Criteria for using pathway: All Adult patients with both Type 1 and Type 2 Diabetes, excluding women starting insulin in pregnancy (see pregnancy diabetes guidelines), who are starting insulin therapy either in primary or secondary care.

This Care Pathway has been developed by a multidisciplinary team. It is intended as a guide to care and treatment, and an aid to documenting patient progress. The Care Pathway document is designed to replace the conventional medical and nursing clinical record.

All healthcare professionals must have successfully completed the e-learning training programme ‘The Safe Use of Insulin’ before using this pathway. www.diabetes.nhs.uk/safe_use_of_insulin.

All healthcare professionals are of course free to exercise their own professional judgment when using this Pathway. However if the Care Pathway is varied from for any reason, the reason for variation and subsequent action taken must be documented on the multidisciplinary progress notes. The multi-disciplinary progress notes can also be used to document any additional communications required to ensure appropriate care for patient.

Any comments regarding this Care Pathway should be sent to Lyn Gilbert, Diabetes Specialist Nurse, The Wyre Forest Centre for Diabetes and Education, Kidderminster Hospital, Bewdley Road, Kidderminster, DY11 6RJ

If you have any problems completing the pathway please contact your local Diabetes Specialist Nurse. For guidance on use please refer to the education training pack.

**REASON FOR STARTING PATIENT ON INSULIN** – please tick relevant box ( )

- New onset Type 1 Diabetes [ ]
- Type 2 Now requiring insulin [ ]

**GUIDELINES REFERRED TO WHEN DEVELOPING THIS CARE PATHWAY**

1. Guidelines for the management of the initiation of insulin in adults
2. Management of Diabetic Ketoacidosis
3. Flowchart for Treatment of Hypoglycaemia
4. Local Area Prescribing Guidelines (Worcestershire)
5. Insulin Procedure – Supply, Administration, Storage and Transfer/TTO’s of Insulin

**ABBREVIATIONS USED IN CARE PATHWAY**

<table>
<thead>
<tr>
<th>RN</th>
<th>Registered Nurse</th>
<th>St N</th>
<th>Student Nurse (under supervision)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Podiatrist</td>
<td>D</td>
<td>Dietician</td>
</tr>
<tr>
<td>DSN</td>
<td>Diabetes Specialist Nurse</td>
<td>HCP</td>
<td>Trained Registered Healthcare Professional</td>
</tr>
<tr>
<td>Dr</td>
<td>Doctor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUPPORTING DOCUMENTATION**

- Diabetes Discharge Summary Form

All users of this pathway must enter their specimen signature and initials below

<table>
<thead>
<tr>
<th>PRINT NAME</th>
<th>SIGNATURE</th>
<th>INITIALS</th>
<th>DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Stage 1: Assessment

## Communication and Ability

- **Does the patient need an interpreter?**
  - Yes [ ]
  - No [ ]

- **If Yes have interpreter services been offered?**
  - Yes [ ]
  - No [ ]
  - If no, please specify in multidisciplinary notes

**Pearl Linguistics - 0207 253 7700**
**email: hte@pearllinguistics.com**

Please circle if any of the following apply:

- Hearing impairment / impaired vision / physical dexterity:
  - Others: _________________________________

- **Mental health problems present?**
  - Yes [ ]
  - No [ ]
  - If yes, please specify:

## Lifestyle

Please assess current status of the following lifestyle issues and record below:

- **Current diet / eating patterns**
  - _________________________________

- **Alcohol intake**
  - _________________________________

- **Smoker**
  - Yes [ ]
  - No [ ]

- **Does patient drive for an occupation or work for police / armed forces?**
  - If yes refer to guidelines for the management of the initiation of insulin in adults or discuss with DSN
  - Yes [ ]
  - No [ ]

- **Occupation**
  - _________________________________

- **Social activities**
  - _________________________________
### OTHER RELEVANT MEDICAL CONDITIONS/REASON FOR ADMISSION

**• Diabetes medication - pre insulin please circle**

- Metformin
- Gliclazide/Glipizide/Glibenclamide/Tolbutamide
- Glimepiride/Nateglinide/Repaglinide
- Pioglitazone
- GLP 1 Agent (Exenatide, Liraglutide, Bydureon, Lyxumia)
- DPP 4 inhibitors (Sitagliptin, Saxagliptin)

Other medications please specify:
- .................................................................
- .................................................................
- .................................................................

**KNOWLEDGE**

- Check patients current knowledge and understanding of diabetes: .................................................

Does the patient understand:
- The importance of control .............................................. Yes ☐  No ☐
- The need for insulin .............................................. Yes ☐  No ☐
- The importance of healthy eating ................................. Yes ☐  No ☐
- The impact on driving .............................................. Yes ☐  No ☐
- The impact on employment ......................................... Yes ☐  No ☐

Does the patient have any fears /concerns / anxieties? Yes ☐  No ☐

If YES, please specify:
- ......................................................................................
- ......................................................................................
- ......................................................................................
Remember Never Stop Taking Insulin

<table>
<thead>
<tr>
<th>Design:</th>
<th>Signature Date/ Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAGE 2: PRESCRIPTION AND DOSE / DEVICES</strong></td>
<td></td>
</tr>
<tr>
<td>Is patient likely to be able to manage insulin administration: Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>(NB - it is expected that most patients will manage insulin administration independently though may require initial District Nurse support)</td>
<td></td>
</tr>
<tr>
<td>• Who is likely to be injecting?</td>
<td></td>
</tr>
<tr>
<td>Self? Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>Family member / carer? Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>District Nurse required for initial support? Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>District Nurse required for ongoing support? Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>If ongoing please specify why......................................................................................</td>
<td></td>
</tr>
<tr>
<td>On referral please discuss with District Nurse</td>
<td></td>
</tr>
</tbody>
</table>

**DR/RN**

Consider insulin regime and device according to patients age, ability and social circumstances. See flowchart on page 15.

• Which device is to be used - please specify:........................................................................

If ongoing support from District Nurse proceed to syringe and vial

Please telephone relevant District Nurse Team at this point.

Medical staff please prescribe insulin dosage for community staff - see prescribing sheet on pages 16 and 17.

Please specify District Nurse Name and Contact Number:............................................................
Remember Never Stop Taking Insulin

<table>
<thead>
<tr>
<th>Design</th>
<th>Signature Date/ Time</th>
</tr>
</thead>
</table>

Please see Appendix 1 on page 13 for guidance on appropriate regime and dose

Please record

- insulin type:______________________________________
- dose and frequency:________________________________

Insulin dosage is likely to need adjustment, please refer to page 14 and 15 for guidance

- Diabetes kit (acute) or equipment (community) ordered?  Yes [] No []

(NB Type 1 patients or any patient under 40 years should be prescribed a Diabetes Kit with urine Ketone sticks)

- Oral hypoglycaemic agents to continue?  Yes [] No []

NB: Some Glitazones are now licenced for use with insulin. Discuss with Consultant before proceeding.

Please specify name and dose: .................................................................

- Local DSN notified  Yes [] No []
- Referred to dietitian  Yes [] No []

Primary Care Staff please follow local policy regarding referrals.

STAGE 3: PATIENT/CARER COMPETENCIES

Please refer to flowchart on injection technique - Page 12

- Check who will need to be taught administration:
  - Patient  YES [ ] NO [ ] Carer/other individual:  YES [ ] NO [ ]
  - Name and contact number of carer to be involved:

Injection Technique

- Is the patient/carer able to demonstrate to nurse: Yes [ ] No [ ]
- Giving injection using correct technique? Yes [ ] No [ ]
- Able to change cartridge in pen (if applicable) Yes [ ] No [ ]

Please comment in the space below on patients ability to administer insulin

Please refer to District Nurse team if necessary - see page 4.
Stage 3: PATIENT / CARER COMPETENCIES

Blood glucose monitoring

- Is patient already blood glucose monitoring? Yes ☐ No ☐
  
  If YES, check age of patients meter and patients technique (replace meter if more than three years old)

  If NO, does patient need to learn? Yes ☐ No ☐

- Who will be monitoring blood glucose:
  
  Patient: Yes ☐ No ☐ Carer: Yes ☐ No ☐

Patient or carer competencies - blood glucose monitoring

Patient or carer able to demonstrate to nurse:

- Use of lancing device? Yes ☐ No ☐
- Operation of meter? Yes ☐ No ☐
  
  Please specify type of meter: .............................................................................

- Patient / Carer have been taught meter calibration (if appropriate)? Yes ☐ No ☐
  
  If unable to use - discuss with Diabetes Specialist Nurse

Patient or Carer Competencies - disposal of sharps

Patient and Carer able to demonstrate to Nurse:

Knowledge of safe disposal of lancets / needles? Yes ☐ No ☐
Stage 4: EDUCATION

For patients who are likely to be discharged **within 24 hours** of admission e.g. A&E, MAU, MSSU or for patients commencing insulin in the community in the first 24 hours please ensure that the following has been done (please refer to guidelines for further clarification).

- Is patient competent in blood glucose monitoring? Yes ☐ No ☐
  If NO, see page 6
- Is patient competent in injection technique Yes ☐ No ☐
  If NO, see page 5
- Initial dietary advice given? Yes ☐ No ☐
- Referral to dietitian? (acute trust) Yes ☐ No ☐
- Seen by dietitian? Yes ☐ No ☐
- Leaflet First Steps and Initial Dietary Advice for People with Diabetes Commencing Insulin Therapy given? Yes ☐ No ☐

**All patients need to be educated regarding the following topics when new to insulin:**

- Awareness of hypoglycaemia, signs and symptoms? **(refer to flowchart pg 11)** Yes ☐ No ☐
  Treatment and prevention Yes ☐ No ☐
- Aware of:
  a) the need to inform DVLA Yes ☐ No ☐
  b) the need to inform motor insurance company Yes ☐ No ☐
  **(Advise to refrain from driving for 2-7 days after commencement of insulin)**
  c) the need to carry identification Yes ☐ No ☐
  d) How to manage illness Yes ☐ No ☐
  e) Is patient aware that they must never stop taking insulin? Yes ☐ No ☐
  f) Diabetic Ketoacidosis (DKA) (Type 1 only) Yes ☐ No ☐
  g) Ketone testing Yes ☐ No ☐

**(NB Type 1 patient or any patient under 40 years should be prescribed with a Diabetes Kit with urine Ketone sticks)**
### Stage 5: CHECKLIST / SUMMARY

#### District Nurse
- Is District Nurse still required?   Yes [ ]  No [ ]
  (Cancel if not required) - please document contact made

#### Medication
- Diabetes Kit (acute) equipment (community)?   Yes [ ]  No [ ]
  - With urine Ketones sticks?   Yes [ ]  No [ ]
  - Without urine Ketones sticks?   Yes [ ]  No [ ]
- Ensure patient has 28 day supply of all medication and equipment   Yes [ ]  No [ ]
- Patient knows to obtain further supplies of insulin/equipment from GP?   Yes [ ]  No [ ]

#### FOLLOW UP
- Patient has an appropriate follow up appointment with consultant/GP?   Yes [ ]  No [ ]
  (Please complete audit tool on page 19)
- Insulin Care Pathway Checklist / Summary form
  (See page 19) has been completed and faxed to local DSN (if in acute trust) and District Nurse/Practice Nurse if appropriate   Yes [ ]  No [ ]

#### IDENTIFICATION
- Patient has ID card   Yes [ ]  No [ ]

#### EMERGENCY CONTACT NUMBER
- Patient has contact numbers for advice (i.e. local Diabetes Specialist Nurse/Practice Nurse)   Yes [ ]  No [ ]
  (For emergency please contact own GP/Primary Care Centre. For other support please contact Practice Nurse or Local Diabetes Specialist Nurse)

#### PLEASE DOCUMENT THE FOLLOWING:
- Insulin type and device.............................................................
- Insulin dose:................................................................
- Does patient know dose?   Yes [ ]  No [ ]

Please ensure this Pathway stays with Patient at home or at discharge.
### Stage 5: CHECKLIST / SUMMARY

**Patient has knowledge of the following areas within first 3 months of starting insulin:**

<table>
<thead>
<tr>
<th>Area</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of hypoglycaemia and hyperglycaemia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sick day rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel advice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate footwear and the need to check their own feet <strong>daily</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy (if appropriate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks of Smoking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of regular review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes UK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Remember Never Stop Taking Insulin*
MULTI-DISCIPLINARY PROGRESS NOTES Please use this sheet to document any additional communications required to ensure appropriate care for patient.

<table>
<thead>
<tr>
<th>No</th>
<th>Sign/Print Name Designation</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TREATMENT OF HYPOGLYCAEMIA

Hypoglycaemia defined as blood glucose less than 4mmols

Hypoglycaemia suspected - Patient complains of sweating, shaking, dizziness, tingling, confusion

Wash patient’s hands and check capillary blood glucose

MILD
Patient conscious, orientated and able to swallow

STEP ONE: GET HYPO BOX
Give:
5 glucose tablets or
2 x 100mls of orange juice either orally or via ENTERAL TUBE. If allergic to citrus fruit avoid using orange juice

Repeat blood glucose after 10 - 15 minutes - if less than 4mmol/l repeat step one up to 3 times - or consider using Glucogel 1.5 - 2 tubes

If blood glucose remains less than 4mmols after 3 times of treating with rapid acting carbohydrate or Glucogel 1.5 - 2 tubes
CONTACT A DOCTOR

Consider Glucagon* 1mg IM or establish IV access and give 50mls of 10-20% glucose.

Once blood glucose levels are above 4mmols give 20 grams long acting carbohydrate:
2 biscuits or
1 slice toast
or normal meal if due within 1 hour of hypo or IV 10% glucose at 100ml/hr

Increase blood glucose monitoring to every 15 minutes until 3 consecutive readings of 4.1mmol or greater obtained
Then continue regular 2 to 4 hour blood glucose monitoring for the next 24 hours

Moderate
Patient conscious, but confused/disorientated or aggressive and able to swallow

STEP ONE: GET HYPO BOX
If capable/cooperative give:
5 glucose tablets or
2 x 100mls orange juice (give juice either orally or via ENTERAL TUBE) or
if uncooperative but able to swallow give Glucogel 1.5 - 2 tubes
Consider using Glucagon* 1mg IM (only give once) if allergic to citrus fruit avoid using orange juice

Repeat blood glucose after 10 - 15 minutes - if still less than 4mmol/l either repeat step one up to 3 times or contact a doctor to establish IV access and give 50mls of 10-20% glucose.

If blood glucose levels are above 4mmols give 20 grams long acting carbohydrate:
2 biscuits or
1 slice toast
or normal meal if due within 1 hour of hypo or IV 10% glucose at 100ml/hr

SEVERE
Patient unconscious or nil by mouth

STEP ONE
Check ABC

STOP INTRAVENOUS INSULIN WHILST HYPO Call 2222 - GET HYPO BOX
Establish IV access and give 50mls of 10-20% glucose.
If no immediate IV access consider using Glucagon* 1mg IM (only give once)

Repeat blood glucose after 10 minutes - if still less than 4mmol/l give 50mls of IV 10-20% glucose until blood glucose is above 4mmols

If IV insulin sliding scale stopped, restart once blood glucose is above 4mmol/l.
If NBM give IV 10% glucose at 100mls/hr until review by doctor or treat with long acting carbohydrate as described in flow chart for mild and moderate hypo.

* Glucagon IM is less effective for repeated hypos, starved patient or severe hepatic disease.

Patient Group Directives for glucose tablets, glucogel, 10-20% glucose and glucagon can be found on the Trust Intranet.
INJECTION TECHNIQUE

WHO WILL ADMINISTER INSULIN?

- WHO NEEDS TO BE TAUGHT ADMINISTRATION?

PATIENT

- WASH HANDS

- WHEN IS PATIENT EXPECTED TO BE FIT (REVIEW DATE)?

- IS PATIENT ABLE TO ABSORB INFORMATION?

CARER

- WASH HANDS

- CHECK INSULIN IS CORRECT TYPE AND MIXTURE (IF APPROPRIATE)

- CHECK EXPIRY DATE OF INSULIN

- CHECK SUFFICIENT QUANTITY OF INSULIN IS AVAILABLE IN PEN

- SCREW ON STERILE PEN NEEDLE

- BEFORE INJECTION, ENSURE INSULIN IS MIXED AS APPROPRIATE. PERFORM AIRSHOT - ACCORDING TO PEN DEVICE INSTRUCTIONS

- CHECK UNITS OF INSULIN TO BE GIVEN AND DIAL UP REQUIRED NUMBER OF UNITS

- INSULIN SHOULD BE ADMINISTERED TO THE APPROPRIATE SITE

- LIFTING UP A FOLD OF SKIN BETWEEN THUMB AND INDEX FINGER (ENSURING SUBCUTANEOUS INJECTION) SLIDE NEEDLE VERTICALLY AT AN ANGLE OF 90° TO THE MAIN SURFACE OF THE SKIN, INTO THE FOLD

- AFTER INJECTION UNSCREW AND DISPOSE OF PEN/NEEDLE INTO SHARPS CONTAINER

- TEACH PATIENT SAFE DISPOSAL OF SHARPS USING BD SAFE CLIP DEVICE AND/OR SHARPS BIN.

CONSIDERATIONS FOR INSULIN REGIME

Aim of insulin therapy
- Improved control
- Symptom relief

Social Circumstances
- Lives alone
- Living with family member
- Residential or nursing home
- Employment e.g. shift work

Who will be injecting?
- Self
- Family member
- District nurses

Insulin delivery device?
- Pen
- Pre-filled cartridges

Dose / Regime

CONSIDER:
- One daily intermediate long acting insulin e.g. Insuman Basal, Insulatard, Glargine or Detemir - starting dose may be 10 units
  OR
- Twice daily intermediate acting insulin e.g. Insuman Basal/Insulatard - starting dose may be 8 units BD
  OR
- Twice daily pre-mixed insulin e.g. Humulin M3 or Novomix 30, starting dose may be 8 units BD
  OR
- Basal bolus regime, discuss with the Diabetes Team.

*Wherever possible use insulins as stated in the Local Area Prescribing Guidelines
HEALTHCARE PROFESSIONAL GUIDANCE ON INSULIN ADJUSTMENTS

Adjusting once daily injection regime

- Increase insulin dose by 2-4 units every 3rd day until pre-breakfast blood glucose levels are 4-6 mmol/L.

Adjusting twice daily injection regime

NB Morning injection controls lunchtime and teatime blood glucose levels. The evening injection controls the bedtime, overnight and the following morning blood glucose levels. If blood glucose levels are:

- Less than 4.0 mmol/l - treat as hypo, if reoccurs - seek advice
- 4.1 - 7 mmol/l - no change to insulin dose
- 7.1 - 11 mmol/l - increase by 2 units of the relevant insulin
- 11.1 - 17 mmol/l - increase by 4 units of the relevant insulin
- 17.1 mmol/l or above - increase by 4 units and/or ring Diabetes team or GP for advice.

Test blood glucose levels before each meal and at bedtime and make dose adjustment every 2-3 days depending on results of previous days tests. As blood glucose levels normalise, frequency of monitoring can be reduced.

Adjusting four injection daily regime (Basal Bolus) - Contact Diabetes Team if appropriate for advice.

MISSED/DELAYED INSULIN INJECTION

Once daily insulin

- Less than 6 hours delay, give full dose followed by a starchy carbohydrate snack or meal if due
- More than 6 hours delay, give 1/2 normal dose e.g. 10 units instead of 20 units.
- More than 12 hours delay, omit this dose and consider increasing next day dose by 25-50% as a ‘one off’.

NB: Tresiba insulin - can be given (full dose) provided there is an interval of 8 hours before next injection.

Advise extra blood glucose monitoring throughout all of the above.

Twice daily mixtures

- Delay up to 2 hours - give injection consider reduced dose by 10%
- Delay 2-4 hours - give injection consider reduced dose by 25%
- Delay 4-6 hours - give injection consider reduced dose by 50%
- Delay more than 6 hours - omit this dose and consider increasing the next dose of insulin by 25-50% as a ‘one off’.

If blood glucose levels are running high consider less of a reduction. Advise extra blood glucose monitoring throughout all of the above.

EPISODES OF ILLNESS/ OR INFECTION

Common coughs, colds, ‘upset tummy’ or flu viruses will affect diabetes control. During most episodes of illness blood glucose levels can be expected to rise - there are a few points to remember:-

- NEVER stop taking insulin - doses may need to increase even though the patient may not be eating.
- If unable to eat try replacing usual meals with alternatives ie: soup, ice-cream, fruit juice, lucozade, non-diet coke or pop, glucose, honey or jam.
- Test blood glucose levels 2-4 hourly.
- If blood glucose levels are more than 15mmol/L test ketone levels if Type 1 Diabetes or Type 2 under 40 years of age.
- If ketones are present extra doses of insulin will be required to bring down blood glucose levels.
- Advise NEVER go to bed on a rising blood glucose level - stay awake, monitor and bring down levels.
- Try to drink plenty of water and sugar free drinks, at least 2 litres or 4-5 pints should be sipped through the day if possible.
- Take adequate rest.

Suggested regime for dose increases when ill - if blood glucose levels are:-

- Less than 15mmol/L - continue normal insulin
- Between 15-22 mmol/L - increase insulin from the next dose, taking 4 units extra before meals and bed (if total daily insulin more than 50 units, double these extra insulin amounts).
- Above 22 mmol/L - increase insulin from the next dose, taking 6 units extra before meals and bed (if total daily insulin more than 50 units, double these extra insulin amounts).

- If ketones are present and/or vomiting this is an emergency situation and you are advised to seek medical advice immediately.
**INNOLET**
Prefilled Disposable Pen
Dials 1-50 units

**NOVOPEN 4**
Dials 1-60 units

**FLEXPEN PRE-FILLED DISPOSABLE PEN**
Dials 1-60 units

**KWIKPEN PREFILLED DISPOSABLE PEN**
Dials 1-60 units

**HUMAPEN SAVVIO CARTRIDGE PEN**
Dials 1-80 units

**SOLOSTAR**
Dials 1-80 units

**FLEXTOUCH PEN**
Dials 1-80 units

**TYPE OF INSULIN:**
- Insulatard
- Novorapid
- Levemir
- Novomix 30
- Leumir
- Humalog
- Humulin I
- Humalog mix 25
- Humalog mix 50
- Humulin M3
- Novomix 30
- Levemir
- Apidra
- Humalog
- Humulin S
- Humulin I
- Humulin M3
- Humalog mix 25
- Humalog mix 50
- Glargine (Lantus)
- Apidra
- Combi 25
- Combi 15, 25, 50

**INDICATIONS:**
- Visual impaired
- Poor dexterity

**REMEMBER:**
- Patient will need to be able to change cartridge

**PB NEEDLE INFORMATION:**
- Pen needles are available in 4.5, 6 and 8mm length. 8mm length lifted skin fold necessary, individual patient assessment required.
- All other insulins should be injected **30 minutes before a meal excluding bed time insulins. Long acting insulins Glargine/Levemir do not need to be given with food.**

**NB:**
- Novomix 30 / Humalog Mix 25 / Humalog Mix 50 / Novorapid / Humalog, Apidra: These insulins need to be injected **immediately before a meal.**
- If the patient is unable to self inject and requires a pen device advise use BD Autoshield Duo needles (5mm length), see training video at www.bd.com/duo/.
- Please refer to Insulin Procedure document, contact local DSN.
### DISTRICT NURSE / COMMUNITY PRESCRIBING SHEET

#### INSTRUCTIONS RECEIVED FROM DOCTOR

<table>
<thead>
<tr>
<th>Date</th>
<th>Name &amp; Address</th>
<th>Insulin type and time to be given</th>
<th>Dosage &amp; Route</th>
<th>Drs Signature &amp; Print Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Insulin type</th>
<th>Units Given</th>
<th>Site</th>
<th>Signature Print Name/Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PF WR2137–Care Pathway for Management of Initiation of Insulin–Version 25–Page 16 of 20
<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Insulin type</th>
<th>Units Given</th>
<th>Site</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INITIATION OF INSULIN AUDIT TOOL

Please fill in this tool when this episode of care is completed and return to Lyn Gilbert, Diabetes Specialist Nurse, The Wyre Forest Centre for Diabetes and Education, Kidderminster Hospital, Bewdley Road, Kidderminster DY11 6RJ

Please note: The brackets at the end of each audit question e.g. (1) indicate where you will find the information in the care pathway.

YES Not Recorded Not applicable
(NR)

1. Were interpreter services offered? (1)
2. Was the district nurse contacted during the discharge planning stage? (4 & 8)
3. Was the patient seen/referred by a dietitian? (4 & 7)
4. Was patient given the leaflet ‘First Steps & Initial Dietary advice’ (7)
5. Was patient’s competence regarding blood glucose monitoring assessed? (6)
6. Was patient’s competence with injection technique assessed? (5)
7. Was the patient educated in the management of hypoglycaemia prior to discharge? (7)
8. If the patient has Type 1 diabetes or are under 40 years of age were they instructed in urine ketone testing? (7)
9. Was the patient discharged/issued with a Diabetes Kit? (8)
10. Does the patient have an appropriate follow-up appointment? (8)
11. i. Was the insulin care pathway discharge checklist/summary faxed as appropriate? (8 & 19)
   ii. Was the patient discharged/given the pathway? (8)
12. Where was insulin commenced: WRH KH ALX WHAC GP SURGERY

Where do you work? WRH KH Alex WHAC GP SURGERY
Affix Patient Label here or record

NAME: .................................................................
NHS NO: ............................................................
HOSP NO: ..........................................................
D.O.B: ..............................................................

GP NAME: ................................................................
Date of admission: .............................................
Discharging Ward: ..............................................
Patient’s Discharge address (if different from above): .................................................................
Patient’s telephone number: ...............................
Reason for admission: ........................................

Date insulin commenced: .................................
Type of insulin: 1) ..............................................
2) .................................................................
Timing of injections: .........................................

Pen Device & Dose on discharge: ........................
Diabetes kit provided: YES □ NO □
Oral Hypoglycaemic Agent continued: YES □ NO □
Please specify: ....................................................

Type of Diabetes and treatment: (Insulin or oral agents)
Is this a new diagnosis of diabetes? YES □ NO □
Type 1 (insulin dependant)
Type 2 - Diet and tablets ....................................
Insulin treated ..................................................

Meter provided and taught YES □ NO □
Patient / carer competent with Blood Glucose Monitoring: YES □ NO □
Patient / carer competent with Insulin Injections: YES □ NO □
Referred to District Nurse: Initial Support YES □ NO □
District Nurses to administer insulin, if YES insulin syringes provided YES □ NO □
BASIC EDUCATION PROVIDED:

Symptom and treatment of hypoglycaemia    YES □    NO □
Managing sick days and testing for ketones    YES □    NO □
Current DVLA Regulations    YES □    NO □

ALL AREAS OF EDUCATION WILL NEED TO BE REVISITED

Signature: _____________________________ Print Name: ________________________________

Designation: ___________________________ Date: ______/_____/_______

Pages 19 and 20 to be faxed to Diabetes Specialist Nurse OR relevant District/Practice Nurse
Original copy must be retained in patients medical notes.
Kidderminster Diabetes Specialist Nurse : 01562 826395
Redditch Diabetes Specialist Nurse : 01527 488649
Worcester Diabetes Specialist Nurse : 01905 760780