT MOVE THEM – ensure someone stays with the patient, verbally reassuring them and explaining the process.

13 Inform the Duty Doctor*/emergency services (dependent on local policy) immediately and act on direction and advice received. **If specialist equipment is required for client care, ensure this is clearly communicated on the phone to the emergency services, to allow them to come prepared.**

14 *Duty Doctor and or GP must be informed within 30 minutes of the fall occurring.*

The patient must be offered a medical examination after sustaining a fall.

N.B. * THE CLINICAL DECISION IN RELATION TO THE ACTION TAKEN IS THE RESPONSIBILITY OF THE EXAMINING HEALTHCARE PROFESSIONAL (HCP).

1 A patient who has sustained an unwitnessed fall must have neurological observations completed.

1 A patient who is witnessed to have banged or injured their head must have neurological observations completed.

Neurological observations must be completed and recorded every 15 minutes or until such time as the Duty Doctor/Doctor responsible for the clinical area examines the client or instructs otherwise.

17 **(If Neurological Observationsto continue then carry out in line with NICE Clinical Guidelines CG176:Head Injury). Neurological Observation chart is available on Trust Intranet**

18 An patient who sustains an unwitnessed fall, who bangs or injures their head as a result of a fall; must be observed for signs of: loss or fluctuating consciousness; persistent headaches; seizures; amnesia, vomiting or Glasgow Coma Scale of less than 15. If there are any concerns following a unwitnessed fall or head bang/injury, **please seek immediate medical advice (NICE, CG176:Head Injury)**

AFTER THE PATIENT HAS BEEN ASSISTED TO RISE:

1 Verbally reassure the patient.

1 Assist the patient to a comfortable chair or place of their choice.

2 Ensure someone remains with the patient and blood pressure, temperature, pulse and respiration rate are recorded and monitored. **(6 hourly for 48 hours, lying and standing BP)**

2 Inform the Duty Doctor/Senior Nurse (according to local policy) immediately.

2 Complete the incident form and record all details in the MDT notes, including the baseline observations. The information must be recorded as soon after the incident as is possible.

NB: Complete the Datix at indicated in the Trust Policy for the Management and Prevention of Slips, Trips and Falls. Ensure the time and the location of the fall are all recorded on the Datix incident form and the MDT records. Ensure you record on the incident form and MDT records that you cared for the client in accordance Best Practice Guidelines

2 Inform the next of kin as soon after the incident as possible and always before the end of your duty and recorded details in the MDT notes

2 At the first available opportunity review the client's Falls Risk Assessment; review and discuss the falls MDT Multi Factorial Assessment and care plan with the MDT.

2 Report the incident and the actions taken to colleagues on duty, to new staff taking over the shift, DSN and members of the MDT.

Questions?

The Vital signs are?

Mental alertness

T P R

BP

BM

Sats

Recap

- NEWS2 – scores and escalation plans
- Delirium
- Sepsis
- Diabetes
- Falls

- 5 minute highlights

2-Day PH Day 1 Quiz