**Joint British Diabetes Society Inpatient Care Group**

**Form 2 - Case based data collection form.**

Data Collection Tool for the management of diabetes during enteral feeding

Managing glucose control for people with diabetes during enteral feeding is difficult. There are very few research papers to guide clinical practice. The aim of this audit is to look at how diabetes teams are managing this in reality and what level of glucose control is being achieved.

There are two forms to complete.

Form 1 – The institutional data collection form tells us about your unit and your general approach to managing enteral feeding. This form only needs to be completed once.

Form 2 (this one) – the case-based data collection form is used to collect case specific data to establish the variety of strategies used for the management of diabetes or hyperglycaemia during enteral feeding. Please include your trust name and the case number (out of 5) when saving the document.

When completing this form **please do not include any patient identifiable data** not requested and ensure the forms are only submitted via secure nhs.net to nhs.net email addresses.

Please select a person with diabetes where insulin treatment was used to manage glucose control during enteral feeding (please **do not** include parenteral feeding). We would like data for once the patient is established on a stable feed regimen. The submission of just one case would be very helpful but, if possible, we would like you to submit up to five cases.

It is anticipated this will be completed by or with, a member of the diabetes specialist team.

**Name of Hospital:**

**About the person with diabetes – Case number: …………. (please enter case no. 1-5)**

**\*You will need 5 copies of this form\***

**Role of person completing the form**

[ ]  DISN [ ]  Consultant [ ]  SpR [ ]  CMT [ ]  FY1 [ ]  FY2 [ ]  Diabetes specialist dietitian [ ]  Dietitian [ ]  Pharmacists [ ]  Other, please specify: ……………….

**Would you be happy to be contacted by the JBDS team for more information?** ☐ No

[ ]  Yes (please provide be contact details): ………………………………………………………………..

**Date form completed:** (dd/mm/yy )

**Date of Admission**: (dd/mm/yy )

**Date of Discharge**: (dd/mm/yy ) – if discharged

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| **Demographics** |
| **Year diabetes diagnosed**?........ | **Age at admission** ………………….. | **Gender**: Male [ ]  Female [ ]   |
|  **Ethnicity** [ ]  Not stated |
| **White** | **Mixed** | **Asian / British****Asian** | **Black / Black British** | **Other** |
| [ ]  a) British[ ]  b) Irish[ ]  c) Other white background | [ ]  d) White /Black  Caribbean[ ]  e) White / Black African[ ]  f) White and Asian[ ]  g) Other mixed background | [ ]  h) Indian[ ]  i) Pakistani[ ]  j) Bangladeshi[ ]  k) Other Asian | [ ]  l) Caribbean[ ]  m) African[ ]  n) Other Black background | [ ]  o) Chinese[ ]  p) Any other ethnic group |
| **Weight:**  | **BMI:** |
| **Received glucocorticoids during data collection period?** |  [ ] No [ ] Yes, please specify: |
| **HbA1c** |  Mmol/mol | Date: | [ ]  Not done |
| **Admission glucose** |  Mmol/L | [ ]  Not done |
| **MUST (malnutrition universal screening tool) score** | Score: | [ ]  Not done | [ ]  Don’t Know |
| **Were they on enteral feeding prior to admission**? | [ ]  Yes ☐ No  |

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| **Type of diabetes** |
| [ ]  Type 1  | [ ]  Steroid induced |
| [ ]  Type 2  | [ ]  Secondary to pancreatic damage |
| [ ]  New diagnosis on admission | [ ]  Other (please specify below)  |
| If other, … |
| **Usual diabetes medication prior to admission (tick all that apply)** |
| [ ] Metformin | [ ] GLP1: Oral [ ]  Subcutaneous[ ]  |
| [ ] Sulphonylurea | [ ] Pioglitazone |
| [ ] Insulin  | [ ] Diet controlled only |
| [ ] SGLT2i | [ ] Other (please specify): |
| [ ] DPP4i |
| Insulin (types of insulin and dose(s)) |
| **Patient primary specialist team? Pick single most relevant/ primary issue** |
| [ ]  Gastroenterology  | [ ]  Abdominal surgery |
| [ ]  Neurology | [ ]  Head and neck surgery |
| [ ]  Stroke | [ ]  Other surgery, please specify: |
| [ ]  Critical Care |
| [ ]  Medicine other (please state):  | [ ]  Other Specialty, please specify: |

In the 2 days prior to this review was the patient’s location moved e.g., ITU to the ward or imaging: [ ]  Yes [ ]  No

If the patient was moved, did it have a negative impact on the patient’s glucose control?

[ ]  Yes [ ]  No If yes, please give some details if possible:

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|  **Reason for current use of enteral feed** |
| [ ]  Stroke  | [ ]  Malnutrition |
| [ ]  Head and/or neck surgery | [ ]  Upper abdominal surgery  |
| [ ]  Head and/or neck malignancy | [ ]  Other abdominal surgery  |
| [ ]  Other neurological condition  | [ ]  Other surgery  |
| [ ]  Oesophageal-gastric diseases | [ ]  Other condition, (please specify) … |

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| **Specialist input prior to starting feed (tick all that apply)** |
| [ ]  Specialist nutrition team | [ ]  Speech and language therapy |
| [ ]  Dietitian  | [ ]  Specialist Diabetes Nurse |
| [ ]  Gastroenterology | [ ]  Specialist Diabetes Consultant/SPR |

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| **How was glucose managed in the 48 hours before commencing feed (tick all that apply)** |
| [ ] Metformin | [ ] GLP1: Oral [ ]  Subcutaneous[ ]  |
| [ ] Sulphonylurea | [ ] Pioglitazone |
| [ ] Insulin  | [ ] Diet controlled only |
| [ ] SGLT2i | [ ] Other (please specify): |
| [ ] DPP4i  |
| **Glucose control in the 48 hours prior to commencing feed:** |
| Total number of glucose readings between 6.0-12.0 mmol/L: |  |
| Number of glucose readings 4.0- 5.9 mmol/L:  |  |
| Number of glucose readings < 4.0 mmol/L:  |  |
| Number of glucose readings > 12.0 mmol/L:  |  |
| Total number of glucose readings taken: |  |
| **If prescribed insulin prior to feed what was it? (tick all that apply):** |
| Insulin Type | Prescribed dose/timing |
| Premixed insulin:[ ]  Mix 25/75 [ ]  Mix 30/70[ ]  Mix 50/50 |  |
| [ ]  NPH insulin |  |
| [ ]  Long-acting analogue insulin |  |
| [ ]  Quick acting insulin |  |
| [ ]  Other, please specify: |  |
| [ ] Variable rate intravenous insulin infusion | Total dose received in previous 48hrs: |

**Day 1 – Prescribed feeding regime, once established on full feeding regimen**

Name of feed(s) ………….

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| **Prescribed feeding regimen based on a full 24-hour period** |
| [ ]  24-hour Continuous  |
| [ ]  One feed with a break  | Total number of hours of feed ……….. |
| [ ]  Two different feeds with breaks | Total number of hours of feed ……….. |
| [ ]  Bolus feed (please specify number of bolus feeds prescribed): |  Total number of hours of feed ……….. |
| [ ]  Other (please specify):………………. |
| Calculated calories/24 hours |  |
| Rate of feed (volume per hour) |   |
| Total volume of feed in 24 hrs |  |
| Total carbohydrate content of feed during 24hrs |  |
| Is the patient eating and/or drinking in addition to feed? | [ ]  Yes [ ]  No |

**Day 2 – (**if different to day 1)

If day 2 same as day 1 select here [ ]

Name of feed(s) ………….

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| **Feed duration and Regimen based on the second full 24-hour period from day 1**: |
| [ ]  Continuous  |
| [ ]  One feed with break  | Total number of hours of feed ……….. |
| [ ]  Two feeds with breaks | Total number of hours of feed ……….. |
| [ ]  Bolus feed (please specify number of bolus feeds prescribed): |  Total number of hours of feed ……….. |
| [ ]  Other (please specify):………………. |
| Calculated calories/24 hours |  |
| Rate of feed (volume per hour) |   |
| Total volume of feed in 24 hrs |  |
| Total carbohydrate content of feed in 24hrs |  |
| Is the patient eating and/or drinking in addition to feed? | [ ]  Yes [ ]  No |

**Was the insulin chosen specifically to match the glucose elevating effect of the feed regimen?** [ ]  Yes [ ]  No [ ]  Don’t Know

**OR….**

**Was the feed regimen chosen to specifically match the glucose lowering effect of the insulin?** [ ]  Yes [ ]  No [ ]  Don’t Know

VRIII may have been continued initially when feed is commenced but is then frequently switched to a subcutaneous insulin regimen. For the two days reported, what was the prescribed insulin regimen?

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| **Feed related insulin regimen (tick all that apply):** |
| Premixed insulin:[ ]  Mix 25/75 [ ]  Mix 30/70[ ]  Mix 50/50 |
| [ ]  NPH insulin |
| [ ]  Long-acting analogue insulin |
| [ ]  Quick acting insulin |
| [ ]  Other (please specify) …………………………….. |

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| Patients may be given enteral feeding for prolonged periods. Please select a consecutive 48-hour period, commencing at the start of an enteral feed and complete the table below for the hours that information is available. This is likely to run over three calendar days.  |
| **Day 1** |
| **Time** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Mark (x) in each cell that feed was given |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin type B = BasalQA = Quick actingM = MixedV = VRIII |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin dose (units) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Glucose (mmol/L) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Comments: |
| **Day 2** |
| **Time** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Mark (x) in each cell that feed was given |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin type B = BasalQA = Quick actingM = MixedV = VRIII |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin dose (units) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Glucose (mmol/L) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Comments: |

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| **Day 3** |
| **Time** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Mark (x) in each cell that feed was given |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin type B = BasalQA = Quick acting M = mixedV = VRIII |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Insulin dose (units) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Glucose (mmol/L) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Comments: |

Other comments:

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| Summary of glucose control while on enteral feed. Some patients will be on prolonged enteral feeding. **Please provide the total number of days on feed and look at the glucose record for a maximum of five consecutive days, including the two days you’ve reported.** |
| Total number of days using enteral feeding |  |
| Total number of glucose readings performed during previous five consecutive days of enteral feeding |  |
| **Glucose control during the feed rest period** |
| Total number of glucose readings performed in the rest period between feeds (leave blank if continuous feeding) |  |
| How many readings were 6.0-12.0 mmol/L  |  |
| How many readings were 4.0-5.9 mmol/L  |  |
| How many readings were <4.0 mmol/L  |  |
| How many readings were >12.0 mmol/L  |  |
| **Glucose control during the feed** |
| How many readings were 6.0-12.0 mmol/L  |  |
| How many readings were 4.0-5.9 mmol/L  |  |
| How many readings were <4.0 mmol/L  |  |
| How many readings were >12.0 mmol/L  |  |
| Were there any periods where feed was unexpectedly interrupted? | [ ]  Yes | [ ]  No | [ ]  Don’t know |
| In your opinion did this result in glucose levels outside of nationally recommended targets (capillary glucose outside of the range 6.0-12.0 mmol/L) | [ ]  Yes | [ ]  No | [ ]  Don’t know |
| If yes above, was it (select all that apply): | [ ]  <4.0 mmol/L | [ ]  <6.0 mmol/L | [ ]  >12.0 mmol/L |
| Were there any untoward incidents during the enteral feed? | [ ]  Yes | [ ]  No |
| If yes please describe the untoward incident/s:  |
| Was any other oral fluid given? | [ ]  Yes | [ ]  No |
| Was any other intravenous fluid given? | [ ]  Yes | [ ]  No |

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| **Comments:** |
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| If you have further comments please add below or email directly. |
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Please return this form by secure email to: danielflanagan@nhs.net