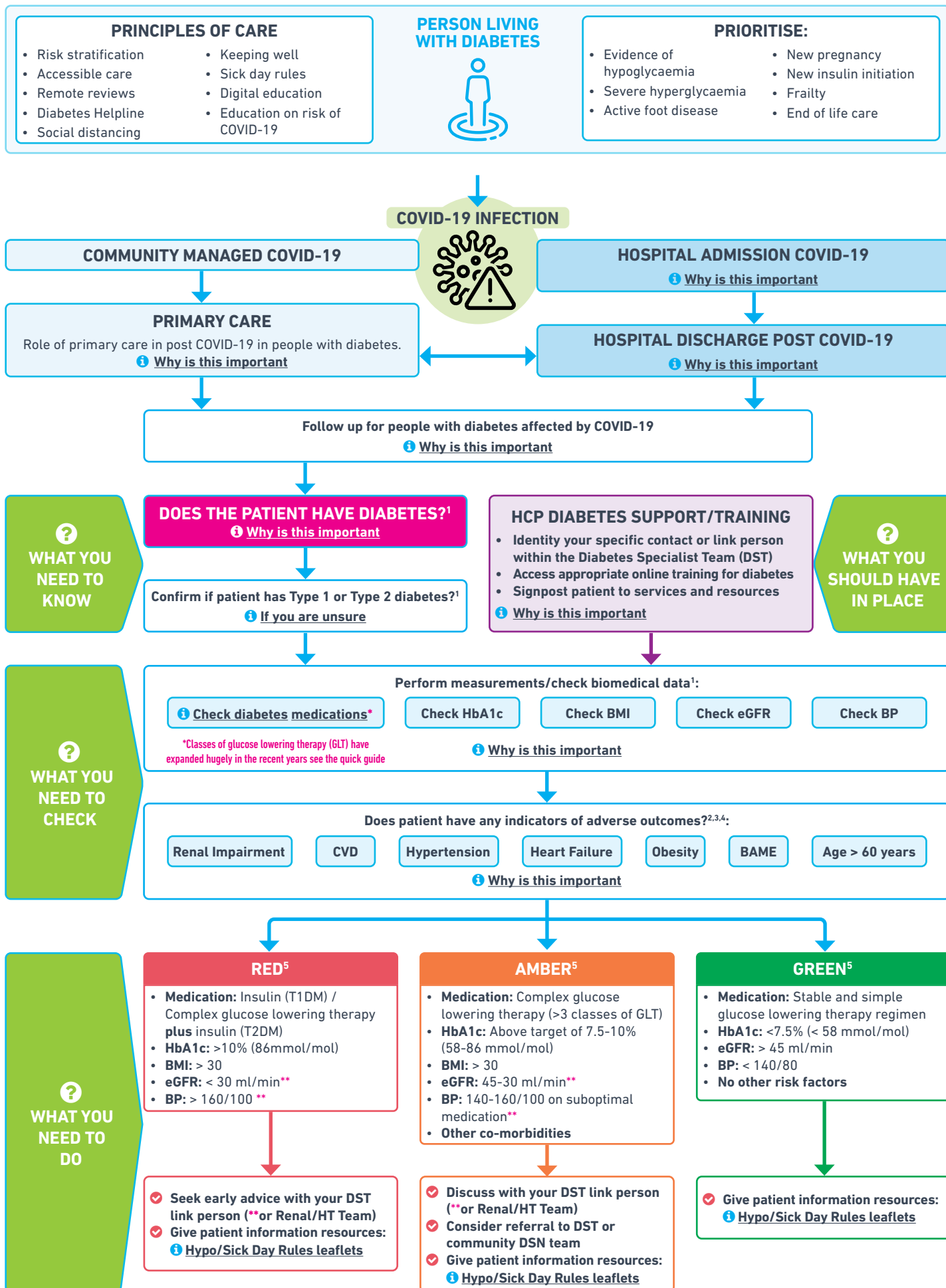


INTEGRATED CARE PATHWAY FOR PEOPLE WITH DIABETES IN THE TIME OF COVID-19



PATHWAY GUIDANCE/INFORMATION

DOES THE PATIENT HAVE DIABETES?

- 30% of patients hospitalised with COVID-19 have diabetes¹
- People with type 1 and type 2 diabetes have a relative increased risk of in-hospital mortality from COVID-19 (T1DM x 3, T2DM x 2)¹

PERFORM MEASUREMENTS/CHECK BIOMEDICAL DATA:

- Increased COVID-19 related mortality was not just associated with cardiovascular and renal complications of diabetes but also glycaemic control and BMI¹
- There was a correlation for HbA1c above 7.5% in type 2 diabetes and a HbA1c of 10% or higher in type 1 diabetes and increased the COVID-19 mortality rates¹

DOES PATIENT HAVE ANY MARKERS OF ADVERSE OUTCOMES?

- Male sex, old age, renal impairment, non-white ethnicity, social economic deprivation, a previous stroke and heart failure were also indicators of increased COVID-19 related mortality.²
- Diabetes status increases the need for medical interventions during COVID-19 and increased mortality risk patients with COVID-19. Well controlled blood glucose levels correlated with improve outcomes in infected patients³
- Association between COVID-19 related deaths and deprivation. There was substantially more deaths in the most deprived areas than in the least deprived areas, particularly individuals with type 1 and type 2 diabetes than those without diabetes⁴

PRIMARY CARE FOLLOW UP: ROLE OF PRIMARY CARE IN PRE AND POST COVID-19 IN PEOPLE WITH DIABETES

- Aggressive risk factor control in people with diabetes in the primary care setting focusing on the [9 Care Process](#).
- Annual flu and COVID 19 vaccination.

Post discharge:

- Encourage patients to embrace diabetes self-management self management support (e.g. reminders, alerts)
- Use evidence based Clinical Decision Support (e.g. protocols, guidelines)
- Provide information on post COVID support. NHS England. Your COVID recovery. 2020. www.yourcovidrecovery.nhs.uk.
- Video and other remote review 1 month post discharge
 - Assess glycaemic profile.
 - Diabetes distress/mental health
 - Adherence to medications
- Repeat HbA1c after 3 month
 - Consider POCT OR HbA1c, ACR etc
- Ensuring seamless communication and collaboration between primary and secondary care services

- Diabetes UK: [Advice for healthcare professionals on coronavirus \(COVID-19\) and diabetes](#).

MAINTENANCE AND DELIVERY OF SPECIALIST DIABETES SERVICES IN HOSPITAL MANAGEMENT

Under the leadership of Professors Gerry Rayman and Partha Kar, a group of Specialists in Diabetes have produced several key pieces of guidance describing the maintenance and delivery of specialist diabetes services for hospitals. Within this published guidance there is a focus on maintaining and adapting inpatient diabetes services to support people with diabetes who are admitted to hospital during the COVID-19 pandemic. The documents are primarily intended for those involved in delivering and redesigning diabetes services in the light of the pandemic. However the National Inpatient diabetes COVID-19 group guidelines are written with non-specialist front-line staff in mind. Included within the documents are:

- A template based on the NHS 'Clinical guide for the management of acute diabetes patients during the coronavirus pandemic', which may be useful when reviewing your diabetes service
- Detailed documents outlining how to maintain patient flow and patient safety across the interface between community and inpatient care.
- Easy to use clinical guidance documents on in hospital management of people presenting to secondary care with diabetes and covid-19
- A checklist to support safe discharge and a patient information leaflet for use at the point of discharge from hospital

The links below will take you directly to all the documents. These may have been adapted by diabetes teams or rapidly implemented as they are dependent on local service needs.

- [ABCD Guidance](#)

HCP DIABETES SUPPORT/TRAINING

Short blended / digital education interventions for HCP (including non specialists) to enable safe and ongoing care for people living with diabetes (Type 1 and 2) with COVID-19.

Areas that are included:

- CaReMe (Cardiac, Renal and Metabolic care of the person with multimorbidity)
- Metabolic control, 3Ts, BP/ Weight
- Mortality and COVID-19
- Lifestyle support
- Risk of T2DM
- Psychological Support
- Sick day rules / hypo/ hyper/ SGLT2i / ACEi / ARB / Metformin
- ABCD: www.abcd.care/dtn/education

Potential stages of HCP education and Patient intervention:

- Prevention
- Inpatient
- Primary Care – post admission or COVID-19 with non-admission
- COVID-19 new diagnosis of diabetes following COVID-19 admission?
- Long COVID-19 will be in rehab pathway

For more information contact us on:

- www.edendiabetes.com
- eden@uhl-tr.nhs.uk

PATIENT DIABETES SUPPORT/TRAINING

Some trusted sources of information include:

- NHS: www.nhs.uk/conditions/diabetes/
- Diabetes UK: www.diabetes.org.uk
- Leicester Diabetes Centre: www.leicesterdiabetescentre.org.uk
- MyDESMOND Education Programme: www.mydesmond.com
- ABCD: www.abcd.care/dtn/education
- MyType1Diabetes: www.mytype1diabetes.nhs.uk
- T1 Resources: www.t1resources.uk

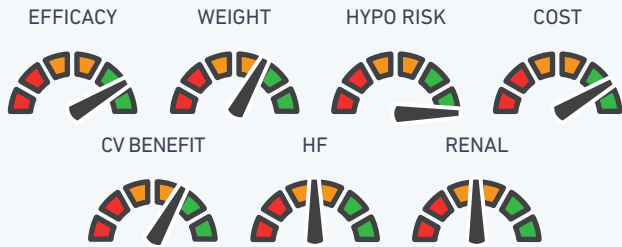
REFERENCES

- [Holman et al. Lancet Diabetes Endocrinol 2020; 8: 823–33](#)
- [Williamson et al. Nature 2020; 584: 430–436.](#)
- [Zhu et al. Cell Metab 2020; Jun 2;31\(6\):1068–1077.e3.](#)
- [Barron et al. Lancet Diabetes Endocrinol. 2020; 8: 813–22](#)
- [ABCD. A Quick guidance to Risk Stratification and recovery of Diabetes Services In the post – Covid-19 Era 2020](#)

QUICK GUIDE TO GLUCOSE LOWERING AGENTS (EXCLUDING INSULIN)

BIGUANIDES

Agents: Metformin

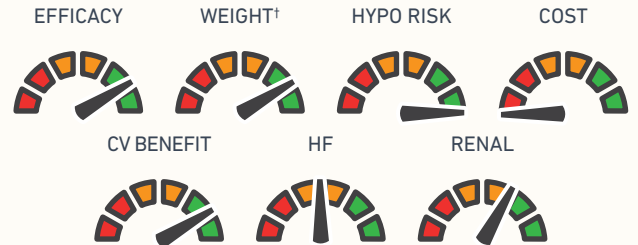


Side Effects:

- GI symptoms
- Vitamin B12 deficiency
- Rare cases of lactic acidosis

GLP-1 RECEPTOR AGONISTS

Agents: Exenatide, Dulaglutide, Liraglutide, Semaglutide, Lixisenatide



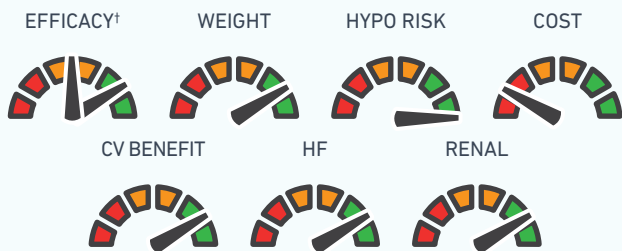
Side Effects:

- Risk of thyroid C-cell tumors
- GI side effects common
- Injection site reactions
- Acute pancreatitis risk

†Weight loss varies across the class.

SGLT2 INHIBITORS

Agents: Canagliflozin, Dapagliflozin, Empagliflozin, Ertugliflozin



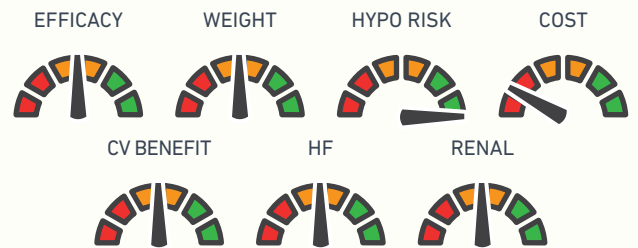
Side Effects:

- ↑ Amputations (canagliflozin)
- ↑ Genital infections
- ↑ Risk of DKA
- ↑ Risk of Fournier's gangrene
- ↑ Risk of fractures (canagliflozin)
- ↑ Risk of volume depletion

†Efficacy depends on renal function.

DPP-4 INHIBITORS

Agents: Sitagliptin, Saxagliptin, Linagliptin, Alogliptin

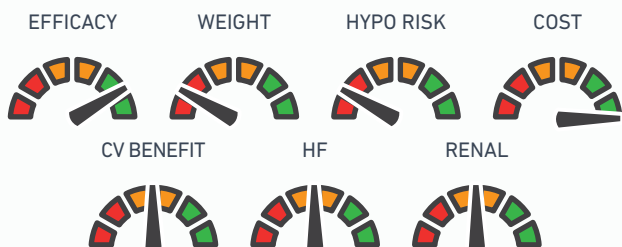


Side Effects:

- Rare urticaria/angioedema
- ↑ HF (saxagliptin)
- Potential acute pancreatitis risk
- Arthralgia

SULFONYLUREAS

Agents: Glibenclamide, Glipizide, Glimepiride

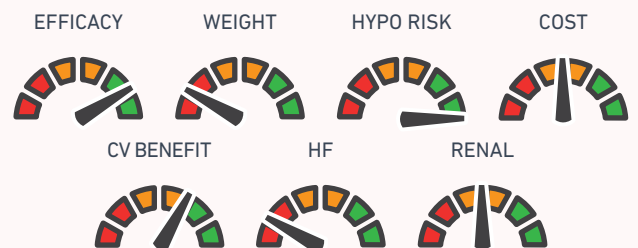


Side Effects:

- Increased risk of cardiovascular mortality based on studies of the older sulfonylurea tolbutamide
- ↑ Risk of hypoglycemia

THIAZOLIDINEDIONES

Agents: Pioglitazone, Rosiglitazone



Side Effects:

- ↑ Congestive heart failure
- ↑ Bone fractures
- ↑ Bladder cancer (pioglitazone)
- ↑ Fluid retention (edema)