

# COVID-19: psychological issues for people with diabetes and health care staff

**COVID-19 has frightened us all. Not only are we at risk of a potentially fatal infection, but our governments' efforts to protect us have separated us from our families and disrupted our lives. People with diabetes are especially vulnerable. Dr Rowan Hillson looks at lessons from past disasters and pandemics to highlight the emotional effects of this pandemic on people with diabetes and health care professionals.**

We've all been affected by the COVID-19 pandemic, some closely and tragically. To readers who have lost family members, friends, or colleagues, I give heartfelt condolences. Each death was not just a statistic but the loss of a much loved and valued person.

All of us will experience emotional effects from this modern plague and our nations' attempts to fight it. Spare a thought for people in past epidemics.

In plague epidemics in England in the 17th century the local constable would padlock the door of any house in which someone had died of plague, with the living inhabitants inside. A red cross and 'Lord have mercy upon us' were written on the door, and the house was guarded by watchmen to make sure no-one left or entered.<sup>1</sup>

The United Nations pointed out that 'Although the COVID-19 crisis is, in the first instance, a physical health crisis, it has the seeds of a major mental health crisis as well, if action is not taken.'<sup>2</sup>

## People with diabetes

Early in the UK COVID-19 outbreak the UK government warned people with diabetes among others: 'You are clinically vulnerable, meaning you are at higher risk of severe illness from coronavirus. You should take particular care to minimise contact with others outside your household.' They were not classed as 'extremely vulnerable'.<sup>3</sup>

Between 1 March and 11 May 2020, one-third of people with

COVID-19 who died in hospital in England had diabetes. After adjusting for confounders, the odds of dying in hospital with COVID-19 for people with diabetes compared with people without diabetes were 2.86 with type 1 diabetes and 1.81 with type 2 diabetes.<sup>4</sup> Overall, 'deaths in people with diabetes in England have more than doubled during the COVID-19 epidemic. Hyperglycaemia and obesity in both type 1 and type 2 diabetes were independently associated with increased COVID-19 mortality'.<sup>5</sup>

This news has rightly received widespread publicity and is causing understandable fear and anxiety among people with diabetes, especially at a time when the UK lockdown is gradually easing. GPs and diabetes teams can do much to help reduce their patients' risk factors, and to provide support.

'It is important for governments and other actors to communicate about COVID-19 in ways that promote mental health and psychosocial well-being... Such communication should be communicated with empathy and include advice on emotional well-being. Undue anxiety caused by inconsistent, incomprehensible or threatening communication needs to be avoided.'<sup>2</sup>

It is vital that public information is accurate. The top 69 viewed YouTube videos on coronavirus or COVID-19 were analysed. These had had 257,804,146 views. Non-factual information was found in 27.5% of videos totalling 62,042,609 views. Government or professional videos had high-quality factual information but accounted for only 11% of videos and 23,807,528 views. It is extremely worrying that far more people viewed non-factual or fake information than accessed correct information about COVID-19.<sup>6</sup>

Laura, 28, has type 1 diabetes. She works as an ambulance technician. Laura and her partner, a police officer, both developed COVID-19. 'When the worst few days were over, I found limiting the news channel to

an hour a day and focusing on positive things which helped lower my stress levels such as painting and reading and gardening now I'm up and about. Our mental health is so important and even more so through this unprecedented time; I can't begin to tell you how inspired and motivated I have been from the diabetic community and especially seeing all of the type 1 key workers and frontliners out there showing strength and unity.

'Right now, I'm feeling positive and looking forward to returning to my job on the frontline... I don't know whether it was because I have type 1 diabetes that I experienced worse symptoms than my partner did... Needless to say that being a type 1 diabetic and testing positive for COVID-19 was a scary and emotional pill to swallow but we just took it day by day. I keep myself very fit and healthy which I do believe helped me recover so well.'<sup>7</sup>

## Diabetes in natural disasters and epidemics

There are few studies of the psychological effects of natural disasters or epidemics on people with diabetes. People with diabetes are already at risk of psychological problems, and people with severe mental health disease are more likely to have diabetes than the general population. A US meta-analysis found that having diabetes doubled the risk of depression compared with the general population.<sup>8</sup> Anxiety is also common among those with diabetes – in one systematic review, 14% of people with diabetes had generalised anxiety disorder and 40% elevated symptoms of anxiety.<sup>9</sup>

The common factor of disasters or epidemics is major disruption. During the COVID-19 pandemic people have been confined to home, unable to visit relatives, working differently or not at all, some supplies have been disrupted, health care arrangements have changed or paused, international travel has virtually ceased. People with diabetes

have been worrying about getting the right food, insulin and other supplies, accessing their usual diabetes services, cessation of care at home, for example foot care. They may not have sought medical help when needed.

An elderly acquaintance cancelled an important hospital appointment because he was convinced he would catch the coronavirus from hospital staff. Others don't want to trouble the busy NHS. Non-COVID-19 deaths during the pandemic appear to have increased.<sup>10</sup>

Several studies have shown that glycaemic control worsens in people with diabetes affected by natural disasters, for example flooding.<sup>11</sup> Hurricane Katrina struck New Orleans and the surrounding area in 2005, affecting about a million people. 'In the subsequent weeks following the hurricane, financial loss, loss of personal belongings, and occasionally bereavement led to severe depression impacting diabetes in many patients.'<sup>12</sup>

The Great East Japan earthquake was followed by a tsunami which caused the Fukushima Daiichi nuclear accident. About 20,000 people died, and hundreds of thousands were displaced from their homes.<sup>13</sup> In Rikuzentakata, the hospital was washed away. Later, 63 people with diabetes who returned were seen in a makeshift clinic: '[G]lycaemic and BP controls of the 28 tsunami-affected patients worsened more than the 35 who had been affected by the earthquake alone.'<sup>14</sup> Worsening glycaemic control in other survivors of the Japanese earthquake was significantly associated with 'psychological stresses, stress-related somatic symptoms, sleep disturbances or anxiety, and social dysfunction' after adjustment for confounding factors.<sup>15</sup>

### The general population and the pandemic

The United Nations states that: 'Good mental health is critical to each country's response to, and recovery from, COVID-19.' Those most at risk of psychological problems are health care workers, older people, young people, those with pre-existing mental health conditions, and those in conflict situations.<sup>2</sup>

### Young people

Among young people and adolescents, stress and social isolation may affect brain health and development. A UK survey during the COVID-19 pandemic found that 83% of 2111 young people with a history of mental health needs felt their mental health was worse. A quarter were no longer able to access their usual mental health support. 'All my plans are cancelled, which means I have nothing to look ahead to and you find yourself trapped in a void of your own thoughts.' 'I have an eating disorder, and it has brought up so many urges to relapse to take control.'<sup>16</sup>

### Older people

Diabetes is common in older people. Social isolation, reduced intellectual stimulation, and reduced physical activity increase the risk of cognitive decline and dementia in older people. One US analysis concluded: 'We found that social disconnectedness predicted higher amounts of perceived isolation, which in turn predicted higher amounts of depression and anxiety symptoms. In the reverse direction, depression and anxiety symptoms predicted higher amounts of perceived isolation, which in turn predicted higher amounts of social disconnectedness.'<sup>17</sup>

Many supporting resources during the COVID-19 pandemic are online, and while many older people are IT proficient, some are not. A nursing journal commented: 'There is... a need to recognise that older people who previously had not reported being socially isolated and lonely may be disproportionately affected by the requirements of social isolation due to COVID-19, because of the removal of social contacts, which may have occurred during grocery shopping, attending community groups and places of worship and other day-to-day activities.'<sup>18</sup>

### Quarantine and lockdown

Around the world, millions are experiencing various degrees of lockdown or quarantine. A recent rapid review of the psychological impact of quarantine included 21st century outbreaks of the coronavirus infections severe acute respiratory syndrome (SARS) and Middle East respiratory

syndrome (MERS), the influenza A virus H1N1, and Ebola. The combined reports described emotional disturbance, low mood (in 73%) or depression, irritability (57%), stress, insomnia, and emotional exhaustion. During isolation, 20% were frightened, 18% nervous, 18% sad, and 10% felt guilty. Surprisingly, 5% were happy, and 4% relieved. Some reported confusion.<sup>19</sup>

Among 129 people quarantined in the Toronto SARS outbreak, 28.9% had post-traumatic stress disorder (PTSD) and 31.2% were depressed. The longer the quarantine, the more likely people were to have PTSD. Knowing or being exposed to someone with SARS increased the likelihood of PTSD or depression.<sup>20</sup>

'During the Korean MERS epidemic, 80.2% of the general public reported fear of being infected, and 46% reported emotional distress. Risk factors associated with increased rates of fear were... concern about public transportation use, difficulty going outside, perception that the state is not protecting the people, helplessness in situations that cannot be controlled, and fear of infection.' Among 1692 people quarantined because of contact with MERS, 36 had MERS. 'Of those who refused to participate, 65 individuals (4.8%) showed strong refusal to participate in the study with profanity and ranting.' MERS patients were mostly isolated in hospital (a third had caught the infection in hospital); they had less access to food and water, bathing, and self-care products than those isolated but not infected. During isolation, among MERS patients, symptoms of anxiety were experienced by 47.2% compared with 7.6% of non-infected people; anger was reported by 52.8% and 16.6% respectively. Four to six months after isolation ended, anxiety occurred among MERS patients in 19.4% compared with 3.0% among non-infected people; anger in 30.6% and 6.4% respectively.<sup>21</sup>

### Health care staff

In a Chinese study of 1257 health care staff in 34 hospitals during the COVID-19 pandemic, 50.4% had depression, 44.6% anxiety, 34.0%

insomnia, and 71.5% distress. The 60.5% of staff working in Wuhan had more severe psychological symptoms as did staff directly engaged in the diagnosis, treatment and care for patients with COVID-19.<sup>22</sup>

'In the fight against the 2019 novel coronavirus (2019-nCoV), medical workers in Wuhan have been facing enormous pressure, including a high risk of infection and inadequate protection from contamination, overwork, frustration, discrimination, isolation, patients with negative emotions, a lack of contact with their families, and exhaustion. The severe situation is causing mental health problems such as stress, anxiety, depressive symptoms, insomnia, denial, anger, and fear. These mental health problems not only affect the medical workers' attention, understanding, and decision making ability, which might hinder the fight against 2019-nCoV, but could also have a lasting effect on their overall wellbeing.' Chinese authorities set up psychological support measures for medical workers in Wuhan.<sup>23</sup>

Among Beijing hospital staff after SARS: 'Work exposure, any quarantining during the outbreak, and if a relative or friend got SARS were all strongly associated with high PTS symptom levels. Among the group with high PTS symptoms, nearly one-half (46.9%) had worked in locations where staff had high levels of exposure to SARS patients, while less than one-quarter of those with low PTS symptoms (22.1%) had worked in those areas.' Staff who had a sense of altruism towards their health care work were less likely to have PTS. PTS symptoms persisted for three years in 40% of affected staff.<sup>24</sup>

Among hospital staff in a Taiwan hospital, the 5% who developed acute stress disorder were more likely to have been quarantined as potential SARS contacts than non-quarantined staff. After the outbreak, 20% of staff felt stigmatised and rejected in their neighbourhood; 9% did not want to work or had thought about resigning.<sup>25</sup>

In Singapore among health care workers who were caring for COVID-19 patients, 14.5% had anxiety, 8.9% depression, 6.6% stress,

and 7.7% PTSD. Surprisingly, anxiety was greater among non-medical health care workers (20.7%) than in medical staff (10.8%) after adjusting for confounders.<sup>26</sup>

In China, health care staff were sent to help colleagues in Wuhan and Hubei. A study compared front-line nurses caring for COVID-19 patients, non-front-line nurses and members of the general public. Vicarious traumatisation scores for front-line nurses were lower than those of non-front-line staff which were similar to those of the general public.<sup>27</sup>

### Kindness

Despite the tragedies and challenges that surround us, the British sense of humour is still alive. John Pritchard from Essex wrote: 'I am becoming fed up with being fed up.'<sup>28</sup>

Just before UK lockdown started easing, the Opinions and Lifestyle survey found that worry about COVID-19 had fallen from 80% the previous week to 75%, and wellbeing issues from 48% to 42% (this included worry about the future, stress, anxiety, and, for half, boredom). Inability to make plans affected 44%. 'Nearly 4 in 10 (39%) adults believed that Britain was somewhat or very kind before the coronavirus pandemic, and a larger proportion of just under 7 in 10 (67%) said that Britain would be kind once we have recovered from the coronavirus pandemic.'<sup>29</sup>

### Summary

We have all been affected in some way by the ongoing COVID-19 pandemic.

Pandemics and natural disasters inevitably have psychological effects which may be profound and long-lasting.

People most at risk of psychological problems include health care staff, older people, adolescents and young people, those with pre-existing mental health conditions, and those in conflict situations.

Deaths in people with diabetes have more than doubled in the COVID-19 outbreak. People with diabetes have over twice the risk of death with COVID-19 compared with the general population. People with diabetes are at risk and frightened and need good access to their

usual diabetes care services to provide education, to help improve their risk factors, and to give psychological support.

Depression and anxiety are common among people with diabetes.

Combined reports from the effects of quarantine in the SARS, MERS, and Ebola epidemics describe emotional disturbance, depression, irritability, stress, insomnia, and emotional exhaustion.

How is your patient with diabetes coping emotionally during this pandemic?

How are you and your colleagues coping?

**Rowan Hillson, MBE,**  
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for Diabetes

### Help

#### For people with diabetes:

- Diabetes UK helpline. [https://www.diabetes.org.uk/How\\_we\\_help/Helpline](https://www.diabetes.org.uk/How_we_help/Helpline) [accessed 14 May 2020].
- Public Health England. Every mind matters. [https://www.nhs.uk/oneyou/every-mind-matters/?WT.tsrc=Search&WT.mc\\_id=Brand&gclid=EAlalQobChMIg8CEg8ez6QIVCbLCh2VWAXdEAAAYASAAEgl0o\\_D\\_BwE](https://www.nhs.uk/oneyou/every-mind-matters/?WT.tsrc=Search&WT.mc_id=Brand&gclid=EAlalQobChMIg8CEg8ez6QIVCbLCh2VWAXdEAAAYASAAEgl0o_D_BwE) [accessed 14 May 2020].

#### For health care professionals:

- Free national confidential support helpline for NHS staff during the Covid-19 outbreak. Telephone 0300 131 7000, or text FRONTLINE to 85258.
- NHS Employers. Health and Wellbeing support for NHS staff. <https://www.nhsemployers.org/news/2020/04/new-staff-health-and-wellbeing-support> [accessed 14 May 2020].

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