

Diabetes management

Percy Pigs and Yum yums

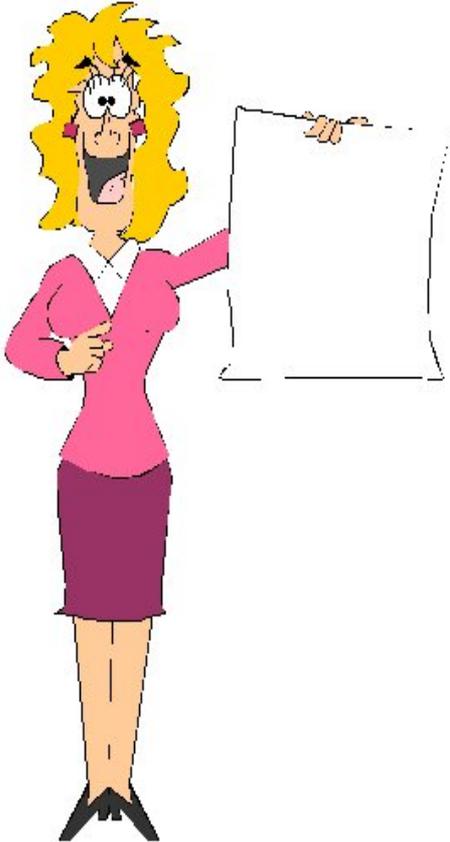
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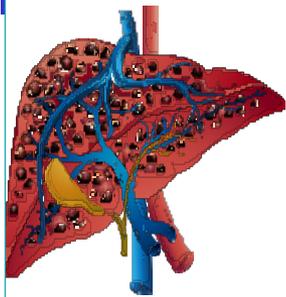
Aims and objectives

To be aware of:

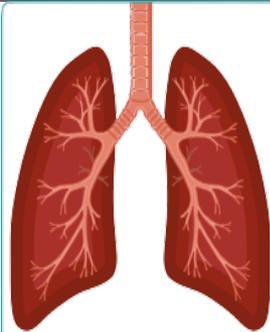
- How physical and mental health are interlinked.
- How diabetes impacts on mental health
- How mental health impacts on diabetes
- The importance of holistic care
- The importance of communicating effectively with the patient
- The value of collaboration
- How nurses practicing at advanced level can improve patient care



How mental health affects physical health



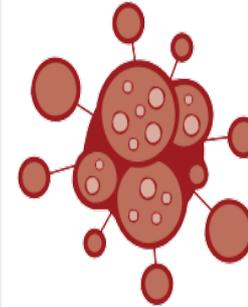
Liver disease
Risk increased x 5



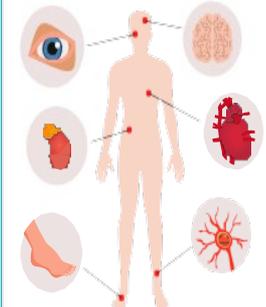
Respiratory disease
Risk increased x 4.7



Cardiovascular disease
Risk increased x 4.7

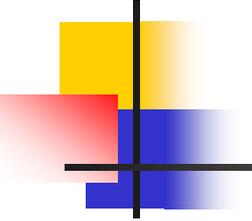


Cancer
Risk increased x2



Diabetes
Risk increased x 2

- People with “severe mental illness” (SMI) e.g. schizophrenia & bipolar disorder that severely impair functional ability are more likely to have physical health problem and experience greater difficulty in managing these problems (Public Health England, 2018).



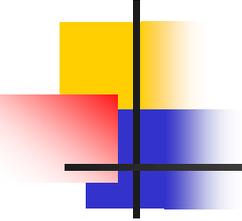
Diabetes and mental health

- Diabetes rates at least double in mental health patients.
- Diabetes Mellitus (DM) affects 7.4% of the population but 15% of those with SMI.
- People with DM occupy 14-30% of hospital beds nationally, have a 74% increased risk of acute admission and a 25% increased risk of re-admission

Avoiding acute admission

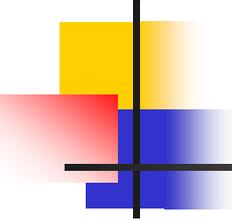


- Acute hospitals don't want to admit acutely mentally unwell patients
- Mental health units don't want to send mentally unwell patients



Why avoid admissions?

- If patient is unwell enough to require acute psychiatric admission then its important to settle the patient. Acute admission is unsettling
- Psychiatric patients struggle in acute hospitals, may require 1:1 care and there are delays in mental health treatment

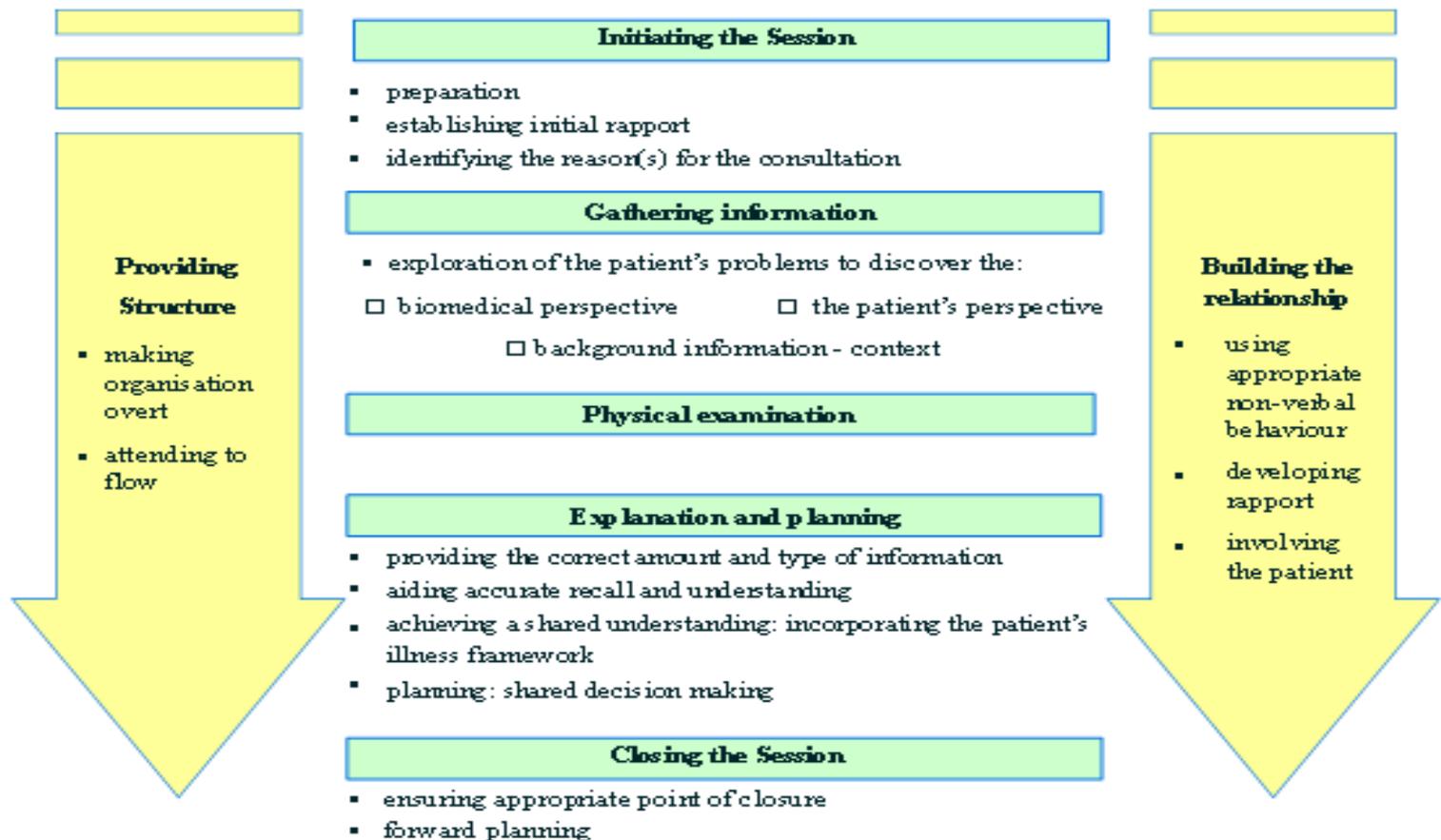


Clinical presentation: Mrs Kaur

- Blood glucose level was 30mmol/L.
- Depression
- Compliant with medication

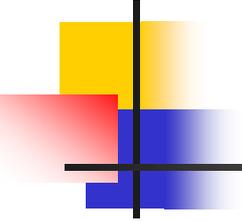
Does she need an acute hospital admission?

Calgary- Cambridge Model



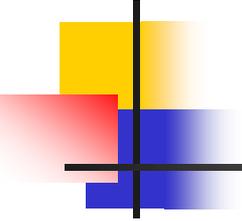
Formulating the diagnosis





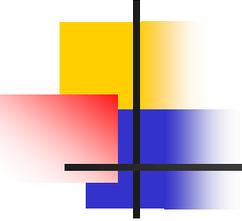
Social history

- Mrs Raminder Kaur, 45 year old housewife*.
- Grew up in the Punjab and moved to England to get married in 1994.
- Has one son who lives with her and her husband. Does not work outside the home and has never worked in the UK. Lives in a housing association flat. Speaks limited English, does not drive and depends on her sisters for company.



Medical history

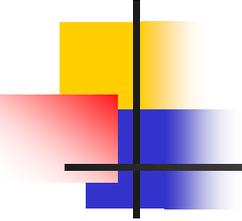
- Depression this year hasn't been depressed before. Admitted as a voluntary patient as not responding to treatment in the community.
- Type two diabetes for “many years”
- Hadn't had a recent follow up as things were just getting “too much”.



Presenting problems

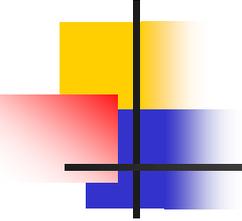
“Tired, thirsty and passing lots of urine”

Reports that she’s been tired and at times unsteady for the last few months.



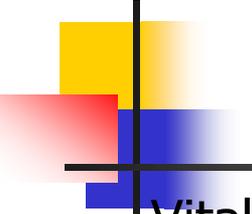
Mrs Kaur's perspective

- Reports she is normally able to look after herself and manage the house. *“It’s been a struggle lately”*. Does not require any help with personal or domestic activities of daily living. *“I do everything at home”*
- Patient reports that she hasn’t felt well all year and seems to be getting worse not better.



Medication

- Gliclazide 40mg twice daily
- Sitagliptin 100mg daily
- Metformin 1 gram twice daily.



Physical examination

Vital signs: Temperature:36.2, Pulse: 72, Respirations: 18, O₂ saturations: 98%, BP 108/70mmhg, CGS15/15.

Blood glucose 30mmols/litre

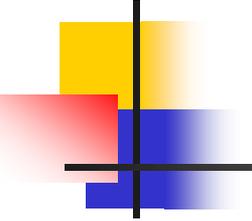
Urine dipstick glucose +++ and is negative to ketones

Weight 52kg. BMI 21.

General observations: Mrs Kaur was clean, tidy, warm and well perfused. Chest is clear.

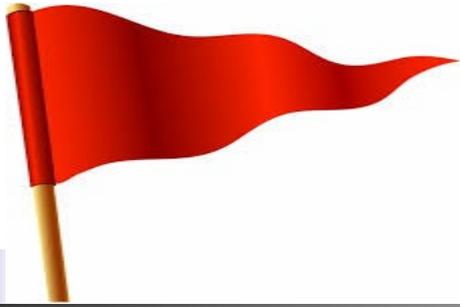
HENT: Dentition good and dental hygiene appears good.

Respiratory: Nil abnormal



Physical Examination (2)

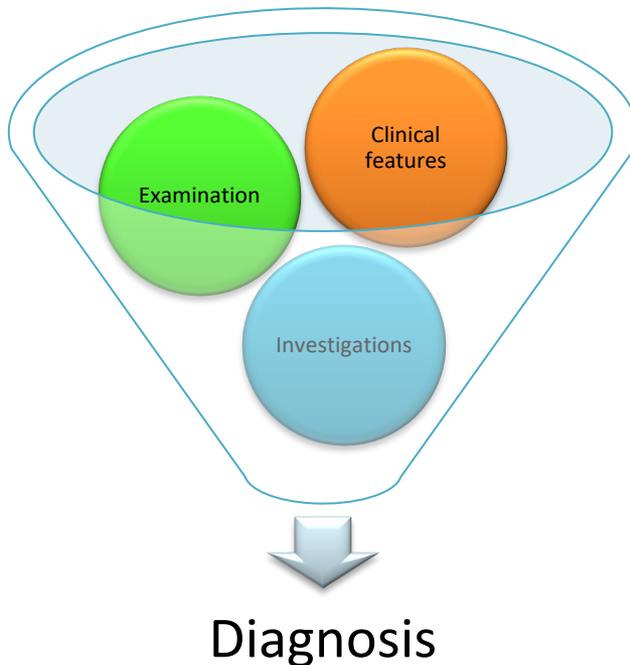
- Pedal pulses palpable. Cranial nerves intact. Central nervous system, unremarkable.
- Peripheral nerves checked using 128Hz tuning fork, normal vibratory sensation sense bilaterally.
- The abdomen was normal. The aortic, renal iliac and femoral arteries auscultated no bruits were noted. Bowel sounds were heard in all four quadrants. No abnormalities noted. Muscular skeletal system was normal.
- Integumentary system and lymphatic normal with no evidence of any fungal infection.



Red flags

- Risk of dehydration
- Poor diabetic control

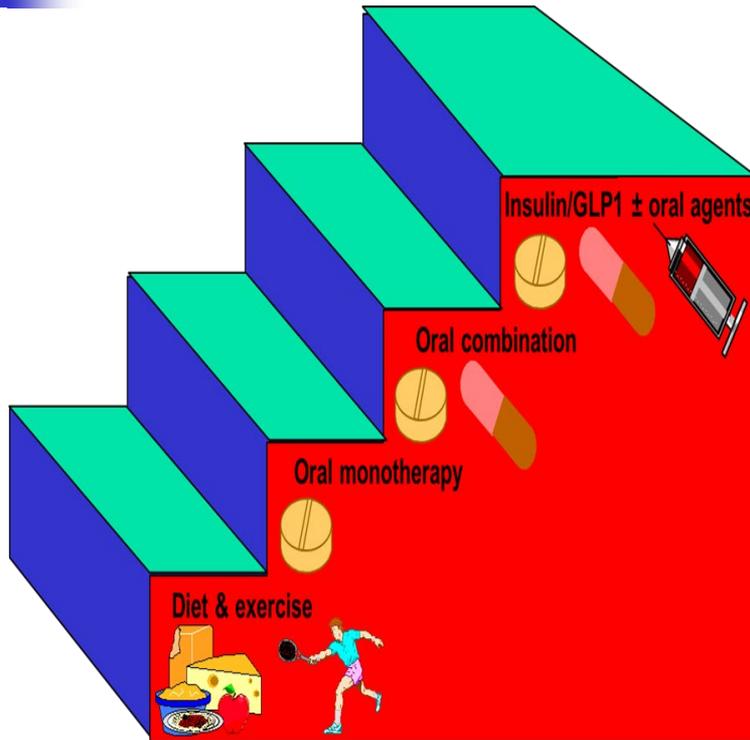
Diagnostic funnel



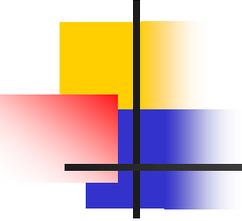
Differentials

- Hyperglycaemia secondary to reduced ability to produce insulin.

Evidence base

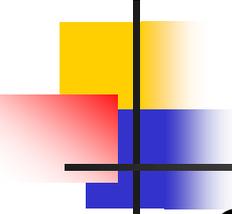


An individualised approach to diabetes care that is tailored to needs and circumstances, personal preferences, risks and ability to benefit from interventions (NICE, 2019).



Evidence base (2)

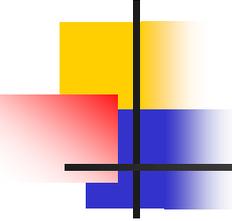
- Mrs. Kaur to follow dietary advice
- Monitor & maintain BP at 140/80mmhg in the absence of renal, ophthalmic or eye damage.
- HBA1C target 48 and checked 3-6 monthly until stable and then six monthly. Around 60% of people with DMT2 achieve an HB1Ac of below 59



Treatment plan

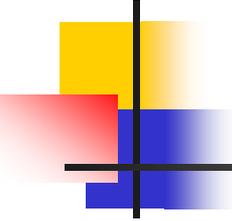
- Consent to insulin injections.
- Stop gliclazide 40mg twice daily as reduced insulin secretion, an increase in gliclazide would be ineffective and encourage weight gain. (BNF, 2020).

A dose of novorapid 8 units was given immediately.



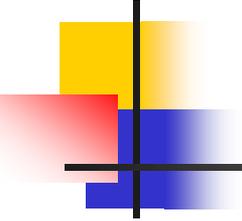
Treatment plan & rationale (2)

- Aim was to reduce blood glucose between 7-10mmol/l to avoid hyperglycaemic hyperosmotic state in relation to high blood glucose and dehydration, using 1 units to reduce blood glucose by 3mmol avoiding hypoglycaemia. (JBDS, 2019)



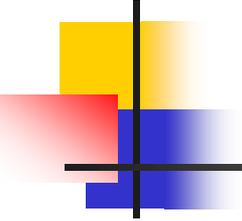
Treatment plan & rationale (3)

- Commenced on insulin glargine 16 units once daily and novorapid PRN 6-10 units.
- Blood sugar is 30 =10 units
- If greater than 12 =6 units.
- The target glucose was 6-12mmolL



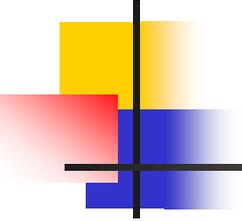
Titration insulin

- Blood glucose persistently greater than 12 increase glargine by 2-4 units daily to achieve target range.
- Insulin use was to reduce osmotic symptoms safely & effectively
- Incremental increases to achieve target blood glucose is recommended by NICE (2016). She was encouraged to drink plenty of unsweetened fluid.



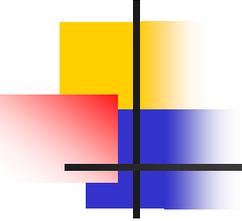
Patient progress

- Commenced 20 units of glargine, a long acting insulin, on 19th of August this was increased incrementally to stabilise blood glucose within the target range of 6-12 mmols. Mrs Kaur drank sufficient sugar free fluids throughout her admission. By 26th of August 36 units of glargine was required daily.
- **Blood glucose remained out of range and still requiring PRN novorapid insulin.**



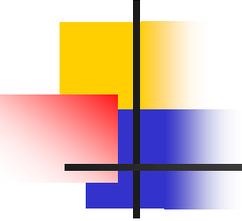
Change of insulin

- Had been overwhelmed by complex regime. On 2nd of September switched to humilin M3 20 units AM and PM & titrated upwards, less burdensome and simpler to manage.
- 9th September Mrs on 30 units of Humilin M3 AM and 28 units PM **her blood glucose was not well controlled.**



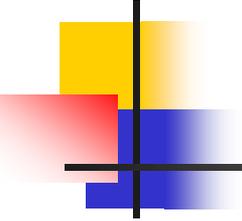
An MDT approach

- Why is blood glucose control so poor?
- Mrs Kaur was buying yum yums (twisted, fried, sugar coated doughnut sticks) and Percy Pigs
- She felt lonely & isolated, no one spoke Punjabi and the television programmes were in English



Interventions

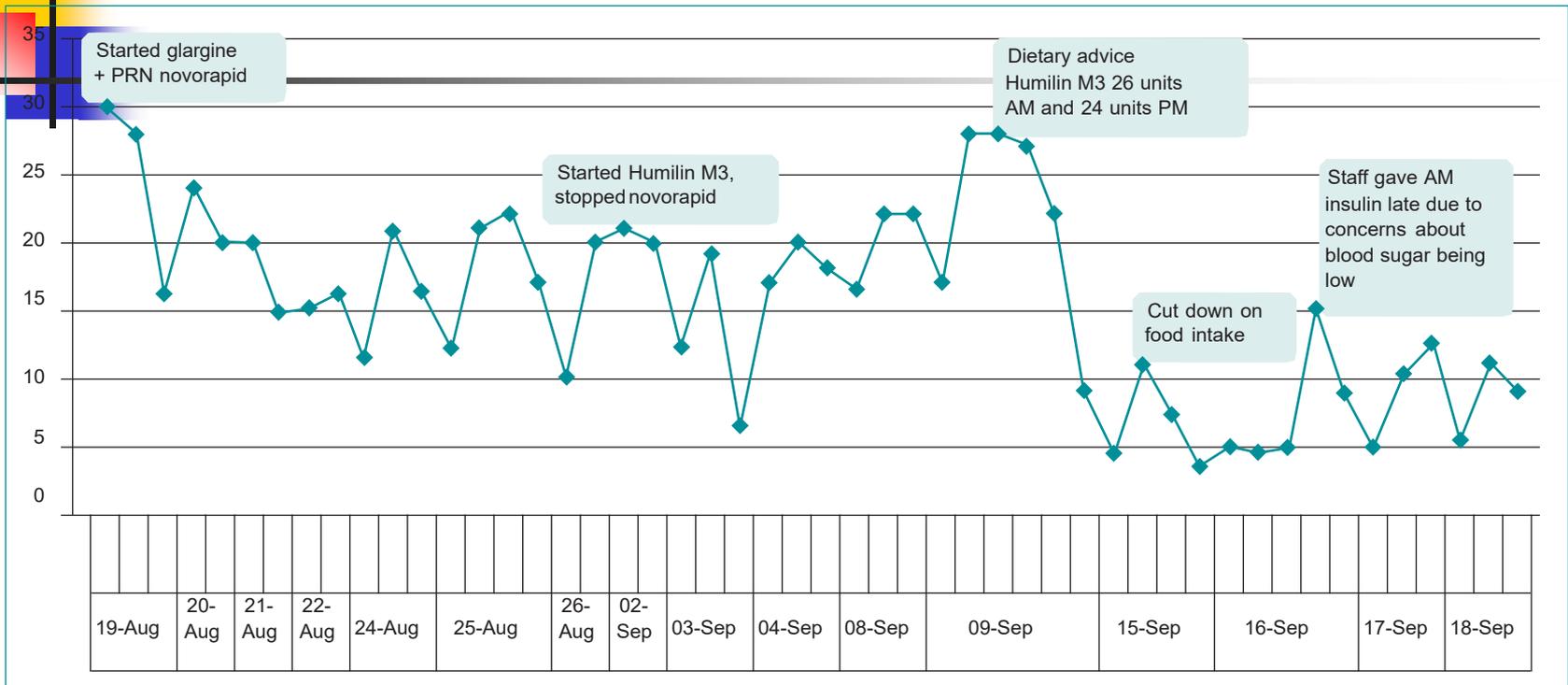
- An interpreter and explanation diabetes and diet
- A leaflet on type two diabetes in Punjabi
- A Punjabi speaking dietician to visit her.
- Blood glucose control improved significantly



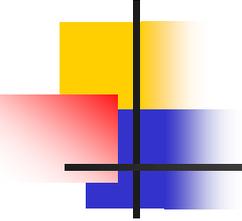
Hypoglycaemia - why?

- No longer buying sweet foods
- Only eating about half of her meals.
- Trying to limit her food intake to improve her diabetes.
- Explained that her weight was normal and she didn't need to lose weight.
- Reduced evening insulin to 24 units

Success at last

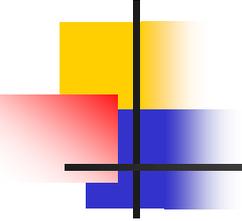


Blood glucose settled within the required range of 6-12mols.



Outcomes

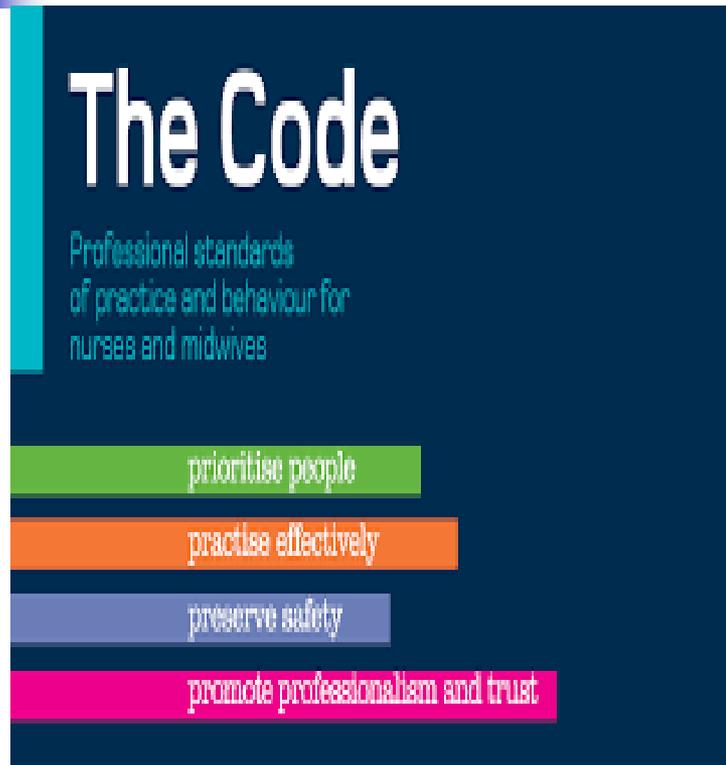
- Mental and physical health improved side by side and each impacted on the other
- Mrs Kaur was able to return home but required district nurse support with insulin administration.
- Mrs Kaur is monitored by community diabetes specialist nurses



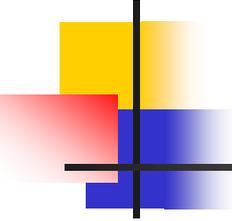
Reflection

- How working together across acute and mental health improves the care of patients
- Importance of communication
- Importance of giving the person written information to reinforce verbal information
- Importance of working with the patient and staff
- Supporting staff who were nervous of managing Mrs Kaur's insulin and being available to them.

Scope of practice

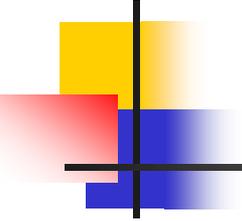


- The nurse is required to work within the limits of competence and make a timely and appropriate referral to another practitioner when it is in the best interests of the individual requiring care and treatment



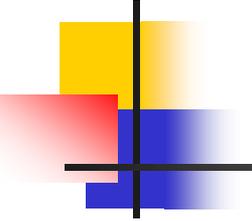
Don't ever forget the patient

Nursing is rooted from the needs of humanity and is founded on the ideal of service. And that, "the nurse is temporarily the consciousness of the unconscious, the love of life for the suicidal, the leg of the amputee, the eyes of the newly blind, a means of locomotion for the infant, knowledge and confidence for the mother and the mouthpiece for those too weak or withdrawn to speak"



Take home messages

- In an ideal world patients would have one symptom that was easily recognised and treated
- In the real world symptoms can have multiple causes and we need to be skilful in drawing out and addressing these.
- A team approach is essential
- All care and treatment should be centred on the hopes and aspirations of the patient
- Clinicians should be alert to complications, work within their sphere of competency and refer appropriately.

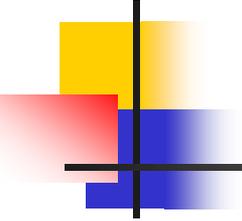


The value of advanced practice

Nurses practicing at advanced level:

- Raise the bar for all nurses
- Are able to see, diagnose and treat
- Are registered, educated and accountable
- Reduce pressures in acute and primary care
- Improve quality of care

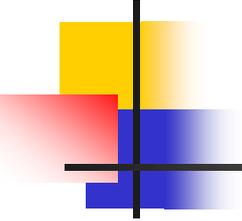
Our challenge is to have our skills recognised and valued at all levels from secretary of state to the patient



Key points

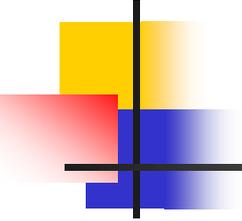
- Adults may have mental and physical health conditions
- Mental health conditions can make it more difficult to obtain a history and determine diagnosis
- The clinician should whenever possible obtain collateral history
- It is important to determine differential diagnosis and to follow guidelines to determine diagnosis
- Diagnosing and treating adults with mental and physical problems requires a team approach.

Resources



Diabetes UK (2019). Diabetes the basics. This is available in a number of different languages including Punjabi.

<https://www.diabetes.org.uk/diabetes-the-basics/information-in-different-languages>



Thank you for listening

Any questions?

If you require a copy of the paper this is based on with references get in touch

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