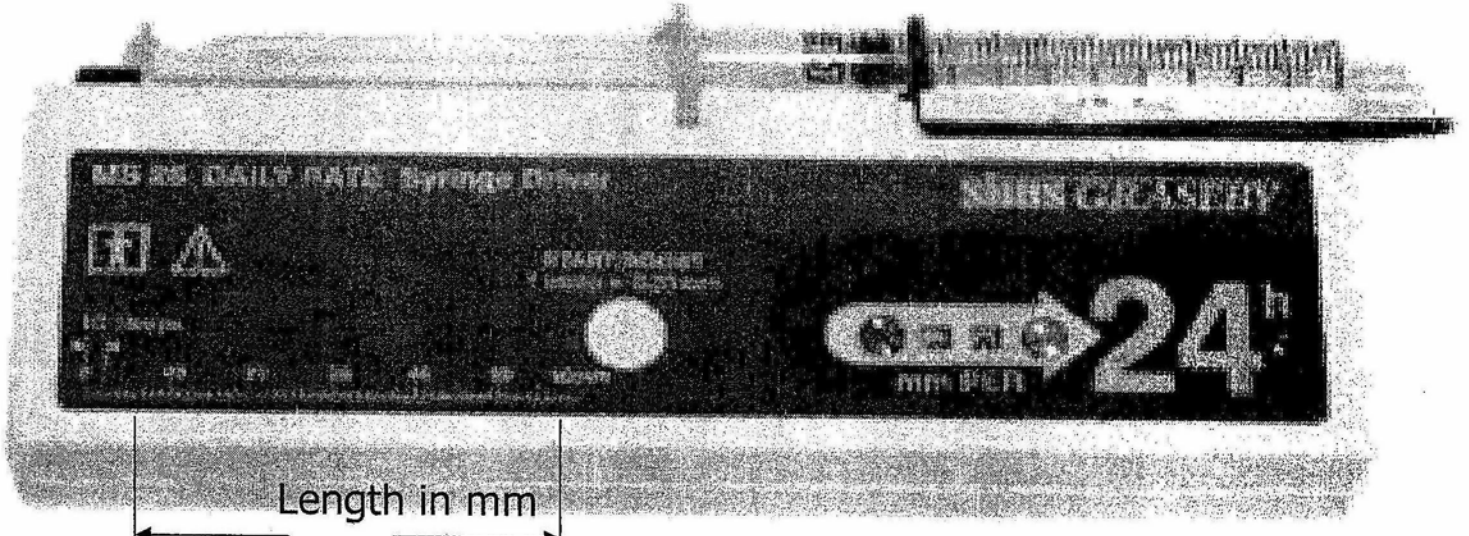
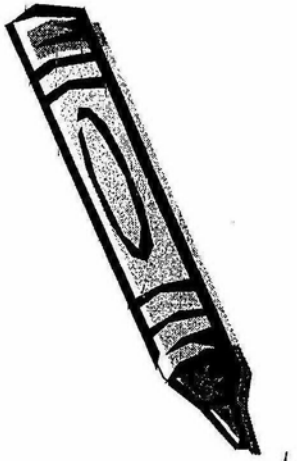
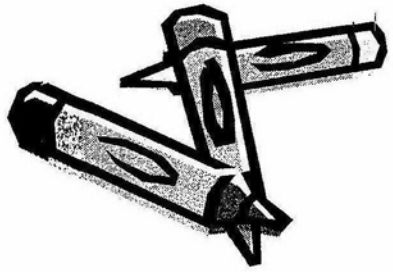
Graseby MS26 driver





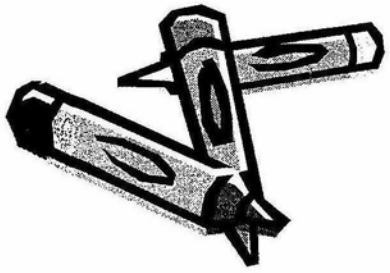
AIM:

- Revision of driver set up (same as Graseby rep Dec 03)
- To increase understanding of set-up procedure.
- Promote confidence in using driver.

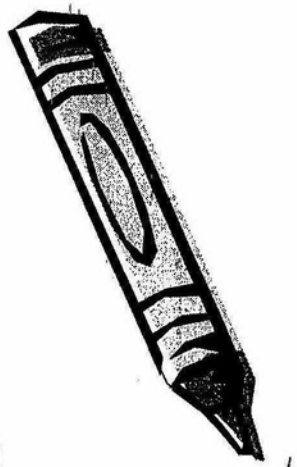


MS26 Syringe driver Features

- Driver has green label stating *24 HR.*
- Boost button – Do NOT use boost
  - amount of drug delivered will not be sufficient to relieve pain.
  - Drugs are often used in combination, you will boost all of the drugs.
  - Multiple boosting → You cannot predict when the driver will run out.
- Driver delivers drugs by the length travelled over time = Rate = $\frac{\text{fluid length (mm)}}{\text{Time (1 day)}}$



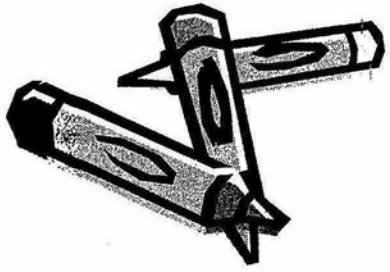
Current method Nov 04



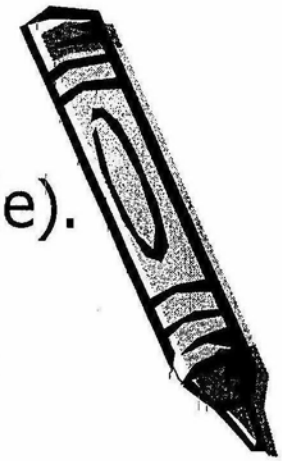
1. Use 10ml Luer lock syringe.
2. Approx 8ml = 48mm length in 10ml syringe.
3. **M**easure 48mm in length & note where this is on syringe barrel.
4. Make up final solution of drug(s) to 48mm in length.
5. **Set Rate** = **48**mm/1 day and do not alter.
6. **Prime line <u>DO NOT</u>** change rate after line is primed.

1st infusion will **<u>ALWAYS</u>** run through in **less than 24hr.**

This is the method you have been taught by the Graseby rep in Dec 2003.

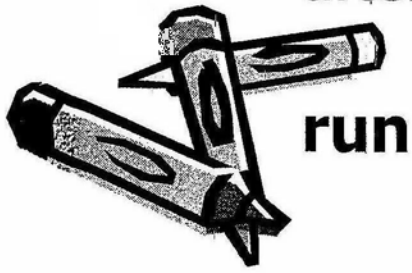


Reminders



1. Set up syringe driver as directed (previous slide).
2. Complete syringe driver chart <u>fully</u>.
3. Check volume of infusion in syringe & monitor patient at regular intervals.
4. When approx. <1ml is left in syringe, be ready to set up new syringe.
5. Check battery status at each syringe change.
6. A new syringe chart must be completed each time syringe is changed.
7. check solution in syringe for crystallization or cloudiness = precipitation = drug incompatible.

NB: *change butterfly needle & extension tube & re-site after every 72hrs.*



PS apart from 1st set-up, expect driver to run out in ~ 1day (24hr).

Calculations

Rate 48mm/1day = 48mm/24hr

Infusion will travel along syringe barrel at 2mm/hr.

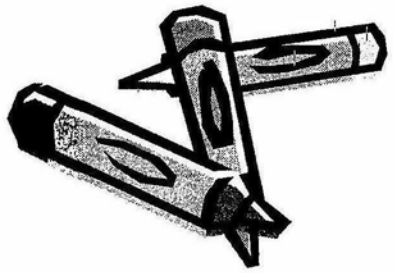
To calculate how long the first infusion will last (x):

$$\frac{[\text{original vol} - \text{vol for priming}]}{\text{Original vol}} = \frac{\text{x hr}}{24\text{hr}}$$

$$\text{x hr} = \frac{(\text{volume in syringe after priming})}{\text{Original volume}} \times 24 \text{ hr}$$

To calculate actual concentration administered:

$$\text{y} = \frac{(\text{volume in syringe after priming})}{\text{Original volume}} \times \text{prescribed drug strength}$$

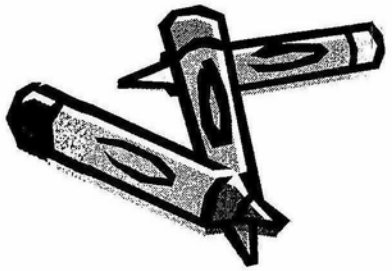


Why Rate is set BEFORE priming line.

If you prime the line then measure the fluid length & set the rate

– you are <u>diluting</u> drug/s & infusion will last for approximately 24hrs.

Therefore you will NOT be giving the concentration that is prescribed.



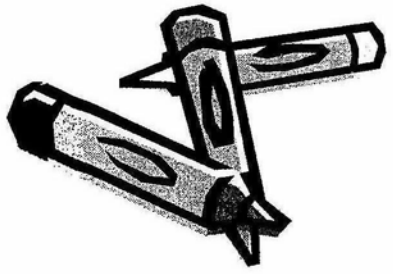
See example

Scenario 1: priming line then set rate.

- Rx 40mg diamorphine in 24 hr csci.
- Make volume to 8mls. (= 40mg/8ml = 5mg/ml)
- Priming line loses 3ml leaving 5ml.
- Measure 5ml fluid = 30mm. Rate is 30mm/1 day.
- Set rate at 30mm. Drug will run through in 24hr.

Actual concentration of drug in 5ml administered = (5ml/8ml)x40mg = 25mg of diamorphine in 24hr.

Patient has received 15mg less than what is prescribed.



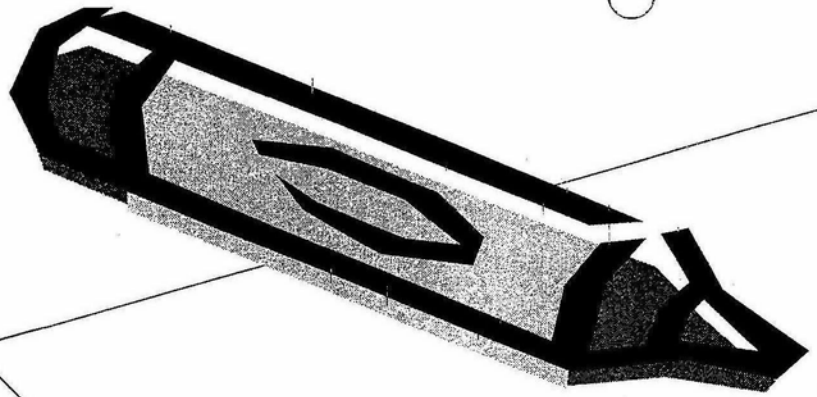
Scenario 2: Set rate then prime line .

- Rx 40mg diamorphine in 24 hr csci.
- Make volume to 8mls. (= 40mg/8ml = 5mg/ml)
- Measure 8ml fluid = 48mm. Set Rate 48mm/1 day.
- Priming line loses 3ml leaving 5ml.
- Infusion will run through in less than 24hr.

Actual concentration of drug in 5ml administered = 25mg of diamorphine.

The infusion lasts: $\frac{5ml}{8ml} \times 24hr = 15hrs.$

If you extrapolate the time to 24hr, the patient will have received the prescribed dose.



SUMMARY

1. Measure fluid length to 48mm on syringe driver.
2. Set RATE to 48
3. then PRIME line & Do not change rate.

New 42 day Rx charts

1. **Start**: Monday 8th November 2004
2. **3 months** trial – end Feb 2005.
3. On **wards**: Daedalus, Dryad & Sultan.
4. **How**:
   a. New patients – start new chart
   b. When re-write chart.
   c. Remove old charts & continuation sheets to safe place for future use.
5. **Evaluation** after 3 months: - complete questionnaire with your comments on chart. Audit of chart.
6. **Difference**: for non-administration – write code