# Diabetes

## A Implications

People with diabetes are more susceptible to infection and are at significantly higher risk of adverse outcome during an influenza pandemic, including increased mortality. Sub-optimal diabetes control impairs natural immunity to infection and delays recovery. Infection itself further aggravates dysglycaemia, leading to a classical adverse vicious cycle. Optimising glycaemic control during acute infection is a fundamental principle of diabetes management.

In addition diabetes is associated with the development of well-recognised long-term complications which will further increase risk of comorbidity and mortality during an influenza pandemic. There will be special considerations for patients with renal impairment (nephropathy), but in particular the greater prevalence of underlying coronary heart disease is likely to lead to increased acute cardiac events, known to be triggered by influenza infection.

Influenza vaccination has been shown to reduce hospital admissions among people with diabetes and to lessen associated complications (such as pneumonia) and mortality. It is uncertain whether vaccination, either in terms of supply or specificity, will be available for such an anticipated influenza pandemic.

These considerations will have major implications for diabetes services throughout all healthcare sectors – primary care, community and acute hospital (secondary/tertiary) care. Influenza infection is likely to result in a substantial need for acute diabetes service provision, with increased hospitalisation (presently diabetes occurs in 15% of patients in hospital, and this figure is likely to be higher during a pandemic).

Rapid emergency access clinics need to be established to cope with the likely need for significant increase in new insulin conversions. Close communication between primary care and specialist teams will be essential to ensure that diabetes service provision is at its most effective and efficient. At the same time, although routine aspects of diabetes care will be deferred, many patients with diabetes will continue to have special needs requiring immediate attention, and these clinical care pathways will need to be preserved and carefully controlled. Where possible educational initiatives should be put in place prior to an anticipated influenza pandemic to prepare patients with diabetes for self-management issues that will arise (effect of infection on diabetes control, need to increase blood glucose monitoring, appropriate insulin dose adjustment, when to seek advice from a healthcare professional.

## B Contingency planning – secondary care services

### Outpatient activity

- Cancel/defer all ‘routine’ follow-up consultations for a four-month period.
- Determine minimum staff required to provide essential specialist services.

- Identify high-risk cases that still need to be seen under the access/follow-up card system (see Appendix), including patients with:
  - disabling hypoglycaemia (Yellow Card)
  - new type 1 diabetes requiring urgent insulin treatment (Yellow Card)
  - diabetes and who are pregnant (Yellow Card)
  - serious diabetic complications, such as:
  - incipient gangrene/critical ischaemia of foot (Yellow Card)
  - visually threatening retinopathy (Yellow Card)
  - stage 4 renal failure (Yellow Card).

### Acute metabolic disturbance

People with diabetes suffering from acute influenza infection are likely to experience deterioration in glycaemic control, resulting in a number of potentially emergency situations:

- diabetic ketoacidosis (likely need for admission: Yellow Card)
- hyperosmolar dysequilibrium (likely need for admission: Yellow Card)
- requirement to increase existing medication (increase in oral hypoglycaemic tablets, increased insulin dosage, increased need to convert from tablets to insulin all likely to require specialist healthcare professional input: Yellow Card).

### Inpatient diabetes management

It is expected that there will be a significant increase in numbers of people with diabetes requiring hospital admission, which therefore will, in turn, result in a need for increased specialist diabetes support to ward areas. An increase in inpatient care in the event of a pandemic will necessitate:

- deploying a greater proportion of specialist teams (medical/nursing) to acute ward areas
- providing specialist advice on diabetes to facilitate early discharge from hospital.

## C Communication with primary care

Good communication channels are essential in order to:

- ensure optimal management of diabetes in the community to minimise need for hospital admission
- facilitate early discharge from hospital
- provide immediate/rapid advice on management of diabetes.

## D Primary care services

GPs and healthcare professionals working in the community will shoulder a major impact from an influenza epidemic and the consequences to people with diabetes. Currently 90% of diabetes management is undertaken in primary care. This will therefore entail specific contingency planning in the event of an influenza pandemic:

- All routine diabetes reviews should be suspended.
- Emergency access for 'acute' diabetes-related problems will be needed.
- Rapid, effective communication channels to the multidisciplinary specialist team should be established.
- Clinical care pathways for high-risk complications eg foot ulceration, incipient gangrene, should continue (Yellow Card).
- Retinal screening programmes could be maintained (as separate from clinical services), although are likely to be disrupted because of patient and staff illness (Yellow Card, if capacity allows).

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