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[Date]

# Nitrous Oxide Clinical Usage Review

[For estimating the clinical use of nitrous oxide over a given time period to compare with the quantity supplied. The aim is to determine whether action is required to mitigate unnecessary waste or losses.]

### Method:

* Complete the table below with the details of all episodes of sedation with N2O/O2. Alternatively, the Sedation Logbook with nitrous oxide use calculator can be used.
* The total (or combined) flow rate, time and % N2O for each sedation episode is used to calculate the volume used. The % N2O would usually be included in the patient record. If the actual flow rate was not recorded for any cases within the review period, the relevant clinician could be asked for an estimate of the likely flow rate used.
* Include all clinical usage for a given N2O supply over an appropriate length of time. The period assessed will depend on the amount of sedation carried out and type of N2O supply used. Usage should be assessed over a period of time in which there are several successive changes of cylinders to allow for a reasonable estimate of N2O supply.
* The volume of N2O used for each sedation case can be calculated as follows:

Volume (in litres) = % N2O x total flow rate (litres/min) x duration of use (min)  
 100

(For flow meter/mixer heads showing N2O and O2 flow rates separately,  
total flow rate = flow rate of N2O + flow rate of O2)

* The total volume of N2O used for all sedation episodes carried out during the review period can be calculated and compared to the total supply of N2O during the same period (see Nitrous Oxide Stock Record template), to identify any waste or losses.

Reviewer: [name]

Start of review period: [date]

End of review period: [date]

| **Case identifier** | **Indication for N2O/O2 sedation** | **% N2O (at end-point)** | **Total (combined) flow rate (litres/min)** | **Duration of use (min)** | **Volume of N2O used (litres)** |
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|  |  | Total volume used (litres) = |  |

## Assessment of clinical usage versus supply

[Compare the total volume used with the total volume supplied (see Nitrous Oxide Stock Record template) for the same review period. If this reveals a significant discrepancy, consider the possible sources of loss/waste e.g. excess stock, return of unused or partly used cylinders, leaks.]

## Action Plan

[Consider what action could be taken, if required, e.g. reduce quantity of cylinders ordered, improve stock rotation, ensure relevant staff are aware of stock control system and policies, test for leaks.]