

Nitrous oxide Quiz 2017 **Answers**

Name _____ Date _____

1 A risk assessment prior for Nitrous Oxide must be performed and documented by credentialed nurse. The risk assessment alerts the practitioner to:

- a) A child who has minimal reserve.
- b) A patient who is at risk of having an adverse event.
- c) To ensure concerns are discussed and clarified as per the RCH Procedure "Procedural Sedation Ward and Ambulatory areas" consultation process
- d) **All of the above**

2 What equipment must be available prior to performing a procedural sedation?

- a) Standard hospital resuscitation trolley, thermometer,
- b) Oximeter, suction equipment.
- c) **Standard hospital resuscitation trolley, separate and functional suction and oxygen, saturation oximeter.**
- d) Thermometer, oximeter, bag and mask, Standard hospital resuscitation trolley.
- e) Separate and functional oxygen, separate and functional suction, oximeter, BSL machine.

3 What hospital documentation must be completed when performing a procedural sedation with Nitrous Oxide? Circle all that apply.

- a) Procedural Sedation order set
- b) Sedation Narrator
- c) MAR
- d) **All of the above**

5 Nitrous Oxide is an inhaled gas which produces:

- a) Analgesia
- b) Amnesia
- c) Anaesthesia
- d) Anxiolytic
- e) **All of the above**

6 Identify the function of the nitrous oxide delivery unit parts?



Nitrous oxide flow meter tube

Oxygen flow meter tube

Flow Control Knob (controls the flow in litres of both gases)

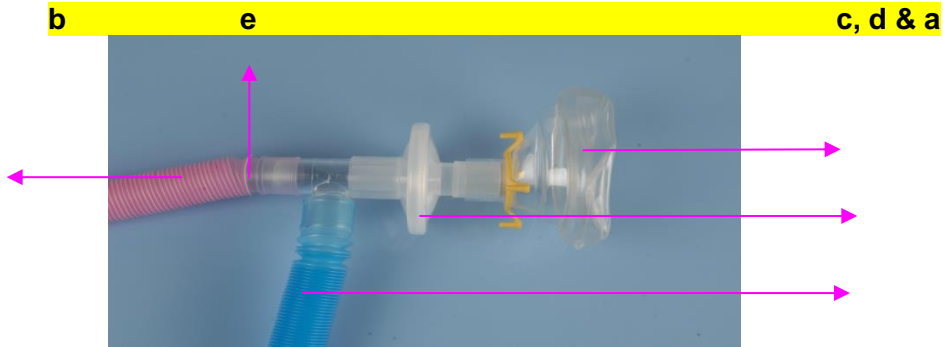
Concentration Control Knob (controls concentration of Nitrous oxide/ Oxygen %)

Emergency Air Valve (provides room air to the patient if gas flow is interrupted)

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7. What are the parts of the nitrous circuit- place corresponding letter by each part?

- a) Delivers Nitrous Oxide/ oxygen to patient
- b) Exhaled gas scavenged via this tube.
- c) Mask
- d) Filter
- e) One way valve



8 What baseline observations should be recorded immediately prior to administering Nitrous Oxide?

- a) **Sedation Score, Heart Rate, Respiratory Rate, SpO2.**
- b) Sedation Score, Heart Rate, Blood Pressure, Respiratory Rate.
- c) Heart Rate, Respiratory Rate, SpO2, Blood Pressure.
- d) Heart Rate, Respiratory Rate, Blood Pressure, Temperature

9 Prior to a sedation with Nitrous Oxide, Circle all that apply

- a) **The parent handout must be discussed with the parent/s.**
- b) **Informed Consent must be obtained**
- c) **The indications of Nitrous Oxide and the possible adverse events are discussed with parent/s or guardian.**
- d) Written consent must be obtained.

10 When choosing the correct face mask for a child, a staff member would:



- a) **The mask fits on top of the bridge of the nose and that the bottom fits below the lip and above the chin.**
- b) The mask fits on top of the bridge of the nose and that the bottom fits below the chin.
- c) The mask fits just over the orbit of the eye and the bottom fits below the lip and above the chin.
- d) The mask fits on top of the bridge of the nose and that the bottom above the lower lip.

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11 The nitrous oxide unit fails to deliver gas. What are the possible issues?

Circle corrects statement(s)

- a) Fail safe mechanism initiated due to loss in nitrous oxide gas flow
- b) Loss of oxygen from wall source or cylinder
- c) Tear or hole in the reservoir bag
- d) All of the above

12 Please circle the correct statement: during the sedation event the:

- a) Reservoir bag size alters according to the child's breathing pattern only.
- b) Reservoir bag size alters according to both the child's breathing pattern and the gas flows rate.

13 During the sedation event the reservoir bag deflates, what action should you take?

- a) The flow knob on the unit must be increased.
- b) The flow knob of the unit must be decrease
- c) Check the reservoir bag.
- d) a and c
- e) b and c

15 Diffusion hypoxemia is best avoided by?

- a) Administering 100% Oxygen for 3-5 minutes post procedure.
- b) Slowly weaning down Nitrous Oxide after the procedure.
- c) Getting the patient to take five deep breaths of room air as soon as the procedure has finished.

16 Before performing a procedural sedation with nitrous oxide you check to find that the unit is not operating correctly. In response to this observation you: Circle all that apply.

- a) Call another unit and ask to borrow the Nitrous Oxide unit.
- b) Place a sign of the unit identifying it as malfunctioning; call another department/ ward to arrange to borrow the nitrous oxide unit and page Comfort Kids Program.
- c) No need to page or call Comfort Kids Program.

17 Scenarios

Bob is a 10 year old requiring a Botox injections with nitrous oxide.

17.1 Bob's mother asks if he can have pain medication prior.

- a) No, nitrous oxide provides pain relief and therefore this is not required.
- b) Yes, an adjunct pain relief may be helpful in providing pain relief in addition to nitrous oxide.

17.2 Bob's mum asks for information about nitrous oxide, what are your responsibilities?

- a) Provide her with nitrous oxide fact sheet
- b) Discuss the side effects
- c) Answer her questions, which meet criteria informed consent.
- d) Explain the procedure and make a plan
- e) b& c
- f) All of the above

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17.3 Bob is unsure about nitrous oxide, what resources do you have at your disposal?

- a) Provide Bob and his mum with nitrous oxide prep book for children
- b) Ignore his anxiety; nitrous oxide will take the anxiety away during procedure.
- c) Allow him to practice with the mask
- d) a, b, c
- e) a, c

17.4 Bob is anxious but reassuring, he is receiving 50% nitrous oxide, and his eyes are bit glazed, he is lying back in bed, his vital signs stable. SaO₂ 97%.

Five minutes later he is teary, trying to sit upright and says it hurts, and he can't breathe right. What should you do? Circle the correct statement(s)

- a) Reassure Bob and continue with the procedure this is normal response to nitrous oxide
- b) Stop the procedure
- c) Reassess the patient and if appropriate increase the nitrous oxide concentration.
- d) Check reservoir bag
- e) Decrease the nitrous oxide, reassure the patient, and increase nitrous oxide slowly in a few minutes

17.5 During the Botox injection the medical Consultant asks you to go to the cupboard and collect a new needle for the procedure. The child's vital signs are stable, sedation score is less < 2 and the parent agrees to hold the mask in place. Circle the correct response to the request

- a) The child is stable assisting with small task is fine
- b) Politely decline and ring the call bell for assistance Credentialed staff member is accountable for the gas delivery, assessing and monitoring of the patient throughout the sedation period

17.6 Bob is receiving 60% nitrous oxide; he was previously talking and playing with the "I spy" book. You notice his: eyes are glazed, looking at ceiling, slow to answer command, his heart rate is stable, the SaO₂ is a little lower 93% from 97%. What should you do?

- a) This is normal response; some children become quiet and sleepy during procedures. Continue to monitor and complete the procedure.
- b) Decrease nitrous oxide, reassess the child and ask the Consultant to stop the procedure for interim.
- c) Decrease nitrous oxide by 10%.

17.7 Bob received 100% oxygen for five minutes after the procedure, he's a bit pale but otherwise chatty and happy. What post sedation instructions should be given to mum?

- a) Bob can eat and drink and go to play room when he's ready
- b) Tell Bob's mum his coordination could be affected, ensure falls prevention communicated
- c) Bob can go to play room now but cannot eat or drink for another 30 min.
- d) Bob is to remain in bed or seated (DMU & Dentistry) for 20 minutes until nitrous oxide effect completely worn off, taking fluids +/- light diet when back to pre sedation state
- e) a and b
- f) b and d

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18 The Consultant has prescribed 0.3 mg/kg of oral Midazolam and asks for 70% nitrous oxide for the Botox procedure? What is your sedation plan for this child?

Circle the correct statement(s)

- a) Agree with the plan if the patient satisfies the pre-sedation risk assessment, as per the Sedation Narrator
- b) State you will titrate nitrous oxide slowly in 10% increments to assess sedation and pain relief.
- c) No, this is against the RCH procedure Procedural Sedation Ward and Ambulatory areas
- d) Agree and administer both agents as prescribed by the Consultant

Total Score _____ / 100% Procedural Sedation Trainer _____ (name/ signature)

Answers: email CKP
Updated 2017 K Austin