

immigrants — are less able to advocate for their preferences and will be more dependent on the way that the services are organised.<sup>25,26</sup> Again, this is a whole team effort. Ridd *et al* refer to reception staff contributing to good patient–doctor encounters. More than simply assuring a ‘positive frame of mind’ for the clinical encounter, the reception staff can function as an extension of the relationship with the doctor. This requires that the reception staff are conceived as part of the care team and internalise the practice philosophy as much as the clinicians do.

Despite the large body of evidence supporting the importance of concentrating care in known and trusted providers, the continuing patient–doctor relationship still needs to be defended both within primary care and the wider health system. It requires personal and professional commitment by doctors to patients and to the rest of the care team, but it can easily be eroded in a context of constant system change. Research that brings together the qualitative dimensions of the relationship with quantitative measures of healthcare patterns may provide insight whether there is a critical zone of concentration of care at which the therapeutic benefits of continuity are compromised.

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## **Tired all the time: can new research on fatigue help clinicians?**

Over 10% of patients attending primary care clinics describe at least one month of substantial fatigue.<sup>1</sup> Despite its prevalence, many clinicians feel uncertain or dissatisfied with the level of care they are able to provide patients with persistent fatigue.<sup>2</sup> These anxieties are not without basis; up to two-thirds of patients with chronic fatigue report being dissatisfied with the quality of care

they receive.<sup>3</sup> GPs will tend to stereotype patients with chronic fatigue as having certain undesirable traits and will feel a sense of hopelessness regarding treatment options.<sup>4</sup> However, there is now an emerging body of research evidence which should provide GPs with a greater sense of certainty regarding their management decisions. Incorporating this evidence base

into clinical practice should allow clinicians to feel less helpless, and will hopefully result in improved outcomes for patients suffering from the debilitating effects of fatigue.

One of the main anxieties when managing a complaint of fatigue is how to begin and when to end investigations aimed at identifying any underlying physical disease. This difficulty stems from fatigue being a

very non-specific symptom, with very low yields from any particular investigation. There are, however, numerous cautionary tales of individuals who have suffered from delayed or missed diagnoses due to under investigation of fatigue.<sup>5</sup> A previous study based in the US demonstrated that even in a specialised clinic, only 2% of examinations provided diagnostic information, and laboratory investigations revealed an underlying cause in only 5% of patients.<sup>6</sup> However, fatigued patients seen in specialised clinics are different from those seen in general practice,<sup>7</sup> with some reports suggesting that much higher yields from investigations may be possible in the primary care setting.<sup>8</sup>

In this month's issue Koch and colleagues report the results of the VAMPIRE study, a Dutch-based study designed to investigate the value of blood-test ordering for a range of unexplained complaints, including fatigue.<sup>9</sup> By examining medical records they found that only 8% of patients presenting with fatigue had a blood-test detectable somatic illness diagnosed over a 1-year follow-up period. The vast majority of the disorders diagnosed could be detected from a very limited set of simple blood tests (haemoglobin, erythrocyte sedimentation rate, glucose, and thyroid stimulating hormone). The authors concluded that only a restricted range of blood tests should be ordered in cases of unexplained fatigue and that this should only be done after a 4-week wait.

While their results certainly support the advice of limiting the range of tests initially ordered, the issues surrounding the 4-week delay are less clear cut. Their results demonstrate that a clinician's initial perception about the cause of fatigue is often inaccurate and that most patients (78%) will not re-present for blood tests in 4 weeks. This low rate of re-presentation would be acceptable if patients were self-selecting on the basis of need, with higher rates of somatic disease in those who do return. However, based on the small numbers returning for tests in this study, such a selection process does not seem to occur, with similar levels of positive results found in both the immediate and the delayed blood test groups. Therefore, while some uncertainty remains regarding the timing of initial blood tests, GPs can be

confident that most organic causes of fatigue will be detected by a good history, physical examination, and a limited number of blood tests.

In order to be diagnosed with chronic fatigue syndrome (CFS) a patient's fatigue must be unexplained, present for at least 6 months and be accompanied by a range of cognitive and somatic symptoms.<sup>10</sup> The recently released NICE guidelines on the diagnosis and management of CFS also describe a much more extensive list of blood and urine investigations which should be performed on all patients with persistent fatigue.<sup>11</sup> Once established, CFS has a dramatic impact on patients' lives, with full recovery being rare in the absence of specific treatment.<sup>12</sup> However, effective treatments are now available, with NICE endorsing treatments such as cognitive behavioural therapy (CBT) and graded exercise therapy.<sup>11</sup>

Evidence for the effectiveness of CBT comes mainly from secondary care studies.<sup>13</sup> CBT delivered by GPs has tended not to be effective,<sup>14</sup> although more detailed studies of therapist-delivered psychological interventions in primary care settings are currently being conducted.<sup>15</sup> This does not mean there is an absence of evidence-based interventions for primary care clinicians to use now. GPs are particularly well placed to implement strategies aimed at preventing an episode of brief fatigue progressing to CFS.

A paper by Nijrolder *et al*,<sup>16</sup> also published in this issue, may provide further evidence to assist with such prevention strategies. This paper describes an observational cohort study of 642 patients who presented to primary care with a new episode of fatigue. A detailed list of baseline characteristics was considered in an attempt to identify what, if anything, would predict recovery versus chronicity of fatigue. The initial severity of fatigue and patient expectations of chronicity consistently predicted a poor outcome. As the authors point out, patient perceptions can be influenced and potentially modified by the advice provided early in the course of an illness. This early advice will often come from GPs. Based on other indirect evidence it is reasonable to assume that advice directed towards avoiding prolonged bed rest and establishing a sensible balance

between activity and rest is likely to be most helpful.<sup>17</sup>

Even with such preventative strategies, some patients will continue to present with chronic fatigue. At this point, GPs will justifiably ask 'What causes CFS?' Given the complex and heterogeneous nature of this syndrome, it is not surprising that a simple answer is not possible. Most will now accept that a multifactorial model of predisposing, triggering, and maintaining factors is most likely.<sup>18</sup> We know that some predisposing factors, such as being female, previously suffering from a psychiatric disorder, emotional instability, and having a disabling illness in childhood may be present many years before any fatigue is reported.<sup>19-21</sup>

Somewhat surprisingly, there is also evidence that being over-active as a child or young adult may increase the risk of CFS later in life.<sup>22</sup> The reasons for this apparently contradictory finding are not yet clear, although one possible explanation is that over-activity in childhood is associated with a 'hyperactive' or 'action-prone' personality.<sup>23,24</sup> This may make individuals more prone to develop physical complaints such as fatigue following a period of incapacity. There is good evidence that some cases of CFS are triggered by specific viral infections, but this does not appear to be necessary in all cases.<sup>25</sup>

Elevated pre-morbid stress has also been shown to be an important risk factor for some cases of chronic fatigue.<sup>20</sup> Despite persistent attempts, no compelling evidence for biological markers of established CFS has emerged to date. Many studies have found alterations to the hypothalamo-pituitary-adrenal axis, although prospective studies suggest these changes are not present in the early stages of the illness and are likely to be secondary to behavioural changes such as inactivity, de-conditioning, and sleep disturbance.<sup>26</sup> There is also no consistent pattern of immunological dysfunction, although a number of studies have reported some abnormal levels of T cells, natural killer cells, and cytokines.<sup>27</sup> The success of interventions like CBT suggests that behavioural patterns, such as a 'boom and bust' cycle of activity, may be particularly important in maintaining fatigue symptoms.<sup>13,28</sup>

There are obviously many questions still

to be answered about fatigue and CFS. However, when seeing a patient with fatigue, GPs can now be more confident about who is at risk for chronicity and what should be done to prevent this. Even when chronicity does occur, there are evidence-based interventions available. Managing non-specific symptoms will always present challenges, but in the case of fatigue, the mounting evidence will hopefully provide increased hope and guidance for GPs.

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## A fractured service: the latest advice on osteoporosis

Fragility fractures are common and place a heavy burden on individuals, health, and social care services. One in two women and one in five men will suffer a fracture after the age of 50 years.<sup>1</sup> About 20% of patients suffering a hip fracture die within a year as a result.<sup>2</sup> Each year, fractures account for 2 million hospital-bed days in England. This is more than cardiac ischaemia, diabetes, heart failure, or

chronic obstructive pulmonary disease.<sup>3</sup> Patients with hip fractures occupy one in five orthopaedic beds.<sup>4</sup> Half of those can no longer live independently as a result of the injury and one in five need residential care.<sup>5</sup> Considering the growing burden, fracture prevention is of great importance especially as the robust evidence for pharmacological treatments has shown them to be cost-effective irrespective of age.<sup>6</sup>

In this issue of the *BJGP* a Dutch team examines a case finding tool that is widely used in general practice in the Netherlands to select patients for referral for DXA (dual energy X-ray absorptiometry) scanning.<sup>7</sup> Specificity was found to be high (85.9%) but sensitivity was very low (19.5%). The team concluded that the tool 'is of little value to select patients for DXA measurement' and that the Dutch case