CLINICAL GUIDELINE FOR THE MANAGEMENT OF ADULTS WITH DIABETES MELLITUS REQUIRING END OF LIFE CARE

1. **Aim/Purpose of this Guideline**
   The aim of this document is to provide Health Care Professionals working within the Royal Cornwall Hospital Trusts with management guidance for appropriate and sensitive high quality Diabetes care for all adults with Diabetes at the end of their lives.

**Scope**
This guidance is for the management of adults with Diabetes at the end of life in:
A) **Continuing end of life care - deteriorating/weeks prognosis**
B) **Final days - terminal care/days prognosis.**

**NB** If prognosis is uncertain to discuss with Consultant/hospital palliative care team. If guidance is required for the management of adults with Diabetes at the end of life who are stable with 1 year or more prognosis, or who are unstable with advanced disease/months prognosis please refer to “End of Life Diabetes Care Clinical Care Recommendations” (Diabetes UK 2013).

2. **The Guidance**

   **Principles**
   The defining key principles that underlie high quality Diabetes care at the end of life are:
   
   - Provision of a painless and symptom-free death
   - Tailor glucose-lowering therapy and minimize diabetes related adverse treatment effects
   - Avoidance of:
     - Hypoglycaemia events
     - Diabetic Ketoacidosis (DKA)
     - Hyperosmolar Hyperglycaemic state (HHS)
     - Symptomatic Hyperglycaemia
   - Avoidance of foot complications in frail, bed bound adults with diabetes
   - Avoidance of symptomatic clinical dehydration
   - Provision of an appropriate level of intervention according to stage of illness, symptom profile, and respect for dignity
   - Supporting and maintaining the empowerment of individuals (in their self management) and carers to the last possible stage.

   **Glucose Control Targets**
   No published evidence exists to justify any particular glucose range to aim for at the end of life, but Diabetes UK (2013) has recommended the following glucose ranges:
   
   - **Aim 1** – no glucose level less than 6 mmol/l
   - **Aim 2** – no blood glucose higher than 15 mmol/l
A - Continuing end of life care - deteriorating/weeks prognosis

1. Main Aims
   - Keep drug intervention to a minimum.
   - Control symptoms and blood glucose ranges to within 6 -15mmol/l.

2. Considerations - when choosing or continuing with oral anti Diabetic agents.
   - Renal function – review eGFR
   - Dietary intake review
   - Hypoglycaemia Risks

Refer to Diabetes inpatient Specialist Nurse Team # 3104, bleep 2205 or Endocrine team for advice

3. Insulin Regimens
   - Simplify to once per day regimens to be administered in the morning where possible
   - Consider a reduction in total daily dose to 75% of usual total daily dose.
   - **Do not stop long acting basal Insulin's in Type 1 Diabetes.**

Refer to Diabetes In-patient Specialist Nurse Team #3104, bleep 2205 or Endocrine team for advice

B) Final days - terminal care/days prognosis.

- **Type 2 Diabetes managed with Diet and/or oral medication and/or GLP1 agonist**
  - Stop oral medications & GLP1 injections
  - Stop monitoring blood glucose levels.
  - If symptoms of Hyperglycaemia are observed perform urinalysis for glucose*.

- **Type 2 Diabetes managed with Insulin**
  - Stop Insulin
  - Stop monitoring blood glucose levels
  - Urinalysis for glucose daily.*
  - If over 2+ of glucose - check blood glucose.
  - If blood glucose > 20 mmols/l repeat in 2-4 hours.
    - If remains > 20mmol/l start OD daily long acting basal Insulin i.e. Lantus at 0.2 units per kg/body weight.

- **Type 1 Diabetes always managed with Insulin**
  - Continue once daily dose of usual long acting basal Insulin with reduction in dose to 75% of usual daily dose

- **Check blood glucose once daily varying times.**
  - If < 8 mmols/l reduce insulin by 10%-20%
  - If > 20 mmols/l increase insulin by 10%-20% to reduce risk of symptoms and development of Ketones

**Notes.**
- *If no urine available check blood glucose levels.
- Observe regularly for signs and symptoms of Hypoglycaemia.
- If symptoms are observed check blood glucose levels.
- If Hypoglycaemia is confirmed treat as per hospital guideline.

References: End of Life Diabetes Care Clinical Care Recommendations Diabetes UK 2013
3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Compliance with the relevant process for patients reviewed by Diabetes Team.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Kim Bull</td>
</tr>
<tr>
<td>Tool</td>
<td>Patient Documentation</td>
</tr>
<tr>
<td>Frequency</td>
<td>Adult in patients at the end of life reviewed by the specialist Diabetes team</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Non compliance will be reported to the responsible medical team, ward/area manager. Non compliance resulting in an adverse patient event will be reported via Datix</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Medical teams / ward / area managers will undertake subsequent recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes for their areas The Specialist Adult In-Patient Diabetes Team will undertake any trust wide recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Lesson learned or changes to practice will be shared with all the relevant stakeholders</td>
</tr>
</tbody>
</table>

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Diversity & Human Rights Policy' or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>CLINICAL GUIDELINE FOR THE MANAGEMENT OF ADULTS WITH DIABETES MELLITUS REQUIRING END OF LIFE CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>26/01/15</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>26/01/15</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>Feb 2018</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Medical Directorate. Kim Bull Clinical Nurse Specialist - Diabetes</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 253104</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>Guideline for management of Diabetes at the end of life.</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Diabetes. End of Life Care. Palliative Care</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT</td>
</tr>
<tr>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>New document</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>New document</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Diabetes In-Patient Specialist Nurses, Consultant Endocrinologists, Consultant in palliative care. Palliative care specialist Nurses.</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Rob Parry</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not Required</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet</td>
</tr>
<tr>
<td>Document Library Folder/Sub Folder</td>
<td>Diabetes</td>
</tr>
<tr>
<td>Links to key external standards</td>
<td>NSF Diabetes 2001 standard 8</td>
</tr>
<tr>
<td>Related Documents:</td>
<td>End of Life Diabetes Care Clinical Care Recommendations Diabetes UK 2013</td>
</tr>
</tbody>
</table>
Training Need Identified?  No.

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/01/15</td>
<td>V1.0</td>
<td>Initial Issue</td>
<td>Kim Bull  Clinical Nurse Specialist - Diabetes</td>
</tr>
</tbody>
</table>

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document
This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.
Appendix 2. Initial Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>CLINICAL GUIDELINE FOR THE MANAGEMENT OF ADULTS WITH DIABETES MELLITUS REQUIRING END OF LIFE CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directorate and service area: Medical</td>
</tr>
<tr>
<td>Name of individual completing assessment: Kim Bull</td>
</tr>
<tr>
<td>1. Policy Aim* Who is the strategy / policy / proposal / service function aimed at?</td>
</tr>
</tbody>
</table>
| 2. Policy Objectives* | - To provide a consistent approach to the management of adults with Diabetes at the end of life within RCH sites.  
- Avoidance of symptoms and complications |
| 4. *How will you measure the outcome? | Datix Reporting  
Review of medical/ nursing documentation as required |
| 5. Who is intended to benefit from the policy? | Adults with Diabetes at the end of life. |
| 6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy? | Yes |
| b) If yes, have these *groups been consulted? | Yes |
| C). Please list any groups who have been consulted about this procedure. | Diabetes In-Patient Specialist Nurses  
Consultant Endocrinologists  
Consultant in Palliative care.  
Palliative Care Specialist Nurses. |

7. The Impact
Please complete the following table.

<table>
<thead>
<tr>
<th>Are there concerns that the policy could have differential impact on:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equality Strands:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (male, female, transgender / gender reassignment)</td>
<td>√</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CLINICAL GUIDELINE FOR THE MANAGEMENT OF ADULTS WITH DIABETES MELLITUS REQUIRING END OF LIFE CARE
Page 6 of 7
### Race / Ethnic communities /groups
- ✓

### Disability
- ✓
- learning
disability, physical
disability, sensory
impairment and
mental health
problems

### Religion / other beliefs
- ✓

### Marriage and civil partnership
- ✓

### Pregnancy and maternity
- ✓

### Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian
- ✓

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:
- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation- this excludes any policies which have been identified as not requiring consultation. or
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended.
   - Yes
   - No ✓

9. If you are not recommending a Full Impact assessment please explain why.

Guideline is suitable for all adult in-patients with Diabetes irrespective of any equality factors at the end of life.

Signature of policy developer / lead manager / director

Date of completion and submission

Names and signatures of members carrying out the Screening Assessment

1.
2.

---

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead, c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed _____ Kim Bull ___________

Date __________ 26/01/16 _________