Improving Compliance in diabetes management of children and teenagers in Croydon
Secondary Care

• We are aware that management of diabetes is complex and demanding in paediatrics

• Patient compliance and adherence is even more difficult

• Even though paediatric diabetes care is based within the secondary care,

• it is important for us work together with GPs who carry out the referring and prescribing
Management at diagnosis

- Most children present in A/E in DKA.
- Others well enough are admitted for self management teaching.
- Teaching will commence as soon as child is well enough
- It will include:
  1. What is diabetes
  2. Insulin administration using insulin pens and needles
  3. Injection sites
  4. Blood glucose monitoring
  5. They are given packs containing variety of equipment and information leaflets
Packs issued on diagnosis will include

- FreeStyle Insulinx (Bolus advisor) and FreeStyle Optium

- Accu-Chek Aviva Expert (Bolus advisor) and GlucoMen LX Plus meter

- GlucoMen LX Plus meter can be used for ketones and blood glucose

- Where child and family have already been using certain meters, their choice should be given at time of diagnosis

- include blood glucose and Ketone test strips, lancets and information leaflets
Differences in meters that influence children’s choice

Glucose meters have similar features, but have slight differences. These are:

• Newer meters provide assistance with insulin dosage calculation for carb counting and insulin correction calculation

• Others offer blood glucose and ketone monitoring in one meter. (Be wary of meters which have similar strips for glucose and ketone strips as patients become very confused)

• Size, colour, basic or complicated

• Blood sample sizes vary from 0.3 – 0.8 microliter

• Quick result time from 3-10 seconds

• Result memory size from 250 or more tests with 7, 14 and 28 day display and averages
Differences in meters that influence children’s choice

- When children come to clinic after looking on the internet, in shops or after seen other blood glucose testing meters else
- They request for a different meter for a variety of reasons

- These will vary from:
  - Small to fit the clutch handbag on going out
  - favourite colour
  - Trendy to suit lifestyle,

  - look like mp3 players,

  - usb meters that can be used for their music, schoolwork

  - with expandable memory

  - fits into IPad' and iPhone and show graphs.

  - All-in ones – with lancets and strips carried in the machine.

  - Certain lancets reduce the pain sensation when picking fingers.
School children Equipment Load over load

• One has to be aware that:
• Children have to carry all their diabetes equipment and snacks for managing their hypos on top of their daily school bags.

• Therefore in paediatric care we have to find what suits each individual and give them the correct equipment to suit their requirements in order to influence and encourage compliance.

• This may also mean regular updates equipment to keep up with trends as per normal teenage behaviour

• Croydon Borough has a very diverse community amongst which are families who may not speak/read English may require simpler equipment

• GP support is essential in the determination of the individual patient’s needs and in prescribing accordingly.
Prescription Requests

• GPs need to be aware that patients may need to test their blood glucose a minimum of four times a day and some up to 10x or more a day when unwell.
• Those on insulin pumps may have times that they test every hour for 24 hours
• This means constant requests of repeat prescriptions to the GPs for the relevant equipment.
• We recommend prescriptions to have 300 glucose test strips
Non-Compliance

• Patients often come back to us without any records of glucose monitoring for a couple of days/weeks and also without any blood monitoring equipment.

• The reasons often given are:
  – Have not received prescription
  – GP refused to prescribe
  – (GP has refused to change to a newer model)
  – Do not like the old equipment
  – Can not be bothered
  – Wants to be the same as the peers and can not deal with having diabetes.

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Non-Compliance

- Regimen adherence problems are common in individuals with diabetes, making glycaemic control difficult to attain.

- Patient non compliance to treatment recommendations is often frustrating for diabetes health care professionals. Improving Patient Adherence, Alan M. Delamater, PhD, ABPP Clinical Diabetes April 2006 vol. 24 no. 2 71-77

- But because the risk of complications of diabetes can be reduced by proper adherence

- The non equipment related reasons offered by patients for non-compliance we try to deal with through the suitable channels.

- Assistance is required from the GPs on prescription – to focus prescription depending on the actual requirements of the patients that will encourage compliance even if this means prescribing the newer/different models of equipment which are often more expensive.

- In our experience, compliance especially within the teenager group of patients is strongly reliant on the type of equipment that they carry, support and encouragement from their families, peers and the multidisciplinary team.
In Summary

• Hopefully, in the future for those who monitor blood glucose levels, a new method will be developed that's safe, accurate, non-invasive, user friendly and cost effective.

• Finding a cure for diabetes would be even better.

• But for now, we the healthcare professionals need to continue to work together, giving these children support, and provide the best education possible, the appropriate equipment available and the best regime for them to manage their diabetes and remain well and prevent complications for many years to come.