

Welcome to Bournemouth's Pump Therapy Training Course

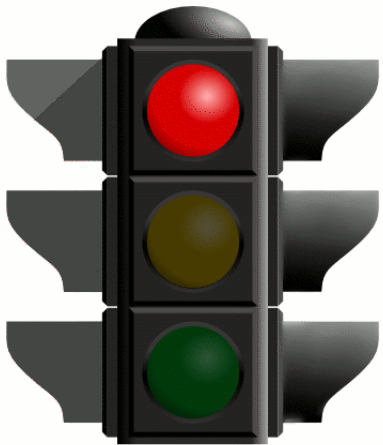


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Preparing your patient for pump therapy



NICE guidelines 2008:

CSII is recommended as a treatment option for adults and children 12 years or over provided:

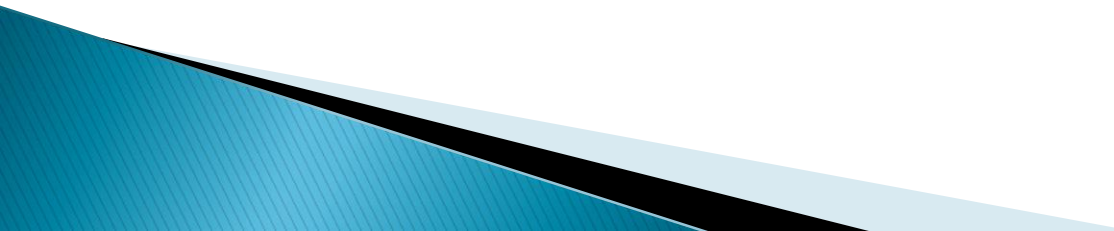
- Attempts to achieve target HbA1c with MDI results in repeated and unpredictable hypoglycaemia that results in persistent anxiety about recurrence and is associated with significant adverse effect of QOL
- HbA1c is above 70 mmol/mol (8.5%) despite MDI with long acting analogue and high level of care

NICE guidelines 2008:

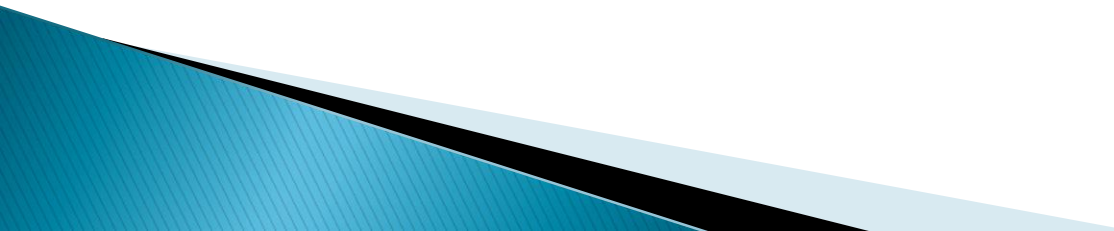
CSII is recommended as a treatment option for children younger than 12 years provided:

- MDI is considered impractical or inappropriate
- children on pumps would be expected to undergo a trial of MDI between 12 – 18 years?

CSII therapy

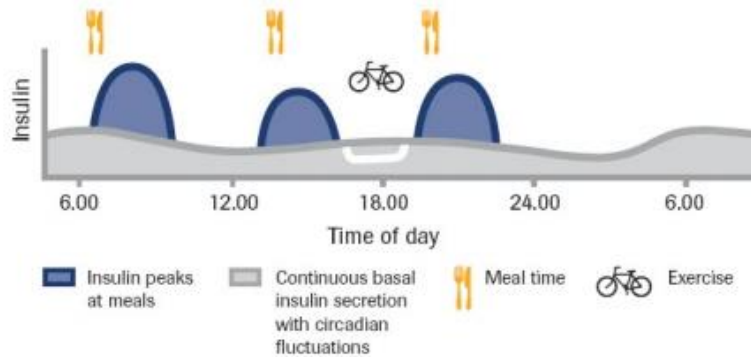
- ▶ Only initiated by trained specialist team who should provide structured education programmes
 - ▶ Should only be continued if HbA1c falls or there is a decrease in hypoglycaemia episodes. Appropriate targets should be set
 - ▶ Not recommended for people with type 2 diabetes
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For group discussion

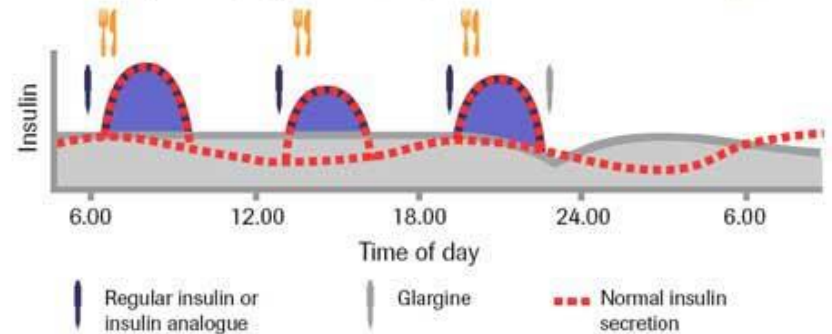
1. What are the benefits of pump therapy?
Can you think of any disadvantages of pump therapy?
 2. Which patients are most suitable for pump therapy? Are there any patients you would not consider suitable for pump therapy?
- 

Key principles

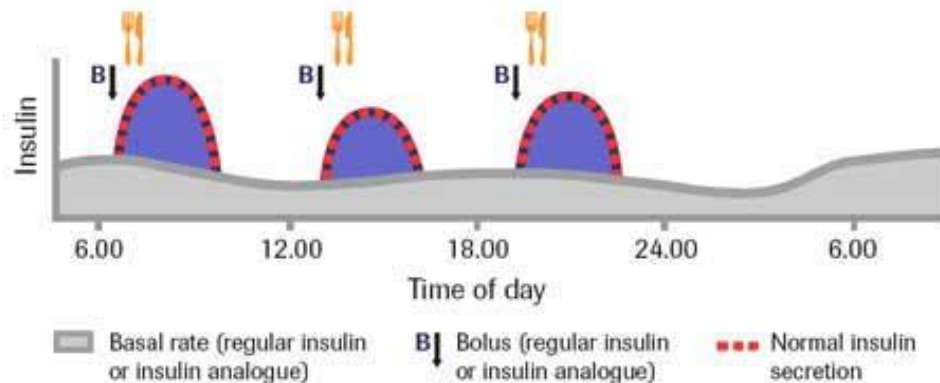
People without diabetes



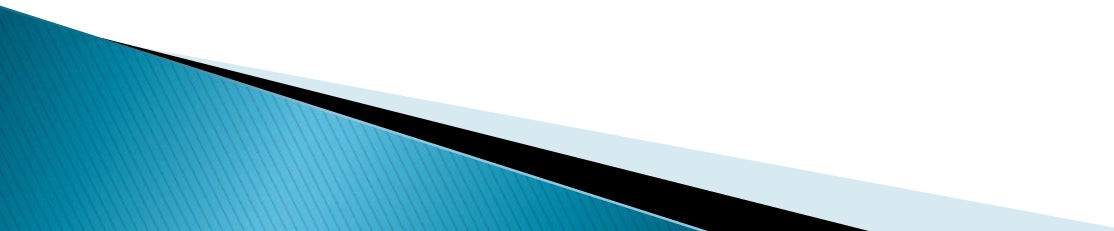
Multiple daily injections (MDI)/Intensified Insulin Therapy



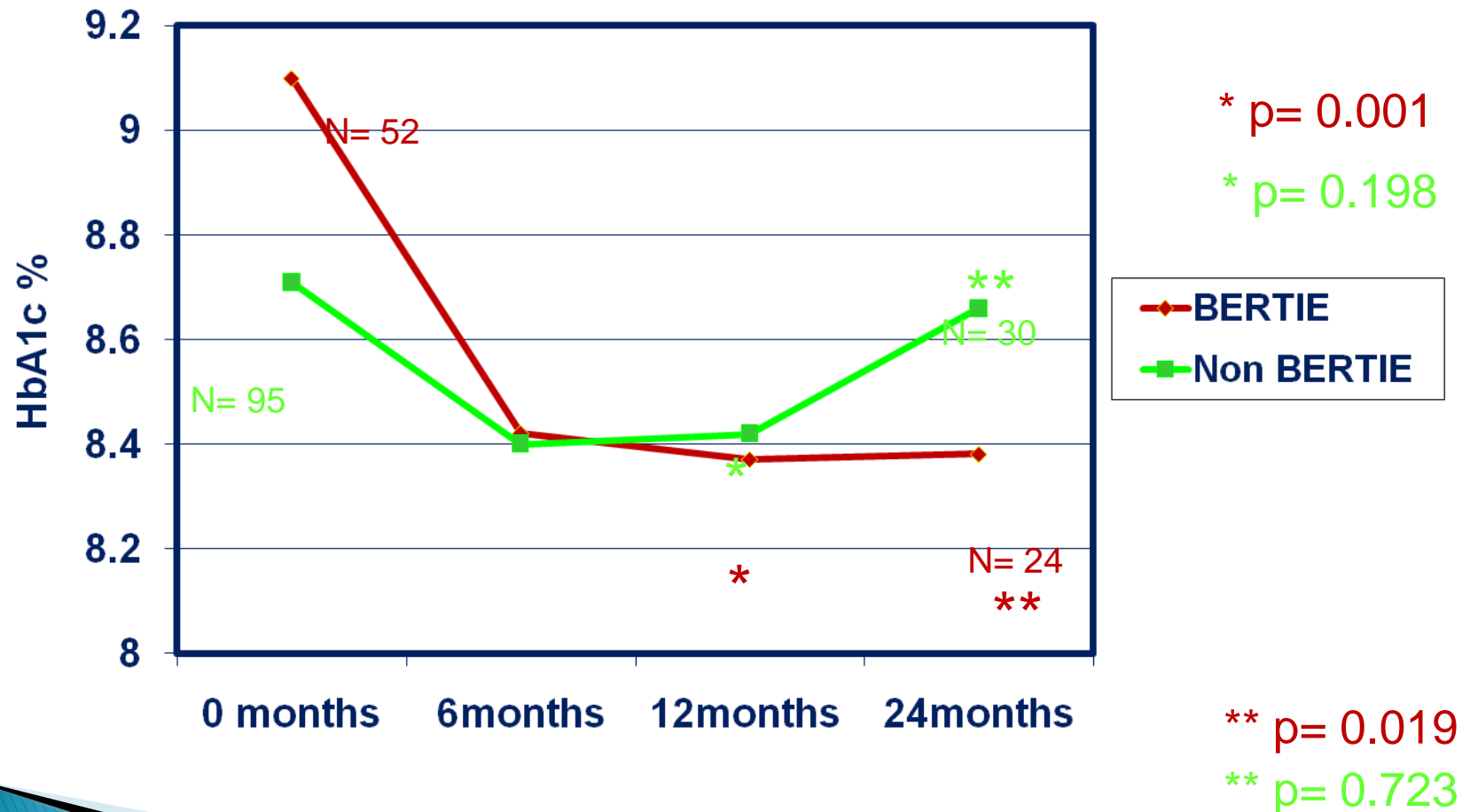
Insulin pump



What education/training do patients need before they go onto pump therapy?

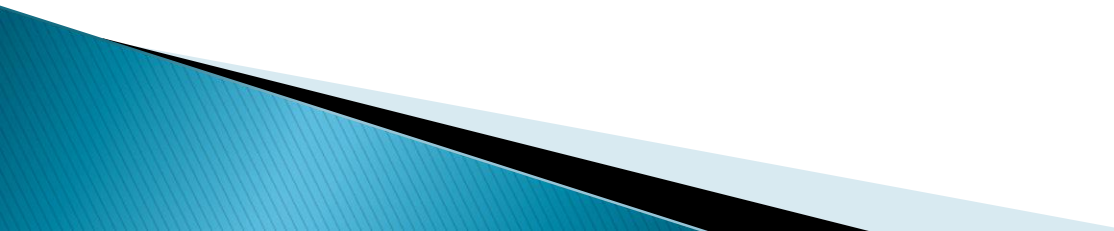


Change in HbA1c after starting pump therapy




What do you need to assess?

Assessment

- ▶ Criteria
 - ▶ Self management skills
 - ▶ Understanding
 - ▶ Hopes, fears and expectation
 - ▶ Motivation
 - ▶ Commitment to education programme
 - ▶ Discuss advantages and disadvantages
 - ▶ Choice?
 - ▶ Funding
- 

Which Pump?

- ▶ What choices do you have in your centres?
 - ▶ Cost
 - ▶ Bolus advisor, on pump/handset/phone app
 - ▶ Remote handset/phone app (discreet)
 - ▶ Patch pump
 - ▶ Sensor augmented system
 - ▶ Predicted low glucose suspend/hybrid closed loop
 - ▶ Fully closed loop option
- 

Pump system Name	Drop in cartridge	Remote handset	Bolus calculator	Associated Phone app	Patch pump	Sensor Augmented
Ypospump	✓		✓ on app	✓		
Roche Combo		✓	✓ Expert handset			
Roche Insight	✓	✓	✓ handset	✓ In 2020		
Roche Solo		✓ phone app	✓ on app	✓	✓	
Medtronic 640g		only bg meter	✓ On pump			Predicted low bg suspend Guardian 3. Needs calibration
Medtronic 670g		only bg meter	✓ on pump			Hybrid loop Guardian 3. Needs calibration
Tandem T Slim			✓ on pump	✓		Basal IQ Dexcom G6
Omnipod		✓ PDM & new app	✓ on PDM	✓ New app	✓	
Dana R		✓	✓ on handset			Dexcom G6
Dana RS		✓ Phone app	✓ on app	✓		Dexcom G6

Pump Assessment Check List

Name:

Hospital Number:

CCG:

HbA1c (Date):

Funded requested: Yes/No/NA

Diabetes Management Skills	Check	Comments
Frequency of blood testing (4+per day)		
Frequency of attendance in clinics		
Attendance at Type 1 Education		
Appropriate Carb Counting Skills Carb Ratio Correction Factor Target Blood Glucose Hypo treatments Sick day rules Adjustments with exercise (Expert Skills test?) Use of Bolus advisor meter		
Screening Questionnaires: Gold PAID Hypo Behaviour Hypo Worry		Results

Reason for Pump Therapy

Improve HbA1c (8.5%/69mmols +)

Hypoglycaemia Unawareness

Fear of injections

Planning Pregnancy

Lifestyle Flexibility e.g. Shifts

Severe/Frequent Hypoglycaemia

Dawn Phenomenon

Absorption Problems

Insulin sensitive

Other:



Demonstration/Explanation	Check
Pump System Pump Handset Cannulas Reservoirs Accessories Back up pens	
Discuss Pros & Cons	
Pump Education Programme	
Give Pump Info Pack	
Give Pump Programme leaflet	

- ✓ Worn constantly with up to 1 hour disconnected
- ✓ Need to check ketones & infusion sets/cannulas with Hyperglycaemia
- ✓ Need back up supplies
- ✓ Still need to count carbs and adjust insulin to lifestyle
- ✓ Need to attend reviews & clinics
- ✓ Regular blood testing

Future Plan:

BERTIE

Other Education (Individual)

Provisional pump start dates given

Discuss at team meeting

(Name on list)

Comments:

HP Name:

Date:

Consistent, thorough, pre-pump assessment and care planning

Multiple Daily Injection (MDI) & Carbohydrate (CHO) Counting Assessment Tool

(for patients using analogue insulin)

The overall aim of this questionnaire is to ensure that you have the knowledge required to support you to manage your diabetes.

The questions are designed to help you and your diabetes team understand which areas of diabetes management you are confident in and which areas you may be less sure of.

Please do not view it as a test or exam. It will simply be used to identify the areas where further information or support may be needed.

**Please complete this questionnaire.
Take as much time as you need.**

Summary: before pump start

Patients must

- ← Meet the NICE guidelines
- ← Be confident in self-management skills
- ← Be aware of pros and cons of pump therapy
- ← Identify their particular reason and benefits of pump therapy
- ← Had any psychological issues addressed
- ← Practical demonstration & familiarisation of pump



Bournemouth's Pump training Programme

PRE PUMP

Need/skills
NICE Assessment

BERTIE or other carbohydrate
counting /insulin adjustment
course/education.

Optimise skills
*Support for emotional &
Psychological issues*
Build confidence

PUMP START

Day 1

Goal setting
Contract
Calculations
Introduce pump,
handset & cannula

1 week
Practice

Day 2

Get connected
Management skills

Overnight
Experience

Day 3

Practicalities
Focus on basal
reviews
Management skills

3 ½ days , 4 patients per group

POST PUMP

2 hr Reviews groups
At 1, 3, 6 & 9 months
Build skills for
independent pump skills

Medical Pump Clinic at
12 months
Ongoing review or
discharge to referrer

HbA1c, weight
PAID
Hypo Awareness
Fear of hypo scores
Review goals



BEST PRACTICE GUIDE:
Continuous subcutaneous
insulin infusion (CSII)
A clinical guide for adult
diabetes services