Department for Work & Pensions

Evaluation of the Statement of Fitness for Work (fit note): quantitative survey of fit notes

June 2013

Summary

Background

The Statement of Fitness for Work (known as a 'fit note'), was introduced in April 2010 across England, Wales and Scotland, with the aims of improving back to work advice for individuals on sickness absence; improving communication between individuals, doctors and employers on what a patient could do at work; and thereby reducing sickness absence levels. The Institute for Employment Studies (IES) and the University of Liverpool were commissioned by the Department for Work and Pensions (DWP) to conduct a quantitative assessment of the fit note to strengthen the evidence base on sickness certification and sickness absence.

Methods

A total of 49 practices, in five geographical regions, were recruited to assist in collecting data for the fit note evaluation for a period of a year. Data collection started in the first practice in October 2011 and the majority of practices had completed collection by January 2013. Details of fit notes issued to patients at each participating general practice were collected via the use of specially commissioned 'carbonised' pads of fit notes, which were entered into a database and analysed. In total 58,695 fit notes were collected from 25,000 patients across the 49 practices.

Key findings

- Over a third of the fit notes issued were for mild-to-moderate mental health disorders. The highest rates of fit notes being issued for Mild-to-moderate mental health disorders were in practices in the most socially deprived areas.

- Twelve per cent of patients had been given fit notes with a 'may be fit for work' assessment.

- GPs' use of the fit note varied significantly within and between practices including the use of the 'may be fit for work' option, the provision of return-to-work advice and indicating the need for reassessment at the end of the fit note period.

- Just over a fifth of fit notes were issued for a period of one week or less, around half for between one and four weeks, around a quarter for between a month and three months and the remainder for longer than three months.

- Almost one in five sickness absence episodes (covered by linked fit notes) lasted over 12 weeks and four per cent lasted longer than 28 weeks. Older people, males and those living in the most socially deprived areas were more likely to have a long-term sickness episode over 12 weeks.

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Abbreviations

DWP   Department for Work and Pensions

DZ   Data zones

GP   General practitioner

LSOA   Lower-level super output area

PCRN   Primary Care Research Network

URTI   Upper respiratory tract infection

Glossary of terms

Deprived practices

'Very highly deprived' practices were those issuing over 70 per cent of their total fit notes to patients living in one of the 40 per cent most socially deprived areas.

'Highly deprived' practices were those issuing 50-70 per cent of their total fit notes to patients living in one of the 40 per cent most socially deprived areas.

'Moderately deprived' practices were those issuing 20-50 per cent of their total fit notes to patients living in one of the 40 per cent most socially deprived areas.

'Lowly deprived' and 'very lowly deprived' practices were those issuing 10-20 per cent and under 10 per cent respectively to patients living in one of the 40 per cent most socially deprived areas.

Episode

A continuous period of ill-health involving a series of linked fit notes; only allowing for a break of no more than two weeks before each fit note for them to be treated as part of the same sickness absence episode.

Fit note (or Statement of Fitness for Work, Medical statement, Med3, Med5)

A form issued by doctors as evidence of the advice they have given on an individual's fitness for work and the normal method by which employees provide evidence of sickness to employers after the seventh day of absence.

Long-term fit note

A fit note lasting for over four weeks.

Long-term fit note episode

A linked series of fit notes lasting for longer than 12 weeks.

Sick note

The colloquial term for the medical statement in place prior to 6 April 2010 across England, Wales and Scotland.

Social deprivation

Deprivation of access to key aspects of the social world including income, employment, health, education, housing, crime and living environment.

Socially deprived areas

'Most socially deprived areas' cover patients living in the top 20 per cent of local area (LSOA or DZ) within their country of residence (England, Scotland or Wales). 'Least socially deprived areas' cover patients living in the bottom 20 per cent of local area (LSOA or DZ) within their country of residence.

Executive summary

A new medical statement (the Statement of Fitness for Work – known as a fit note), was introduced on 6 April 2010 across England, Wales and Scotland. Medical statements are issued by doctors as evidence of the advice they have given on an individual's fitness for work and are the normal method for employees to provide evidence of sickness to employers after the seventh day of absence. The new fit note has the option to record that an individual 'may be fit for work taking account of the following advice' and to indicate basic adjustments that could aid return to work. The fit note was introduced with the aims of improving back-to-work advice for individuals on a period of sickness absence; improving communication between individuals, general practitioners (GPs) and employers on what a patient could do at work and thereby reducing the length of sickness absence and getting people back to work more quickly.

As part of the broader programme of evaluation, the Institute for Employment Studies and the University of Liverpool were commissioned by the Department for Work and Pensions to conduct a quantitative assessment of the fit note to strengthen the evidence base on sickness certification and sickness absence. To achieve this, 49 GP practices in five areas of Great Britain collected the data from 58,700 fit notes distributed to 25,000 patients over a 12-month period between October 2011 and January 2013.

The findings reported here are based on an examination of the individual fit notes, the patients receiving fit notes and for episodes of sickness absence, covering linked fit notes. The ratios and numerical bases therefore vary depending on which is being discussed.

Key findings

- Over a third of the fit notes issued were for mild-to-moderate mental health disorders. The highest rates of fit notes being issued for mild-to-moderate mental health disorders were found in practices in the most socially deprived areas.

- There is some evidence that mild-to-moderate mental health disorders are a growing cause of sickness absence.

- Twelve per cent of patients had been given fit notes with the 'may be fit for work' advice. Because some patients received more than one 'may be fit for work' note, this accounted for six per cent of the total number of fit notes in the sample. In over a third of the notes where a 'may be fit for work' assessment had been advised, no additional written comments were provided.

- There was significant variation in GPs' use of the fit note, both within and between practices, including the use of the 'may be fit for work' option, the provision of return-to-work advice and indicating the need for reassessment at the end of the fit note period.

- Just over a fifth of fit notes were issued for a period of one week or less, around half for between one and four weeks, around a quarter for between a month and three months and the remainder for longer than three months.

- Almost one in five sickness absence episodes (covering linked fit notes) lasted over 12 weeks and four per cent lasted longer than 28 weeks. Older people, males and those living in the most socially deprived areas were more likely to have a long-term sickness episode.

- There is some evidence that the introduction of the fit note is having a positive effect in reducing long-term sickness absence.

A third of fit notes covered mild-to-moderate mental health disorders

By far the largest proportion of all fit notes in the study database was issued to patients for mild-to-moderate mental health disorders (including depression, anxiety and stress), accounting for 35 per cent of all fit notes issued. Specific back problems were cited on nine per cent of notes and a further nine per cent were issued to patients following a recent surgical operation. This pattern is repeated if the data is analysed by patient – a third (34 per cent) of the patients in the database received a fit note for a mild-to-moderate mental health disorder, 11 per cent for a back problem and ten per cent for a respiratory condition.

The proportion of fit notes that cited a mild-to-moderate mental health disorder as the reason for work incapacity varied significantly by practice size; from 23 per cent at a small practice in one region to 54 per cent at a large practice in another. The highest rates of mild-to-moderate mental health disorder certification were found in practices in the most socially disadvantaged areas. The proportion of notes with a back problem also varied widely between practices, from under four per cent in one to nearly 17 per cent in another in the same region. There seemed to be less of an association between fit notes for back problems and the social deprivation of the practice population.

Most fit notes lasted for four weeks or less

Just over a fifth (22 per cent) of the individual fit notes issued were for a period of one week or less, 50 per cent were for between one and four weeks, 24 per cent for between one and three months and four per cent for longer than three months.

The length of the period covered by the fit note varied by the type of diagnosis on the fit note. Severe health problems, such as neoplasm and severe mental health disorders, were more likely to lead to a long-term (over four weeks) fit note than other diagnoses. Over 43 per cent of fit notes issued to patients suffering from a musculoskeletal disease other than a back problem were over four weeks in duration. At the other end of the scale, nearly 63 per cent of fit notes issued for a respiratory problem were of short duration (one week or less). Detailed analysis showed that fit notes for mild-to-moderate mental health disorders were ten times more likely than those for respiratory illnesses to be for longer than four weeks; and those citing a back problem were nearly five times more likely than for respiratory illnesses to be long term.

The duration of the fit note also varied by GP, even within the same practice. Full-time GPs and those who were partners were more likely than part-time or salaried GPs to issue longer-term (over four weeks) fit notes.

Male patients were 72 per cent more likely to receive a long-term fit note (over four weeks) than female patients and fit notes issued to older patients were significantly more likely to be long term. Fit notes issued to patients in the most socially deprived areas were nearly five times more likely to be long term than those issued in the least socially deprived areas.

Patients in the most socially deprived areas were more likely to have received a fit note for a mild-to-moderate mental health disorder

While the most common diagnosis listed as the reason for a fit note across the country was for a mild-to-moderate mental health disorder, over 41 per cent of fit notes issued to patients living in one of the 20 per cent most socially deprived areas had a mild-to-moderate mental health disorder. However, less than 31 per cent of fit notes issued to those living in one of the 20 per cent least deprived neighbourhoods were issued for this type of health problem. The study also found a potential social gradient in the use of fit notes to certify work incapacity for a period of time after undergoing a surgical operation as nearly 12 per cent of fit notes issued to patients in the least deprived quintile of residential areas had this health reason listed compared to less than six per cent of fit notes issued to patients in the most socially deprived areas.

Women were more likely than men to receive a fit note for a mild-to-moderate mental health disorder, while men were more likely to be diagnosed with a back problem. Younger people were more likely than older patients to be diagnosed with a mild-to-moderate mental health disorder.

The highest proportion of fit notes received by patients living in the most socially deprived areas was for depression (40 per cent of all mild-to-moderate mental health disorder fit notes issued). However, the fit notes issued to patients with a mild-to-moderate mental health disorder residing in the least socially deprived areas were more likely to be issued for stress (34 per cent of all mild-to-moderate mental health disorder fit notes, compared to 18 per cent of fit notes issued to the most deprived patients). Fit notes issued for substance misuse (alcohol/drug addictions) were more common in the most socially deprived areas (nine per cent, compared to one per cent of mild-to-moderate mental health disorder fit notes issued to patients in the least socially deprived areas).

The average length of a fit note episode was four weeks

Patients may need more than one fit note to cover a period of sickness absence. Fit notes relating to the same incidence of ill-health were grouped together into discrete episodes. Overall, there were 31,000 separate episodes identified in the fit note database. Four out of five (79 per cent) of patients had only one episode of ill-health during the course of the study. The median length of an episode was four weeks, although almost one in five sickness absence episodes (18 per cent) lasted over 12 weeks and four per cent lasted longer than 28 weeks.

The shortest episodes tended to be for respiratory conditions. The diagnoses most likely to lead to a long-term sickness absence episode (i.e. of at least 12 weeks) were neoplasm, severe mental health disorder, a musculoskeletal condition other than a back problem, a circulatory problem or a mild-to-moderate mental health disorder.

Males were 29 per cent more likely than females to have an episode of over 12 weeks. Episodes experienced by patients living in the most socially deprived areas were over twice as likely to be over 12 weeks in duration, compared to those patient episodes in the least socially deprived areas.

Practice partners were more likely than salaried GPs to certificate a sickness absence episode that lasted longer than 12 weeks.

'May be fit for work' was the advice given to 12 per cent of patients

Nearly 12 per cent of all patients received at least one fit note which advised that they 'may be fit for work' during the period of data collection. A quarter of those patients recorded as 'may be fit for work' received more than one fit note. Multiple fit notes were most likely for patients with a back problem or those with a mild-to-moderate mental health disorder.

Six per cent of the fit notes in the database advised that the patient 'may be fit for work' and the proportion was fairly constant over the 12 months of data collection. However there was considerable variation between practices. In one case only one per cent of fit notes had a 'may be fit for work' assessment, while at the other extreme 15 per cent of the fit notes issues by another practice used this option. Eight of the 12 practices with the lowest rates of completing 'may be fit for work' advice were classed as highly or very highly deprived.[1]

Older patients and those living in one of the most socially deprived areas were significantly more likely to receive a fit note advising that they 'may be fit for work'. A 'may be fit for work' assessment appeared to be more prevalent when the patient had been incapacitated due to physical illness or injury. Only four per cent of mild-to-moderate mental health disorder fit notes had the 'may be fit for work' box checked by the GP, significantly lower than for other diagnoses.

In most cases where the 'may be fit for work' box had been used, GPs had also provided advice that could help the patient return to work, either by ticking one or more of the structured options on the fit note and/or writing comments in the space provided. However on seven per cent of fit notes despite advising that the patient 'may be fit for work' the GP had provided no structured or free-text advice.

Of the individual structured items (representing common approaches to return to work), 'amended duties' was most often indicated by GPs. While in most cases where GPs had checked one of the structured options they had gone on to provide further supplementary comments, 29 per cent of fit notes with a 'may be fit for work' assessment had one or more structured options ticked, but no supplementary comment.

Fit notes with 'may be fit for work' assessments tended to be shorter in duration than other fit notes.

The fit note also requires the GP to state whether the patient's fitness for work needs to be assessed again when the current medical statement expires. Of all the fit notes, 44 per cent did not have this item completed. Again there was variation between practices with some more thorough than others in ensuring all fit notes issued to patients have an indication of whether or not they were expected to return for re-assessment.

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[1]   See the Glossary of terms for a definition of 'deprived practices'.

Comparisons with a previous study indicated a rise in mental health disorders and a fall in long-term sickness absence

Comparative 'sick note' data collected in a previous study by the Mersey Primary Care R&D Consortium in 2001/02 used a similar methodology with seven practices in the study. However, comparisons between data from the two studies do need to be treated with caution. The data covers just one particular region and the composition of GPs and patients will have changed in the intervening period between studies. That said, a comparison of the two sets of data indicated that:

• mild-to-moderate mental health disorders (such as anxiety, depression and stress) have increased in importance as a cause of certified sickness absence, and respiratory-related sickness absence has become less prevalent.

• The proportion of fit notes with durations over four weeks issued to patients decreased between studies. At five of the practices, the likelihood of a long-term sickness certificate being issued in the fit note evaluation was significantly reduced, compared to the sick note study, after controlling for patient and diagnostic factors.

• In three of the practices, the use of the fit note was independently associated with a reduction in sickness absence episodes of longer than 12 weeks.

1   Introduction

Medical statements (the Med 3 form/medical certificate – known as fit notes or, until recently, 'sick notes') are issued by doctors as evidence of the advice they have given on an individual's fitness for work. They are the normal method for employees to provide evidence of sickness to employers after the seventh day of absence. They may also be used to support claims to health-related benefits.

A new medical statement was implemented on 6 April 2010 across England, Wales and Scotland. The new fit note incorporated a number of changes, including:

- the introduction of a new option to record that an individual 'may be fit for work taking account of the following advice';
- increasing space for doctors to provide patients with comments on the functional effects of their condition; and
- tick boxes to indicate basic adjustments or adaptations that could aid return to work.

The previous format simply asked the General Practitioner (GP) to record a diagnosis and indicate whether or not the individuals should or should not work. There was little space for the doctor to record any further remarks.

The key policy aims of the new medical statement included:

- improving back-to-work advice for individuals on a period of sickness absence;
- improving communication between GPs, patients and individuals and their employers on what a patient can do, and how and whether a patient's condition could be facilitated in work;
- reducing sickness absence and supporting people with health conditions to stay in or return to work more quickly; and
- contributing to 'creating new perspectives on health and work', and improving awareness and understanding of work for good health.

1.1   Programme of evaluation

In November 2010, the Department for Work and Pensions (DWP) established a programme of research to evaluate the new medical statement which aimed to:

- assess the extent to which the fit note is meeting the policy aims set out above and how this is being achieved;
- explore the experiences and views of the fit note from the perspective of GPs, individuals and employers to:
  - identify positive changes;
  - identify any barriers or disincentives to optimal use of the fit note (and the barriers to providing improved quality of fitness-for-work advice) and provide insights into how these might be addressed; and
  - identify key lessons for potential improvements to guidance in the future;

- identify the impact on sickness absence and flows onto health-related benefits as far as possible;

- assess the extent to which the policy represents value for money in terms of the impact realised; and

- strengthen the evidence base on management of sickness absence in Britain.

The evaluation was intended to inform any change or improvements to the guidance for using the medical statements and assist in informing future policy development, enabling better targeting of policies for individuals who have a high likelihood of sickness absence and flowing onto health-related benefits.

As part of the evaluation programme, DWP commissioned the Institute for Employment Studies and the University of Liverpool to conduct a quantitative assessment of the new medical statement and to strengthen the evidence base on medical statements and sickness absence. The method adopted involved collecting data from fit notes given out by a range of practices in five areas of Great Britain over a period of a year. The practices include a number in the North West which took part in an earlier study of medical statements conducted by Mark Gabbay and Chris Shiels,[2] both of whom are members of the current research team. This means we are able to compare the data from the current fit note with that collected from 'sick notes' in the previous study to see whether there has been any change in practice since the introduction of the new statement.

1.2   Methodology

The aim was to collect data from a range of practices, varying by region and by size of practice and location (i.e. rural or urban etc). In this way it was intended to collect data from a cross-section of practices and patients. Five areas of Great Britain were selected for the study, one covering parts of South Wales, one covering parts of Scotland and three areas in England (in the South East centred on Sussex, the East Midlands centred on Derbyshire, and the North West centred on Liverpool) providing a broad geographical coverage. Within each area, the aim was to collect data from a mix of at least nine practices. A short-list was developed categorising practices by geographical location, size and population density. Short-listed practices were contacted by the research team to explain the purpose of the study and were invited to participate. Relevant Primary Care Research Networks were also informed of the research.

A total of 49 practices, in the five geographical regions, were recruited to assist in collecting data for the fit note evaluation for a period of a year (one, from Wales, subsequently dropped out of the study after a few months of data collection, although the data that had been collected for this practice are included in the final fit note database).

Practices were recruited during the final quarter of 2011. Data collection started in the first practice in October 2011 and the majority of practices had completed collection by January 2013. Details of fit notes issued to patients at each participating general practice were collected via the use of specially commissioned 'carbonised' pads of fit notes, which enabled a copy of the statement to be taken and the details subsequently entered by the practice

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[2]   Shiels, C., Gabbay, M. B. and Ford, F. M. (2004). 'Patient factors associated with duration of certified sickness absence and transition to long-term incapacity', *British Journal of General Practice*, 54(499): 86-91.

into spreadsheet and, subsequently, the fit note database. By the end of the study we had collected data from 58,695 fit notes from the 49 practices.

More detailed information on the size and location of practices involved, the approach used and the number of fit notes collected is set out in Appendix A. It should be noted that, as we do not have information on the total population of fit note recipients, we cannot draw any definitive conclusions about the representativeness of the sample. However, given the diversity of practices involved in the study and the number of fit notes collected, we are confident that the sample represents a fair cross-section of the fit note population as a whole.

1.3   This report

The remainder of this report presents the findings from the analysis of the fit note data and is divided into six chapters:

- **Chapter 2 examines the data taken from each fit note and also provides a patient-based analysis.** It looks at the duration of fit notes and their distribution across diagnostic categories, focusing in particular on mild-to-moderate mental health disorders. We also examine the characteristics of patients receiving at least one fit note and the association between patient characteristics and receipt of a fit note for a specified health problem.

- **Chapter 3 looks at GPs' use of the 'may be fit for work' option on fit notes.** It covers the frequency of use of the 'may be fit for work' option and the types of advice given about possible return to work. We also look at the certification period on return-to-work notes and the completion of the 'need to re-assess' section of the fit note.

- **Chapter 4 provides an episode-based analysis.** It focuses on discrete certified sickness 'episodes', consisting of one or more continuous fit notes and looks at the factors associated with type and length of patient episodes.

- **Chapter 5 examines the characteristics of the GPs issuing fit notes** and how they may be associated with long-term certification outcomes.

- **Chapter 6 provides a 'before and after' analysis** and compares the role of the fit note in long-term sickness certification with that of the previous medical statement used for certifying sickness absence (the sick note or MED3/5 forms).

- **Chapter 7 draws some conclusions from the study.**

Throughout the report we explore associations between a range of potential explanatory variables and a number of key fit note outcomes. Given that a major aim of the fit note is to 'reduce sickness absence and support people with health conditions to stay in or return to work more quickly', duration outcomes relating to the period of time covered by a fit note or notes have been given a primary role in the report.

Therefore, the primary outcomes, on which much of the report focuses, relate to the duration of the certified sickness:

- issue of a long-term fit note to a patient. 'Long term' refers to any individual fit note of over four weeks in duration;

- an episode of continuous certified sickness exceeding 12 weeks in duration. The episode may include a single fit note or more linked fit notes;

- an episode of 28 weeks or more in duration. This is equivalent to the maximum period of Statutory Sick Pay.

However we were also interested in the reasons for sickness absence and therefore other, secondary, outcomes which we examined included:

- issue of fit notes to patients suffering from back problems. Back pain has been a traditional cause of employee sickness absence;

- issue of fit notes to patients for mild-to-moderate mental health disorders. This type of health problem has superseded musculoskeletal problems as the main reason for long-term sickness benefit claims;

- episodes of certified sickness due to mild-to-moderate mental health disorders or back problems;

- issue of fit notes that included fitness-to-work advice or recommendations.

We also examined a range of patient, fit note and GP factors to see whether they were associated with outcomes:

- patient explanatory factors included: age, gender, social deprivation of area of residence, living in urban or rural area and the geographical region of residence;

- diagnosis on the fit note was considered a key potential predictor of outcomes. Categories of diagnosis were used in both fit note- and episode-based analyses;

- GP characteristics potentially impacting on outcomes were GP gender, age, contractual status and hours of working.

Details of the analysis and statistical methods applied are contained in Appendix A. In the text, we only refer to results that are significant at the 95 per cent confidence level. That said, it is worth noting a distinction between **practical** and **statistical** significance, i.e. the very large number of cases included in analysis may result in a relatively minor difference in group proportions (one or two percentage points) being reported as statistically significant.

It should also be noted that the representativeness of the sample of fit notes is unclear, as we have no information on the whole population of recipients of fit notes. However, as the sample is drawn from a structured range of GP practices (varying by size and location) we are confident they are a fair cross-section of practices generally.

2   Fit notes issued and patients receiving the fit notes

In this chapter we examine the data taken from each fit note, looking at the duration of fit notes and their distribution across diagnostic categories, focusing in particular on mild-to-moderate mental health disorders (mild-to-moderate mental health disorders). We also examine the characteristics of patients receiving at least one fit note and the association between patient characteristics and receipt of a fit note for a specified health problem.

The key points from this chapter are:

• over a third of the fit notes issued were for mild-to-moderate mental health disorders (including depression, anxiety and stress). Almost ten per cent were for back problems, with a further four per cent for other musculoskeletal disorders;

• the proportion of fit notes issues for a mild-to-moderate mental health disorder or back condition varied considerably by practice. The highest rates of mild-to-moderate mental health disorders certification were found in practices in the most socially disadvantaged areas;

• just under a quarter of fit notes were issued for a period of one week or less, around half for between one and four weeks, 24 per cent for between a month and three months and the remainder for longer than three months;

• older patients, males and those living in the most deprived neighbourhoods were significantly more likely to be given a long-term fit note (i.e. for over four weeks);

• data on employment status were not systematically recorded but, where available, suggested that patients who were not working were much more likely to have had at least one fit note of over four weeks duration than those in employment.

2.1   The fit note database

Details of 58,695 fit notes have been recorded in the fit note database.

2.1.1   Distribution of fit notes in the database

Over 23 per cent of all fit notes were submitted by North West England practices, 16 per cent by South East England practices, 22 per cent by East Midlands practices, 22 per cent by practices in Wales and 17 per cent by Scottish practices. Over 57 per cent of fit notes were issued to females. Seventeen per cent had been issued to patients aged under 30 and 32 per cent to patients over the age of 50. Over 70 per cent of fit notes relate to patients registered at urban (or suburban) practices. Nearly 28 per cent of notes were issued to patients living in one of the 20 per cent most deprived lower super output area (LSOA) or data zones (DZs) in their respective country, 17 per cent to those in the least socially deprived areas.

2.1.2 Number of fit notes in each diagnostic category

By far the largest proportion of all fit notes was issued to patients for mild-to-moderate mental health disorders.

These psychological health problems (including depression, anxiety and stress) accounted for 35 per cent of all fit notes issued, and 39 per cent of all weeks certified by notes. Specific back problems were cited as the reason for work incapacity on over nine per cent of notes and made a similar contribution to total period of certified sickness absence. Injuries (including fractures) accounted for nearly seven per cent and five per cent of total notes and weeks of certification respectively. While respiratory illnesses were given as the reason for the issue of a fit note in six per cent of cases, only three per cent of total duration of certified sickness was accounted for by this type of illness. This reflects the large number of acute illnesses (such as pper respiratory tract infections) of short duration included in this category. A substantial proportion of fit notes (nine per cent) and certified sickness duration (eight per cent) was due to patients seeking certification of sickness absence following a recent surgical operation.

Table 2.1 presents information relating to the number of fit notes assigned to each diagnostic category, and each category's contribution to total certified sickness.

Table 2.1   Fit note allocation to diagnostic categories

Diagnostic category	Fit notes in category		Total weeks certified in category	
	N	Column %	N	Column %
Mild-to-moderate mental health disorder	20,511	35.1	85,942	39.0
Back problem	5,581	9.4	22,931	9.3
Symptoms	5,310	9.1	18,154	7.3
Post-op recovery	5,128	8.8	18,510	7.6
Respiratory	3,690	6.3	8,251	3.4
Other musculoskeletal	2,486	4.5	15,214	6.2
Other injury	2,567	4.4	7,036	2.9
Infectious/parasitic	1,713	2.9	4,119	1.7
Circulatory	1,667	2.8	9,409	3.9
Digestive	1,547	2.6	4,778	1.9
Nervous system/sense organ	1,475	2.5	7,290	3.0
Bone fracture	1,360	2.3	5,431	2.2
Neoplasm	903	1.5	6,985	2.9
Pregnancy/childbirth	819	1.4	1,959	0.8
Genito-urinary	756	1.3	2,592	1.1
Procedures/invest/treatments	645	1.2	2,274	0.8
Severe mental health disorder	612	1.0	5,625	2.3
Skin	575	1.0	1,759	0.7
Endocrine/nutrition/metabolic	469	0.8	2,569	1.0
Causes of injury	334	0.6	935	0.4
Haematological	161	0.3	620	0.3
Congenital	190	0.3	3,530	1.3
Total	**58,498**[1]	**100**	**245,913**[2]	**100**

[1] A further 197 fit notes could not be allocated to a category.
[2] No certification period was available for 1,527 notes.
Source: Institute for Employment Studies (IES)/University of Liverpool fit note database, 2013.

2.1.3   Variation by practice

In terms of average weekly issue of fit notes at each practice, those with a large list size, not surprisingly, tended to issue a higher volume of fit notes to patients. However, location (urban, suburban, and rural) of the practice and social deprivation of the practice population are equally important factors in the number of notes issued. For instance, a practice in inner-city Liverpool and a medical centre in suburban Derby are not too dissimilar in terms of practice size. However the former practice, serving one of the most deprived populations in the country, issues four times more fit notes in an average week (Table A.2, Appendix A).

Underlying the overall allocation of fit notes to diagnostic categories, reported in Table 2.1, the proportions of diagnoses on fit notes varied between practices. This can be demonstrated with reference to the rates of mild-to-moderate mental health disorder and back problem certification at the 49 practices in the evaluation.

Figure 2.1 maps the proportion of all fit notes at each practice citing a psychological health problem as the reason for work incapacity. While the overall rate was 35 per cent, individual practice rates varied considerably, from 23 per cent at a small practice in Derby, to 54 per cent at a large socially deprived practice in Liverpool. The highest rates of mild-to-moderate mental health disorder certification were found in practices in the most socially disadvantaged areas. Inner-city Liverpool practices had four of the five highest rates, between 40 and 54 per cent.

Figure 2.1   Proportion of mild-to-moderate mental health disorder fit notes at each practice

Source: IES/University of Liverpool fit note database, 2013.
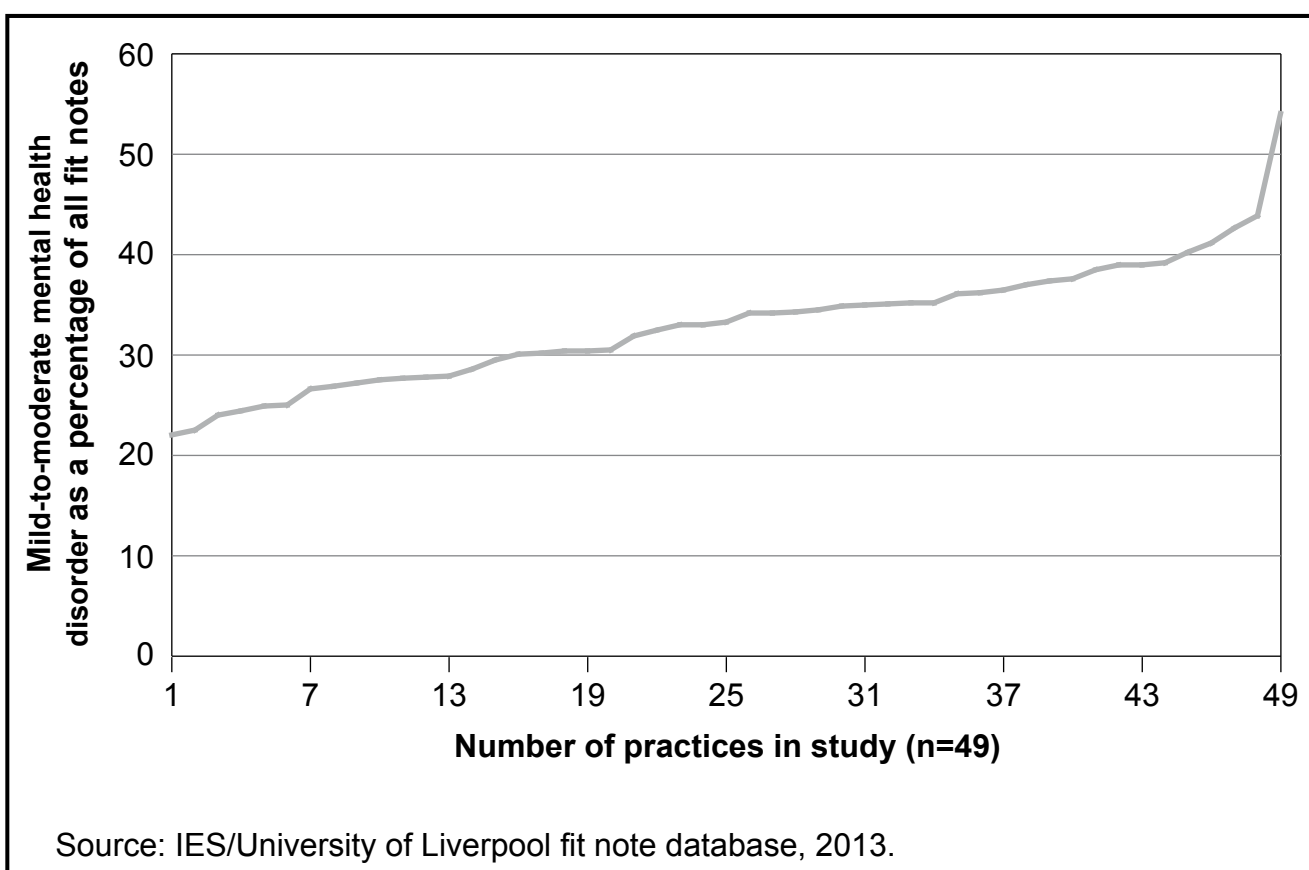
The proportion of notes with a back problem also varied widely between practices (Figure 2.2). Rates deviated considerably from the overall average figure (9.4 per cent). Practice proportions ranged from under four per cent at a lower outlier practice to nearly 17 per cent at an outlier practice at the top of the range. The social deprivation of the practice population appeared to have a weaker association with back problem certification than it did for mild-to-moderate mental health disorder rates. The same practice had the highest rate of back problem certification and the lowest rate of certification for mild-to-moderate mental health disorder. Corresponding tabular data, reporting individual practice rates, are found in Table B.1 in Appendix B and there was only a weak inverse association between overall mild-to-moderate mental health disorder and back problem rates by practice.

Figure 2.2   Proportion of fit notes issued for back problems at each practice

Source: IES/University of Liverpool fit note database, 2013.
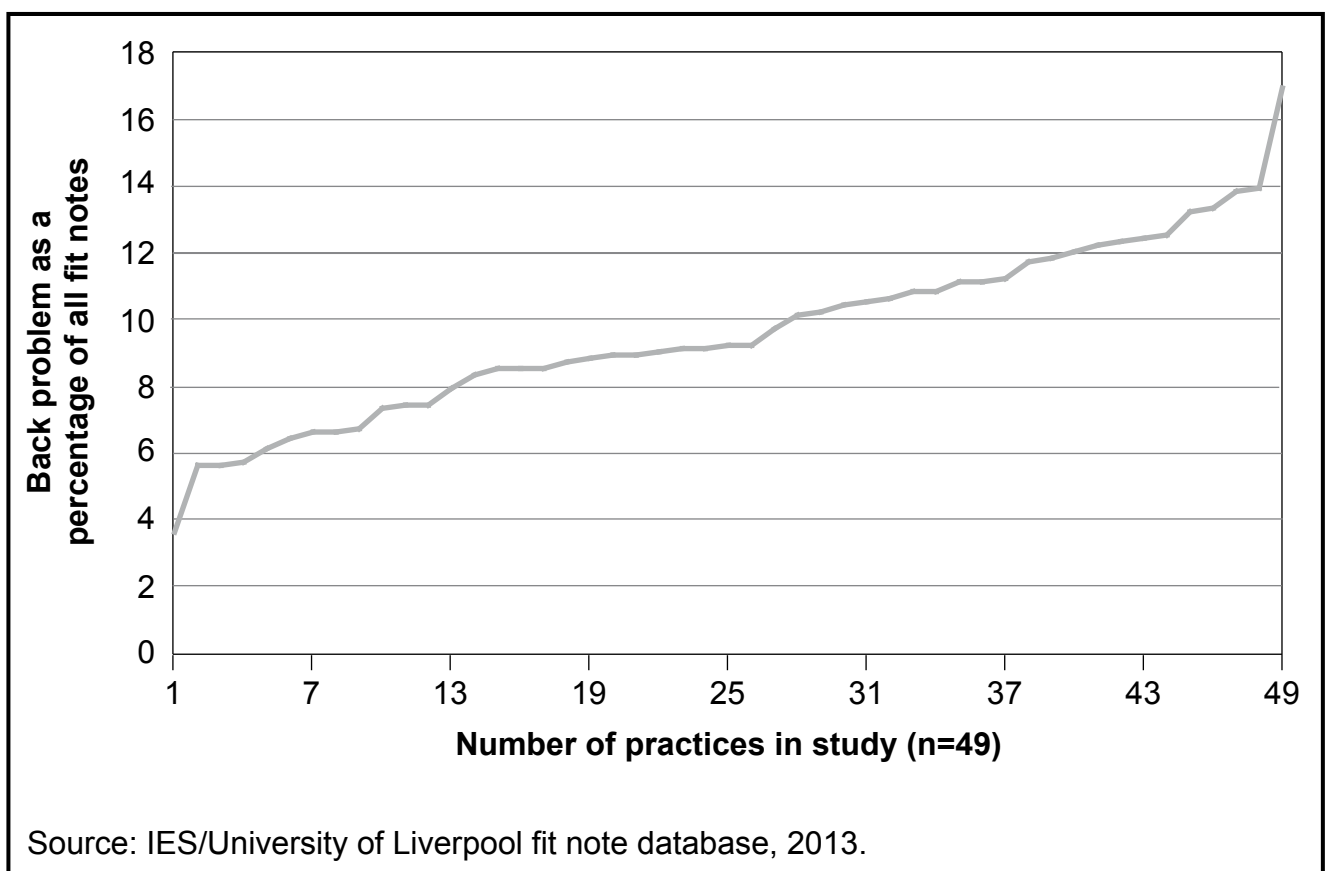
2.1.4   Duration of fit notes

Of the 57,167 fit notes where a period of certification was recorded, 22.2 per cent (n=12,687) were for a period of one week or less, 49.6 per cent (n=28,376) for between one and four weeks, 24 per cent (n=13,714) for between one and three months, 3.6 per cent (n=2,056) between three and six months, and the remaining 0.6 per cent (n=334) of fit notes were for longer than six months.

These proportions varied by the type of diagnosis on the fit note (Table 2.2). Severe health problems, such as neoplasm and a severe mental health disorder, although not significantly contributing to overall number of notes, were more likely to lead to a long-term (over four weeks) fit note. Over 43 per cent of fit notes issued to patients suffering from a musculoskeletal disease other than a back problem, such as osteoarthritis, were over four

weeks in duration. On the other hand, nearly 63 per cent of fit notes issued for a respiratory problem and 56 per cent of those issued for a minor viral illness (infectious/parasitic) were of short duration (one week or less). Some 11 per cent of mild-to-moderate mental health disorders certified for a week or less consisted largely of reported 'stress' and 'bereavement reaction'.

Table 2.2   Duration of fit notes in diagnostic categories

Diagnostic category	1 week or less N	Row %	1-2 weeks N	Row %	2-3 weeks N	Row %	3-4 weeks N	Row %	Over 4 weeks N	Row %	Total N[1]
Mild-to-moderate mental health disorder	2,151	10.7	4,994	24.8	1,180	5.9	5,113	25.4	6,674	33.2	20,122
Severe mental health disorder	28	4.7	45	7.5	16	2.7	113	18.9	395	66.2	597
Back problem	1,259	23.1	1,471	26.9	276	5.1	973	17.8	1,479	27.1	5,452
Other musculoskeletal	345	14.2	419	17.3	109	4.5	501	20.6	1,054	43.4	2,428
Bone fracture	149	11.4	260	19.9	133	10.2	366	28.0	396	30.4	1,304
Other injury	779	31.5	778	31.4	205	8.4	362	14.6	347	14.0	2,471
Causes of injury	103	32.2	106	33.1	26	8.1	50	15.6	35	10.9	320
Infectious/parasitic	933	55.9	371	22.2	56	3.4	108	6.5	200	12.0	1,668
Neoplasm	22	2.5	58	6.7	33	3.8	167	19.4	583	67.6	863
Endocrine/nutrition/metabolic	90	19.9	79	17.4	22	4.9	96	21.2	166	36.6	453
Haematological	41	25.9	42	26.6	11	7.0	34	21.5	30	19.0	158
Nervous system/sense organ	404	28.2	317	22.2	47	3.3	204	14.3	459	32.1	1,431
Circulatory	190	11.8	287	17.8	99	6.1	393	24.3	645	40.0	1,614
Respiratory	2,269	62.9	691	19.1	109	3.0	176	4.9	363	10.1	3,608
Digestive	677	45.0	285	18.9	64	4.2	195	12.9	285	18.9	1,506
Genito-urinary	273	36.8	174	23.5	44	5.9	88	11.9	163	22.0	742
Pregnancy/childbirth	244	30.7	340	42.8	53	6.7	89	11.2	69	8.7	795
Skin	221	40.4	140	25.6	22	4.0	75	13.7	89	16.3	547
Congenital	2	1.1	6	3.3	1	0.5	14	7.7	159	87.4	182
Symptoms	1,507	29.0	1,386	26.7	296	5.7	928	17.8	1,081	20.8	5,198
Procedures/invest/treatments	156	25.0	156	25.0	47	7.5	121	19.4	144	23.1	624
Post-op recovery	817	16.5	1,345	27.2	455	9.2	1,085	22.0	1,246	25.2	4,948

[1]   1,664 fit notes with missing diagnostic and/or duration data.
Source: IES/University of Liverpool fit note database, 2013.

2.1.5   Fit notes and socio-demographic characteristics of patients

In terms of categories of health problem given as the reason for the fit note, the composition of notes issued to male patients varied little from those received by females (Table 2.3). A higher proportion of notes issued to females were for mild-to-moderate mental health disorders (36 per cent compared to 33 per cent of those received by males), and respiratory illness (seven per cent compared to five per cent for males). However, more of the fit notes issued to males were due to a reported back problem (11 per cent compared to eight per cent of all notes issued to females).

Table 2.3   Diagnostic classification of fit notes issued by gender

Diagnostic category	Male		Female	
	N	Column %	N	Column %
Mild-to-moderate mental health disorder	8,346	33.3	12,163	36.4
Severe mental health disorder	366	1.5	246	0.7
Back problem	2,758	11.0	2,823	8.4
Other musculoskeletal	1,002	4.0	1,484	4.4
Bone fracture	681	2.7	679	2.0
Other injury	1,460	5.8	1,107	3.3
Causes of injury	170	0.7	164	0.5
Infectious/parasitic	594	2.4	1,119	3.3
Neoplasm	341	1.4	561	1.7
Endocrine/nutrition/metabolic	258	1.0	211	0.6
Haematological	52	0.2	109	0.3
Nervous system/sense organ	613	2.4	862	2.6
Circulatory	1,056	4.2	611	1.8
Respiratory	1,294	5.2	2,396	7.2
Digestive	760	3.0	787	2.4
Genito-urinary	250	1.0	506	1.5
Pregnancy/childbirth	-	-	819	2.4
Skin	255	1.0	320	1.0
Congenital	104	0.4	86	0.3
Symptoms	2,233	8.9	3,077	9.2
Procedures/invest/treatments	225	0.9	420	1.3
Post-op recovery	2,219	8.9	2,909	8.7
Total	**25,037**[1]	**100**	**33,459**[2]	**100**

[1]   Missing diagnostic data: 89 fit notes issued to males not included.
[2]   Missing diagnostic data: 109 fit notes issued to females not included.
Source: IES/University of Liverpool fit note database, 2013.

The number of fit notes issued to patients of different age varied by the health problem presented as the reason for the sickness absence (Table 2.4). The most striking finding is the relatively minor contribution of mild-to-moderate mental health disorders to the total fit notes issued to the older (aged over 50) groups of patients, compared to younger age-groups. This type of fit note for mild-to-moderate mental health disorder accounted for only 27 per

cent of all notes issued to the older over-50 group, compared to 40 per cent of all notes issued to patients aged between 20 and 49. Compared to younger patients, the proportion of fit notes issued to assist post-operation recovery was higher in the over-50 age groups (12 per cent compared to approximately six per cent of the fit notes issued to the younger age-group patients). The prevalence of respiratory-related notes was highest in the oldest and very youngest age groups. Nearly nine per cent of fit notes issued to the over-50s were for respiratory problems while this type of note accounted for a similar proportion of the total issued to patients in the 16-19 age-group. Only five per cent of fit notes issued to patients in the 20-49 age range were for respiratory problems.

Table 2.5 reports differences in the diagnostic composition of fit notes issued to patients living in geographical areas with varying levels of social deprivation. Patients have been allocated to one of five groups, based on the deprivation rank of their local area LSOA or DZ within their country of residence (England, Scotland or Wales). Of particular interest is the contrast between fit note recipients living in one of the most deprived 20 per cent of neighbourhoods in their country and those residing in the least deprived quintile. Individual tables for England, Scotland and Wales are presented in Tables C.1-C.3 in Appendix C.

The most marked finding relates to mild-to-moderate mental health disorder fit notes as a proportion of all notes issued to patients living in different areas. Over 41 per cent of fit notes issued to patients living in one of the 20 per cent most deprived LSOAs or DZs in their respective country (England, Scotland or Wales) had a psychological health problem (mild-to-moderate mental health disorder) listed as the reason for the note. However, less than 31 per cent of notes issued to those living in one of the 20 per cent least deprived neighbourhoods were issued for this type of health problem. The other finding of note involves a potential social gradient in the use of fit notes to certify work incapacity for a period of time after undergoing a surgical operation. Nearly 12 per cent of notes issued to patients in the least deprived quintile of residential areas had this purpose compared to less than six per cent of notes issued to patients in the most socially deprived areas.

Table 2.4   Diagnostic classification of fit notes issued to patients by age group

Diagnostic category	16-19 N	16-19 Col %	20-24 N	20-24 Col %	25-29 N	25-29 Col %	30-34 N	30-34 Col %	35-39 N	35-39 Col %	40-44 N	40-44 Col %	45-49 N	45-49 Col %	50-54 N	50-54 Col %	55 and over N	55 and over Col %
Mild-to-moderate mental health disorder	255	31.7	1,676	39.4	2,057	40.3	2,306	43.6	2,364	41.2	3,159	40.5	3,139	35.6	2,658	31.6	2,891	23.6
Severe mental health disorder	26	3.2	81	1.9	97	1.9	70	1.3	70	1.2	104	1.3	77	0.9	43	0.5	44	0.4
Back problem	59	7.3	268	6.3	423	8.3	491	9.3	566	9.9	853	10.9	931	10.6	882	10.5	1,102	9.0
Other musculoskeletal	13	1.6	78	1.8	90	1.8	136	2.6	166	2.9	296	3.8	418	4.7	488	5.8	800	6.5
Bone fracture	26	3.2	153	3.6	162	3.2	116	2.2	85	1.5	123	1.6	199	2.3	185	2.2	311	2.5
Other injury	54	6.7	264	6.2	311	6.1	215	4.1	294	5.1	314	4.0	324	3.7	344	4.1	446	3.6
Causes of injury	5	0.6	38	0.9	48	0.9	32	0.6	29	0.5	43	0.6	35	0.4	49	0.6	55	0.4
Infectious/parasitic	58	7.2	167	3.9	171	3.3	184	3.5	173	3.0	184	2.4	250	2.8	228	2.7	296	2.4
Neoplasm	0	0	12	0.3	14	0.3	27	0.5	54	0.9	68	0.9	129	1.5	173	2.1	425	3.5
Endocrine/ nutrition/ metabolic	4	0.5	22	0.5	23	0.5	32	0.6	45	0.8	44	0.6	93	1.1	76	0.9	130	1.1
Haematological	2	0.2	3	0.1	7	0.1	16	0.3	10	0.2	19	0.2	45	0.1	20	0.2	39	0.3
Nervous system/ sense organ	15	1.9	95	2.2	132	2.6	88	1.7	164	2.9	199	2.6	213	2.4	237	2.8	331	2.7
Circulatory	5	0.6	21	0.5	47	0.9	44	0.8	73	1.3	113	1.4	265	3.0	333	4.0	765	6.2
Respiratory	68	8.5	225	5.3	270	5.3	275	5.2	329	5.7	413	5.3	482	5.5	574	6.8	1,048	8.5
Digestive	27	3.4	154	3.6	194	3.8	132	2.5	141	2.5	194	2.5	212	2.4	202	2.4	290	2.4
Genito-urinary	11	1.4	49	1.1	54	1.1	87	1.6	68	1.2	118	1.5	108	1.2	100	1.2	159	1.3
Pregnancy/childbirth	6	0.7	136	3.2	235	4.6	205	3.9	169	2.9	61	0.8	4	0.05	0	0	0	0
Skin	23	2.9	32	0.7	44	0.9	49	0.9	40	0.7	85	1.1	76	0.9	72	0.9	152	1.2
Congenital	27	3.4	86	2.0	13	0.3	6	0.1	14	0.2	5	0.1	11	0.1	6	0.1	22	0.2
Symptoms	58	7.2	424	10.0	411	8.0	416	7.9	465	8.1	706	9.0	827	9.4	794	9.5	1,205	9.8
Procedures/invest/ treatments	15	1.9	32	0.8	34	0.7	24	0.5	50	0.9	92	1.2	98	1.1	98	1.2	201	1.6
Post-op recovery	47	5.8	238	5.6	273	5.3	343	6.5	370	6.4	609	7.8	849	9.6	840	10.0	1,557	12.7
Total fit notes[1]	**804**	**100**	**4,254**	**100**	**5,110**	**100**	**5,294**	**100**	**5,739**	**100**	**7,802**	**100**	**8,785**	**100**	**8,402**	**100**	**12,272**	**100**

[1] Missing diagnostic and/or age data: 197 fit notes not included in analysis.

Source: IES/University of Liverpool fit note database, 2013.

Table 2.5 Diagnostic classification of fit notes issued to patients in 'neighbourhoods' by social deprivation

LSOA/DZ residence of patient / Diagnostic category	In most deprived 20% of LSOAs/DZs in country of residence[1]		Quintile 2		Quintile 3		Quintile 4		In least deprived 20% of LSOAs/DZs in country of residence[2]	
	N	Col %	N	Col %	N	Col %	N	Col %	N	Col %
Mild-to-moderate mental health disorder	6,565	41.3	3,722	36.8	3,657	31.7	3,294	32.2	2,956	30.9
Severe mental health disorder	270	1.7	131	1.3	91	0.8	49	0.5	61	0.6
Back problem	1,516	9.5	1,103	10.9	1,189	10.3	895	8.8	761	8.0
Other musculoskeletal	615	3.9	399	3.9	585	5.1	454	4.4	374	3.9
Bone fracture	315	2.0	216	2.1	266	2.3	294	2.9	237	2.5
Other injury	629	3.9	424	4.2	509	4.4	492	4.8	448	4.7
Causes of injury	94	0.6	63	0.6	57	0.5	56	0.5	55	0.6
Infectious/parasitic	384	2.4	246	2.4	348	3.0	310	3.0	392	4.1
Neoplasm	145	0.9	177	1.7	183	1.6	210	2.1	168	1.8
Endocrine/nutrition/metabolic	180	1.1	73	0.7	86	0.7	71	0.7	48	0.5
Haematology	44	0.3	29	0.3	20	0.2	27	0.3	31	0.3
Nervous system/sense organ	371	2.3	225	2.2	329	2.9	272	2.7	253	2.6
Circulatory	467	2.9	310	3.1	287	2.5	287	2.8	268	2.8
Respiratory	808	5.1	595	5.9	748	6.5	744	7.3	705	7.4
Digestive	416	2.6	242	2.4	332	2.9	265	2.6	268	2.8
Genito-urinary	198	1.2	128	1.3	167	1.4	116	1.1	135	1.4
Pregnancy/childbirth	204	1.3	113	1.1	177	1.5	154	1.5	145	1.5
Skin	144	0.9	82	0.8	126	1.1	113	1.1	102	1.1
Congenital	74	0.5	24	0.2	43	0.4	32	0.3	12	0.1
Symptoms	1,407	8.8	866	8.6	1,126	9.8	930	9.1	882	9.2
Procedures/invest/treatments	120	0.8	121	1.2	156	1.4	119	1.2	121	1.3
Post-op recovery	945	5.9	834	8.2	1,046	9.1	1,034	10.1	1,143	11.9
Total[3]	**15,900**	**100**	**10,123**	**100**	**11,528**	**100**	**10,218**	**100**	**9,599**	**100**

1 Residing in one of most deprived LSOAs or DZs in either England, Scotland or Wales.
2 Residing in one of least deprived LSOAs or DZs in either England, Scotland or Wales.
3 Missing diagnostic and/or deprivation data: 1,361 fit notes not included in analysis.
Source: IES/University of Liverpool fit note database, 2013.

2.1.6   Fit notes issued for mild-to-moderate mental health disorders

As reported above, 20,511 fit notes, representing 35 per cent of the total, were issued for mild-to-moderate mental health disorders. Thirty-eight per cent of these mild-to-moderate mental health disorder notes were issued to patients for depression, 24 per cent for stress, 14 per cent for anxiety, 13 per cent for mixed anxiety and depression, five per cent for bereavement (grief) reaction and five per cent for substance abuse (including alcohol and drug addictions) (Figure 2.3).

Figure 2.3   Proportion of all fit notes in mild-to-moderate mental health disorder category by sub-categories of diagnosis

Percentages

Source: IES/University of Liverpool fit note database, 2013.
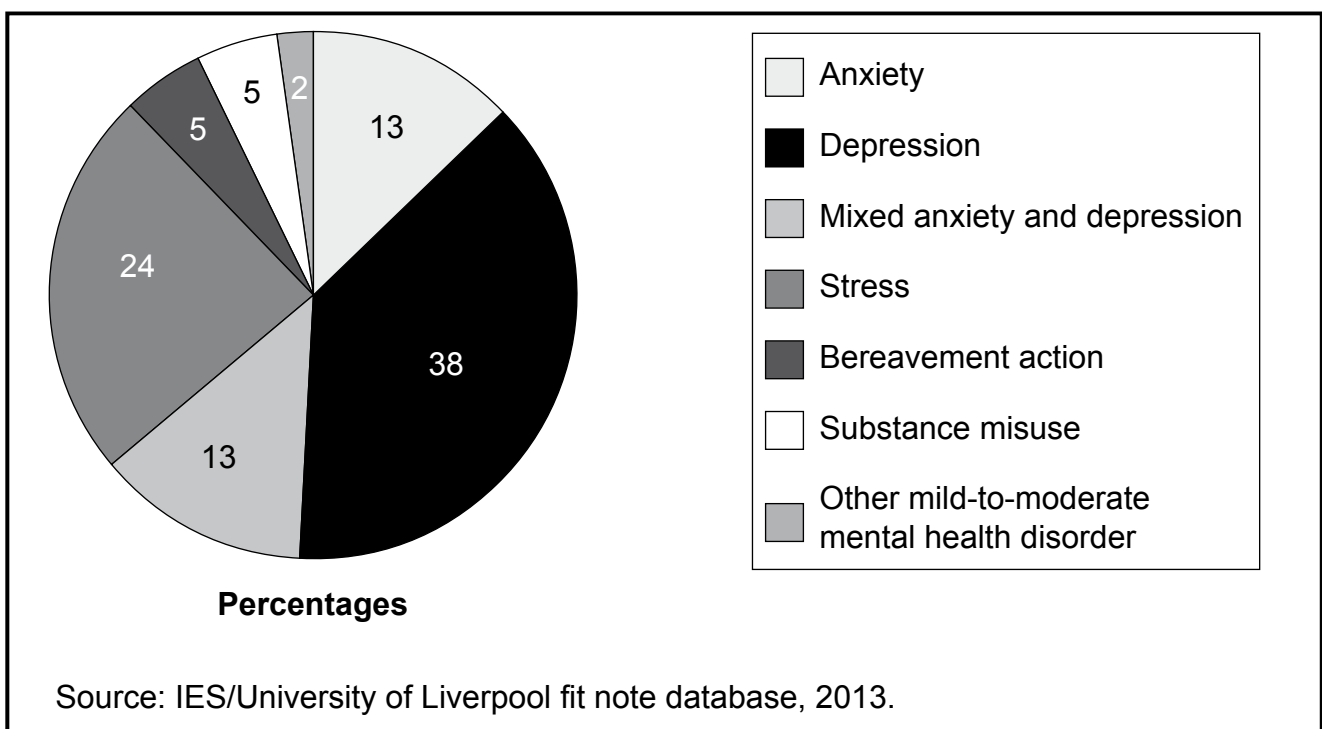
When considering the proportion of all certified sickness duration within the mild-to-moderate mental health disorder category, nearly 60 per cent of total certified weeks were accounted for by fit notes for depression or mixed anxiety and depression. Fit notes for stress only accounted for 15 per cent of the total duration of mild-to-moderate mental health disorder notes (Figure 2.4).

Over 41 per cent of the individual fit notes issued to patients for depression' and 46 per cent of those for mixed anxiety and depression were for a period exceeding four weeks (Table 2.6). Although only accounting for a relatively small proportion (five per cent) of total mild-to-moderate mental health disorder fit notes, substance misuse appeared to be a significant cause of long-term certification. Nearly 70 per cent of these fit notes for addiction-related problems were for longer than four weeks. Nearly 53 per cent of all the shorter mild-to-moderate mental health disorder fit notes, up to one week in duration, were issued to patients with stress or a bereavement reaction.

Figure 2.4   Proportion of all certified weeks in mild-to-moderate mental health disorders by sub-categories of diagnosis

Source: IES/University of Liverpool fit note database, 2013.
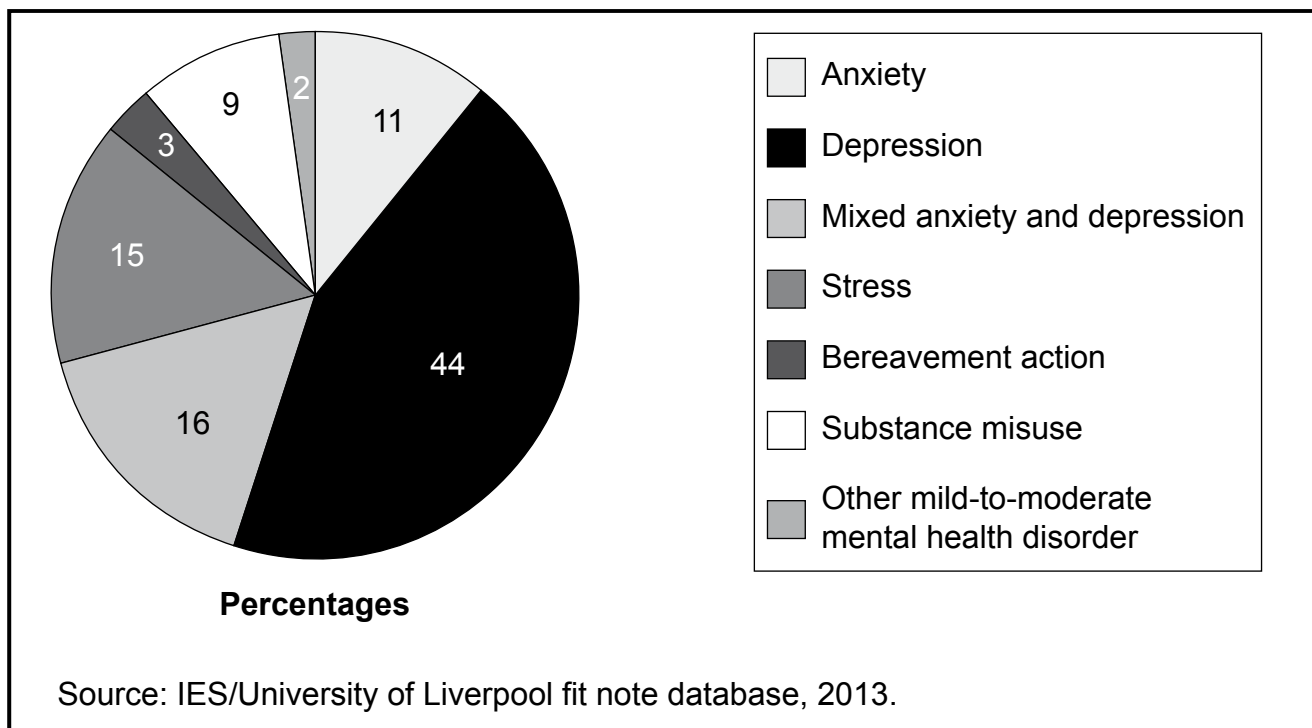
Table 2.6   Duration of fit notes in sub-categories of mild-to-moderate mental health disorder

Diagnostic category	One week or less		One to four weeks		Over four weeks		Total
	N	Row %	N	Row %	N	Row %	N[1]
Anxiety	343	13.6	1,486	59.1	686	27.3	2,515
Depression	477	6.3	3,988	52.5	3,130	41.2	7,595
Mixed anxiety and depression	115	4.5	1,255	49.2	1,181	46.3	2,551
Stress	873	18.3	3,252	68.0	657	13.7	4,782
Bereavement reaction	242	22.3	721	66.6	120	11.1	1,083
Substance misuse	20	1.8	320	29.0	762	69.1	1,102
Other mild-to-moderate mental health disorder	79	16.6	265	55.8	131	27.6	475

[1]   408 mild-to-moderate mental health disorder fit notes with missing duration data.
Source: IES/University of Liverpool fit note database, 2013.

Over 27 per cent of all mild-to-moderate mental health disorder fit notes issued to females, but only 20 per cent issued to males, were for stress. Nearly ten per cent of mild-to-moderate mental health disorder fit notes received by males were due to substance abuse, but only three per cent issued to females cited this as the reason for certified sickness.

Nearly 42 per cent of fit notes given to patients aged less than 30, suffering from a mild-to-moderate mental health disorder, were issued for depression. Only 21 per cent of mild-to-moderate mental health disorder notes issued to this age-group were given because of stress, compared to 31 per cent of all mild-to-moderate mental health disorder notes issued to the over 50 age-group.

The highest proportion of fit notes received by patients living in one of the most socially deprived areas of England, Wales or Scotland was for depression (40 per cent of all mild-to-moderate mental health disorder notes issued). However, the fit notes issued to patients with psychological health problems residing in the least socially deprived areas were more likely to be issued for stress (34 per cent of all mild-to-moderate mental health disorder notes).

The highest proportion of fit notes received by patients living in one of the most socially deprived areas of England, Wales or Scotland was for depression (40 per cent of all mild-to-moderate mental health disorder notes issued). However, the fit notes issued to patients with psychological health problems residing in the least socially deprived areas were more likely to be issued for stress (34 per cent of all mild-to-moderate mental health disorder notes, compared to 18 per cent of notes issued to the most deprived patients). Fit notes issued for substance misuse (alcohol/drug addictions) were more common in the most socially deprived areas (nine per cent, compared to one per cent of mild-to-moderate mental health disorder fit notes issued to the least deprived patients).

2.2 Characteristics of patients receiving fit notes

A total of 25,189 patients in the database have received at least one fit note. Twenty three per cent of total patients were registered at the nine North West England practices, 16 per cent at the seven Scottish practices (Table 2.7). Over 70 per cent of patients were registered at urban or suburban practices, 57 per cent were female and 21 per cent aged 55 or over. Over 27 per cent of patients were residing in one of the 20 per cent most deprived local areas in their respective country (whether England, Scotland or Wales) and nearly 18 per cent in the least deprived neighbourhoods.

Table 2.7   Characteristics of patients receiving at least one fit note

	N	%
Region/country of residence		
North West England	5,808	23.1
South East England	4,273	17.0
East Midlands	5,653	22.4
Wales	5,452	21.6
Scotland	4,003	15.9
Total	**25,189**	**100**
Location of practice		
Urban/suburban	17,927	71.2
Rural/semi-rural	7,262	28.8
Total	**25,189**	**100**
Gender		
Male	10,933	43.4
Female	14,256	56.6
Total	**25,189**	**100**
		Continued

Table 2.7   Continued

	N	%
Age		
16-19	446	1.8
20-24	2,104	8.4
25-29	2,420	9.6
30-34	2,389	9.5
35-39	2,483	9.9
40-44	3,160	12.6
45-49	3,550	14.1
50-54	3,381	13.4
55 and over	5,223	20.7
Total[1]	**25,156**	**100**
Quintile 1 (living in one of the 20% most socially deprived areas in patient's country)[3]	6,647	27.1
Quintile 2	4,169	17.0
Quintile 3	4,965	20.2
Quintile 4	4,448	18.1
Quintile 5 (living in one of the 20% least socially deprived areas in patient's country)[4]	4,294	17.6
Total[2]	**24,523**	**100**

[1] 33 patients with no age data.

[2] Missing data: 666 patients not assigned a deprivation score.

[3] Residing in one of the most deprived LSOAs or DZs in either England, Wales or Scotland.

[4] Residing in one of the least deprived LSOAs or DZs in either England, Wales or Scotland.

Source: IES/University of Liverpool fit note database, 2013.

Over one-third of patients who received a fit note had received at least one for a psychological health problem (Table 2.8). Significant proportions of patients had had sickness absence certified for a back problem (11 per cent) or a respiratory problem (ten per cent). Thirteen per cent of all patients had received a fit note with a symptom cited as the reason for being unfit for work.

2.2.1   Association between patient characteristics and receiving a specific fit note

There was a statistically significant association between the region of the study practice and the likelihood of a patient receiving a fit note for a mild-to-moderate mental health disorder or a back problem (Table 2.9). Nearly 40 per cent of patients in the North West England practices had received a fit note for a mild-to-moderate mental health disorder, but only 29 per cent of those in the practices in South East England and the East Midlands. Scottish practice patients had a significantly lower rate of being issued a fit note for a back problem, compared to patients at practices in other regions. Nine per cent of patients at Scottish practices had received this type of note compared to 11 per cent in other regions. Patients registered in urban and suburban practices were significantly more likely to have received a fit note for a psychological health problem than were their rural/semi-rural counterparts (35 per cent compared to 30 per cent of patients). However, there was no significant association between rural/urban residence and proportion of patients receiving any fit note for a back problem.

Table 2.8   Number and proportion of patients receiving at least one fit note within a diagnostic category

Diagnostic category	No of patients	Proportion (%) of all patients[1]
Mild-to-moderate mental health disorder	8,462	33.6
Severe mental health disorder	357	1.4
Back problem	2,788	11.1
Other musculoskeletal	1,375	5.5
Bone fracture	839	3.3
Other injury	1,670	6.6
Causes of injury	236	0.9
Infectious/parasitic	1,230	4.9
Neoplasm	466	1.9
Endocrine/nutrition/metabolic	279	1.1
Haematology	104	0.4
Nervous system/sense organ	898	3.6
Circulatory	832	3.3
Respiratory	2,577	10.2
Digestive	1,025	4.1
Genito-urinary	513	2.0
Pregnancy/childbirth	504	2.0
Skin	350	1.4
Congenital	138	0.5
Symptoms	3,245	12.9
Procedures/invest/treatments	502	2.0
Post-op recovery	3,123	12.4

[1]   Patients may be included in more than one category. Column percentages total >100.
Source: IES/University of Liverpool fit note database, 2013.

Female patients were significantly more likely to have been issued a mild-to-moderate mental health disorder fit note (35 per cent compared to 31 per cent of male patients) but less likely to have received a note for a back problem (ten per cent compared to 13 per cent of males). A significantly lower proportion of patients in older age groups (aged 50 or over) had received a note for a psychological (mild-to-moderate mental health disorder) health problem (27 per cent compared to 37 per cent of the younger age groups). However, a higher proportion of patients aged 40 or over had received a note for a back problem (12 per cent compared to ten per cent of the younger patients).

There was a highly significant trend toward increasing likelihood of receiving a mild-to-moderate mental health disorder fit note in patients registered at practices in the more deprived geographical areas. Over 41 per cent of patients living in one of the 20 per cent most deprived Lower-level Super Output Areas or DZs in England, Wales or Scotland had received this type of fit note compared to only 28 per cent of patients in the least socially deprived areas. Patients residing in the least deprived group of neighbourhoods were significantly less likely to have received any fit notes for a back problem (nine per cent, compared to 12 per cent of patients living in other areas).

Table 2.9   Characteristics of patients receiving a fit note for a mild-to-moderate mental health disorder or back problem

	N (%)of patients receiving any fit note in mild-to-moderate mental health disorder category	P	N (%) of patients receiving any fit note in Back Problem category	P
Region/country of study practice				
North West England	2,315 (39.9)		581 (10.0)	
South East England	1,257 (29.4)		475 (11.1)	
East Midlands	1,656 (29.3)	**<0.001**	690 (12.2)	**<0.001**
Wales	1,885 (34.6)		675 (12.4)	
Scotland	1,349 (33.7)		367 (9.2)	
Location of practice				
Urban/suburban	6,316 (35.2)		1,996 (11.1)	
Rural/semi-rural	2,146 (29.6)	**<0.001**	792 (10.9)	0.60
Patient gender				
Male	3,410 (31.2)		1,383 (12.6)	
Female	5,052 (35.4)	**<0.001**	1,405 (9.9)	**<0.001**
Patient age				
16-29	1,760 (35.4)		437 (8.8)	
30-39	1,924 (39.5)	**<0.001**	525 (10.8)	**<0.001**
40-49	2,478 (36.9)		848 (12.6)	
50 or over	2,294 (26.7)		972 (11.3)	
Patient residence in LSOA or DZ				
Quintile 1 (living in one of 20% most socially deprived areas in patient's country)1	2,736 (41.2)		783 (11.8)	
Quintile 2	1,466 (35.2)		517 (12.4)	
Quintile 3	1,525 (30.7)	**<0.001**	569 (11.5)	**<0.001**
Quintile 4	1,339 (30.1)		451 (10.1)	
Quintile 5 (living in one of 20% least socially deprived areas in patient's country)2	1,220 (28.4)		397 (9.2)	

[1]   Residing in one of most deprived LSOAs or DZs in either England, Scotland or Wales.
[2]   Residing in one of least deprived LSOAs or DZs in either England, Scotland or Wales.
Source: IES/University of Liverpool fit note database, 2013.

2.2.2 Patient characteristics and duration of fit note

Nearly 35 per cent (n=8,692) of all patients had received at least one individual fit note that certified sickness absence for a period of more than four weeks.

There were highly significant associations between region of residence, urban/rural location, gender, age, neighbourhood deprivation and an increased likelihood of the patient receiving at least one long-term fit note (longer than four weeks) for any health condition (Table 2.10).

Proportions receiving a long-term fit note ranged from 42 per cent of patients in the North West England practices to 29 per cent of those in Scotland and South East England practices. Long-term fit notes were more likely in urban/suburban practices. Thirty-one per cent of fit note recipients in rural/semi-rural practices had been issued with a fit note exceeding four weeks, with 36 per cent having received a similar note in urban/suburban practices. Males were more likely than females to have received a long-term note (40 per cent compared with 31 per cent respectively). Younger patients were significantly less likely to have received a long-term fit note (30 per cent of patients aged under 40, compared to 37 per cent of older patients aged 40 or over). Over 47 per cent of patients living in one of the most deprived neighbourhoods in their respective country had received a long-term note compared to only 25 per cent of residents of the least socially deprived areas in the same country.

When considering only long-term notes issued to patients for a mild-to-moderate mental health disorder, similar associations were found. Patients in North West England practices, urban/suburban residents, males, and residents of the most deprived neighbourhoods were significantly more likely to receive a mild-to-moderate mental health disorder note longer than four weeks in duration. However, patients in the older age groups (aged over 50) were less likely to receive a mild-to-moderate mental health disorder fit note of this length (11 per cent compared to 16 per cent of younger patients). (It has already been reported above that older patients were less likely to receive any note for a psychological health problem, of any duration.)

Table 2.10   Characteristics of patients and the receipt of a long-term fit note (over four weeks) for all diagnostic categories and those with a mild-to-moderate mental health disorder

	N (%) of patients with any long-term fit note (over four weeks)	P	N (%) of patients with any long-term fit note (over four weeks) for a mild-to-moderate mental health disorder	P
Region/country of study practice				
North West England	2,449 (42.2)		1,214 (20.9)	
South East England	1,229 (28.8)		494 (11.6)	
East Midlands	1,921 (34.0)	<0.001	652 (11.5)	<0.001
Wales	1,948 (35.7)		768 (14.1)	
Scotland	1,145 (28.6)		481 (12.0)	
Location of practice				
Urban/suburban	6,451 (36.0)		2,814 (15.7)	
Rural/semi-rural	2,241 (30.9)	<0.001	795 (10.9)	<0.001
Patient gender				
Male	4,304 (39.4)		1,719 (15.7)	
Female	4,388 (30.8)	<0.001	1,890 (13.3)	<0.001
Patient age				
16-29	1,385 (27.9)		660 (13.3)	
30-39	1,576 (32.3)	<0.001	848 (17.4)	<0.001
40-49	2,416 (36.0)		1,111 (16.6)	
50 or over	3,307 (38.4)		988 (11.4)	
Patient residence in LSOA or DZ				
Quintile 1 (living in one of 20% most socially deprived areas in patient's country)1	3,138 (47.2)		1,546 (23.3)	
Quintile 2	1,500 (36.0)		633 (15.2)	
Quintile 3	1,519 (30.6)	<0.001	555 (11.2)	<0.001
Quintile 4	1,274 (28.6)		468 (10.5)	
Quintile 5 (living in one of 20% least socially deprived areas in patient's country)2	1,090 (25.4)		358 (8.3)	

[1]   Residing in one of most deprived LSOAs or DZs in either England, Scotland or Wales.
[2]   Residing in one of least deprived LSOAs or DZs in either England, Scotland or Wales.
Source: IES/University of Liverpool fit note database, 2013.

2.2.3 Employment status of patients receiving fit notes

Employment status is not recorded on a fit note. We asked practices to enter the employment information they had on their records onto the fit note database. However, it became apparent early in the evaluation that many practices had no consistent policy relating to the routine recording of patient employment information. Consequently, for 14,484 (57.5 per cent) patients and 32,475 (55.3 per cent) fit notes in the evaluation database there is no employment information about the employment status of the patient being issued with the fit note. Where information was available, it was often of a general nature (e.g. 'in work', 'employed') rather than providing specific occupational detail. For these reasons, the employment status variable has not been included as a potential explanatory factor in the main analyses conducted for the report.

Information on employment status was available for 10,705 patients and 26,220 fit notes. Over 79 per cent (n=20,747) of these fit notes were issued to 8,865 patients recorded as normally being in paid employment. However, the remaining 5,473 notes were issued to 1,837 patients who did not appear to have been in paid employment at the time of fit note issue. The employment status of these patients was variously described as 'not in work', 'unemployed' 'on benefits' 'on JSA', etc. The majority (56 per cent) of the fit notes issued to the non-working group were for mild-to-moderate mental health disorders, and another three per cent for severe mental health disorders. Corresponding proportions for the working group were 33 per cent for mild-to-moderate mental health disorders and one per cent for severe mental health disorders.

Patients in the non-working group were much more likely to have had at least one fit note of over four weeks' duration at any time during the period of practice data collection. Compared to patients known to be in employment, a significantly higher proportion of non-working patients had received a note of this length (79 per cent compared with 25 per cent).

2.2.4 Patient and diagnostic factors independently associated with issue of long-term fit notes

A number of patient factors (gender, age, social deprivation) and the diagnostic categories were entered in a multilevel mixed-effects regression model in order to estimate the independent effect of each factor on the likelihood of a fit note being over four weeks in duration. Table 2.11 reports odds ratios (and 95 per cent confidence intervals) as an estimate of likelihood for each independent variable, adjusted for all other co-variates in the model. All of the patient factors and most of the diagnostic categories had a significant independent effect on outcome.

Being male rather than female increased the likelihood of a long-term note by 72 per cent, and fit notes issued to older patients were significantly more likely to be over four weeks (a patient being ten years older increased the likelihood by 12 per cent). Compared to those issued to patients living in the least socially deprived areas, a fit note issued to a patient in one of the most deprived neighbourhoods was 4.72 times more likely to be long-term.

For estimating the effect of diagnostic categories, the category with the lowest proportion of long-term fit notes (respiratory) was selected as the reference group. After controlling for all patient factors, fit notes including a mild-to-moderate mental health disorder diagnosis were 9.68 times more likely than those in the reference category to be over four weeks. Fit notes citing a back problem were nearly five times more likely, and those including another musculoskeletal reason for sickness absence (such as arthritis) were over 14 times more likely to be long-term than were fit notes issued for respiratory illness.

Table 2.11   Predictors[1] of long-term fit notes (over four weeks) by patient factors and diagnostic categories

Long-term fit note (over four weeks)	Odds ratio[2] (95% CI)	P
Gender of patient		
Female	1.0	
Male	1.72 (1.59-1.85)	**<0.001**
Age of patient		
10 years older	1.12 (1.09-1.17)	**<0.001**
Residence of patient		
Living in one of 20% least deprived neighbourhoods	1.0	
Living in one of 20% most deprived neighbourhoods	4.72 (4.15-5.38)	**<0.001**
Diagnostic category of fit note		
Respiratory	1.0	
Mild-to-moderate mental health disorder	9.68 (8.01-11.7)	**<0.001**
Severe mental health disorder	41.8 (29.4-59.4)	**<0.001**
Back problem	4.95 (4.00-6.12)	**<0.001**
Other musculoskeletal	14.4 (11.4-18.3)	**<0.001**
Bone fracture	8.27 (6.27-10.9)	**<0.001**
Other injury	1.85 (1.43-2.38)	**<0.001**
Causes of injury	1.13 (0.65-1.98)	0.65
Infectious/parasitic	1.36 (1.01-1.82)	**0.04**
Neoplasm	43.4 (32.2-58.6)	**<0.001**
Endocrine/nutrition/metabolic	10.1 (6.74-15.0)	**<0.001**
Haematological	3.20 (1.62-6.31)	**<0.001**
Nervous system/sense organ	8.26 (6.29-10.8)	**<0.001**
Circulatory	11.3 (8.71-14.7)	**<0.001**
Digestive	2.78 (2.11-3.69)	**<0.001**
Genito-urinary	4.04 (2.86-5.72)	**<0.001**
Pregnancy-related	1.71 (1.13-2.60)	**0.01**
Skin	2.05 (1.34-3.14)	**0.002**
Symptoms	3.35 (2.72-4.13)	**<0.001**
Procedures/invest/treatments	6.01 (4.28-8.44)	**<0.001**
Post-op recovery	5.76 (4.67-7.10)	**<0.001**

[1]   Logistic regression: Multilevel mixed-effects model: Levels (i) fit note (ii) patient (see Appendix A).

[2]   Odds ratio adjusted for other co-variates in the model. The odds ratio (OR) is a simple measures of risk, for example an outcome with an odds ratio of 1.72 (e.g. male) is 72 per cent more likely to occur as the reference group (female in this instance) and in this case is statistically significant at a 99.9 per cent confidence level (see Appendix A).

Results significant at the 95 per cent confidence level shown in **bold**.

Source: IES/University of Liverpool fit note database, 2013.

3 Fitness for work recommendations and advice

This chapter looks at GPs' use of 'may be fit for work' options. It covers the frequency of use of the 'may be fit for work' assessment option and the types of advice given about return to work. We also look at the certification period on fit notes recommending that a patient 'may be fit for work' and the completion of the 'need to re-assess' section of the fit note.

The key points from this chapter are:

- nearly 12 per cent of patients received at least one fit note that included 'may be fit for work' advice during the period of data collection. Patients could receive more than one fit note and only six per cent of all the fit notes issued indicated that the patient 'may be fit for work'. A quarter of those patients recorded as 'may be fit for work' received more than one fit note;

- there was considerable variation between practices. In one practice only one per cent of notes had the 'may be fit for work' box ticked, while at the other extreme 15 per cent of the notes issues by another practice used this option;

- older patients and those living in one of the most socially deprived areas were significantly more likely to receive a 'may be fit for work' note;

- a 'may be fit for work' note was more prevalent when the patient had been incapacitated due to physical illness or injury. Only four per cent of mild-to-moderate mental health disorders fit notes had the 'may be fit for work' box checked by the GP;

- 'may be fit for work' notes tended to be shorter in duration than other fit notes;

- in most cases where the 'may be fit for work' box had been used, GPs also provided return-to-work advice, either by ticking one or more of the structured options on the fit note and/or writing comments in the space provided. However, on seven per cent of notes the GP had checked the 'may be fit for work' option but had subsequently provided no structured or free-text advice;

- the most commonly cited structural advice to patients who were thought to be 'may be fit for work' was 'amended duties';

- in most cases where GPs had checked one of the structured options, they provided further supplementary comments, although 29 per cent of 'may be fit for work' notes had one or more structured options ticked, but no supplementary;

- over four in ten GPs had not stated whether their patient's fitness for work needs to be assessed again when the current medical statement expires;

- use of the 'may be fit for work' option and provision of return-to-work advice varied significantly both between and within practices.

3.1 'May be fit for work' advice

A key feature of the 'fit' note was that doctors were now able to assess that a patient 'may be fit for work taking into account the following advice'. Doctors who assess that their patient 'may be fit for work' should use the rest of the fit note to give further information, by indicating one or more of the common approaches which might help the patient back to work (phased return, altered hours, amended duties and workplace adaptations). They should also provide any other helpful comments on the functional effects of the patient's health condition on their ability to work in the free-text 'comments' section.

Of the 58,695 fit notes in the database, 3,670 notes (6.2 per cent) had an indication that the patient 'may be fit for work'. It had been hypothesised that a higher proportion of notes would include this type of return-to-work advice as GPs became more accustomed to using the fit note and the benefits of a return to work became more fully recognised. However, the rates of completing the 'may be fit for work' section of the fit note did not increase during the course of data collection for the evaluation. Monthly rates of completion decreased from 7.3 per cent in the first month of data collection to 5.5 per cent near the midpoint, and subsequently increased to 6.6 per cent in the final month of collection at practices (Figure 3.1).

Figure 3.1   Proportion of all fit notes including 'may be fit for work' advice, by month of data collection

Source: IES/University of Liverpool fit note database, 2013.
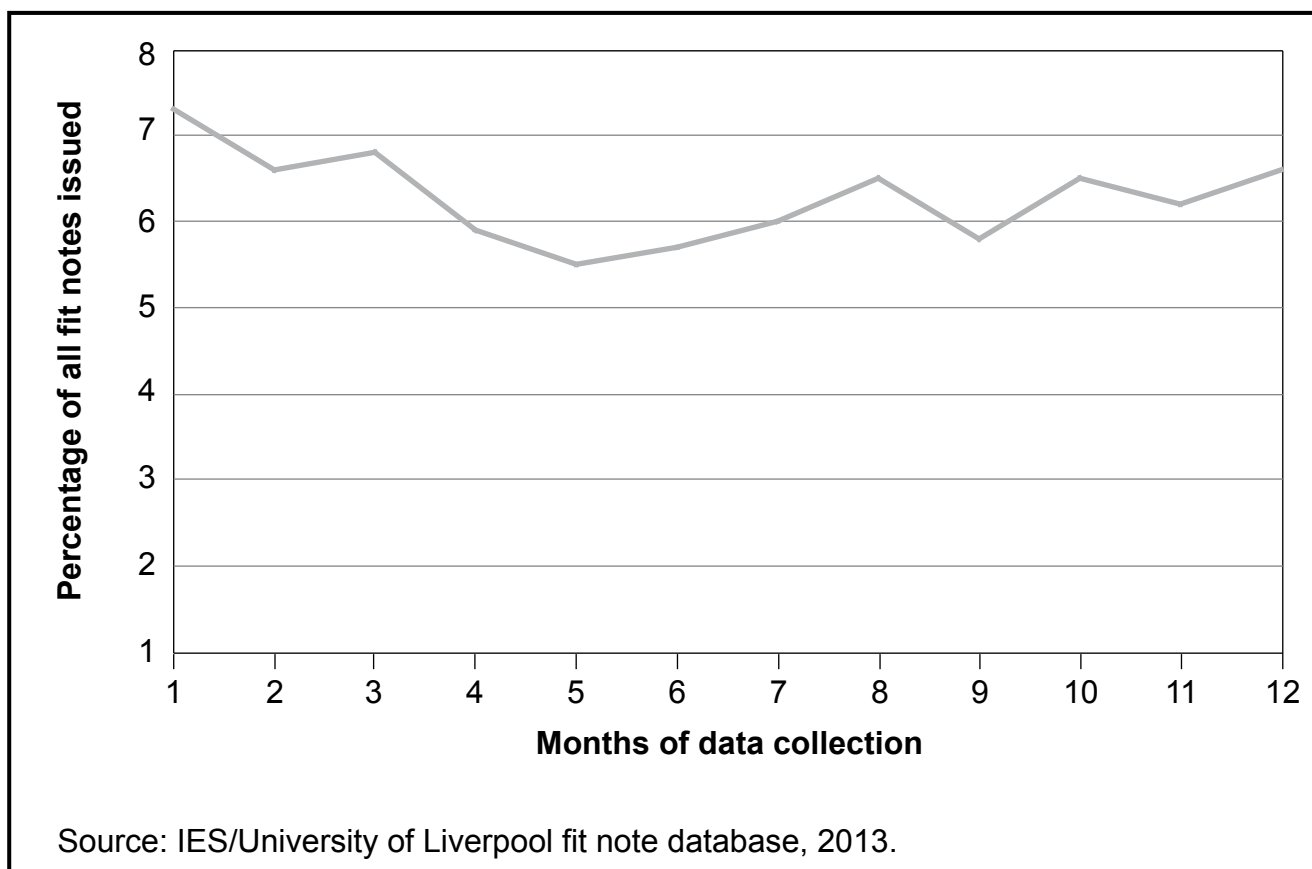
3.1.1   Inter-practice variation in rates of 'may be fit for work' advice

Although the overall completion rate was 6.2 per cent, individual practice rates varied considerably (Figure 3.2). Completion rates ranged from over 15 per cent at one East Midlands practice to one per cent of notes at a practice in Liverpool. (Individual practice rates are reported in Table B.1)

Figure 3.2   Proportion of all fit notes including 'may be fit for work' advice at each practice

Source: IES/University of Liverpool fit note database, 2013.
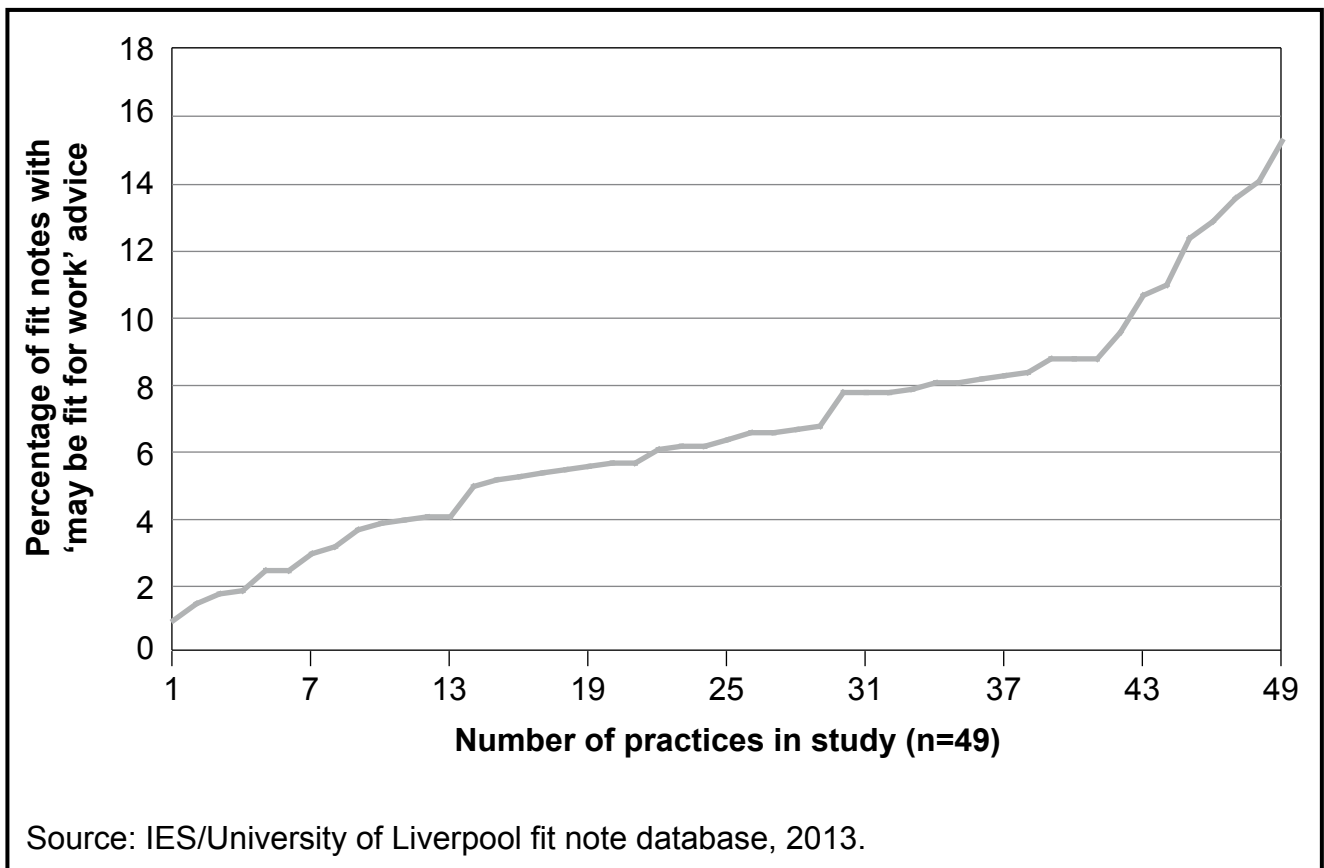
Inspection of the data reported in Table B.1 suggests a potential relationship between the social deprivation of practices and the proportion of their fit notes that included 'may be fit for work' advice. Four of the five practices with the highest proportions were classed as having moderate to very low deprivation levels. Eight of the 12 practices with the lowest rates of completing 'may be fit for work' advice were classed as highly or very highly deprived. Statistical analysis confirmed a significant negative correlation between the individual practice proportion of notes with 'may be fit for work' advice and the proportion of all fit notes issued to patients living in one of the most deprived 40 per cent of neighbourhoods in the respective country of residence. We do not have consistent information about the employment status of our sample of fit note recipients to test whether this was due to relatively high levels of unemployment.

## 3.1.2 Patients receiving a 'may be fit for work' note

Nearly 12 per cent (n=2,990) of patients received at least one fit note including such 'may be fit for work' advice during the period of data collection.

The highest proportion of patients receiving a 'may be fit for work' note was in the East Midlands practices (15 per cent of patients at practices in this region). Thirteen per cent of patients in the Scottish practices, 12 per cent in practices in South East England, ten per cent in Welsh practices and ten per cent in North West England practices received this type of fit note.

Patients registered at rural or semi-rural practices were significantly more likely to receive a 'may be fit for work' note (14 per cent compared to 11 per cent of patients in urban and suburban practices). However, there was no significant association between gender and proportions receiving a 'may be fit for work' note (12.1 per cent of females and 11.6 per cent of males). Older patients were significantly more likely to receive such a note (12.4 per cent of those aged over 40, compared to 11.1 per cent of younger patients).

Patients living in one of the 20 per cent most socially deprived areas in their country were significantly less likely to receive a 'may be fit for work' note. Nearly nine per cent of patients in these areas received a note, compared to over 14 per cent of patients residing in the least socially deprived areas.

Table 3.1   Fit notes with 'may be fit for work' advice

Diagnostic category	N of fit notes in category	% of fit notes with 'may be fit for work' advice
Back problem	5,581	8.3
Other musculoskeletal	2,486	6.7
Bone fracture	1,360	10.2
Other injury	2,567	10.1
Post-op recovery	5,128	9.8
Circulatory	1,667	8.1
Symptoms	5,310	7.2
Causes of injury	334	6.9
Procedures/invest/treatments	645	6.7
Nervous system/sense organ	1,475	6.6
Pregnancy/childbirth	819	6.6
Neoplasm	902	6.4
Haematology	161	5.6
Infectious/parasitic	1,713	5.5
Skin	575	5.4
Congenital	190	5.3
Digestive	1,547	5.0
Endocrine/nutrition/metabolic	469	4.9
Mild-to-moderate mental health disorder	20,511	4.3
Genito-urinary	756	4.2
Severe mental health disorder	612	3.4
Respiratory	3,690	3.0
No diagnosis recorded	197	-
All	**58,695**	**3,670 (6.2)**

Source: IES/University of Liverpool fit note database, 2013.

3.1.3 Proportions of 'may be fit for work' fit notes within diagnostic categories

When considered as a proportion of all notes for a particular diagnosis, a 'may be fit for work' note appeared to be more prevalent when the patient had been incapacitated due to physical illness or injury (Table 3.1). Over ten per cent of fit notes issued to patients suffering from an injury (including fractures) received advice pertaining to a return to work. Nearly ten per cent of all notes issued in order to assist rehabilitation after a surgical operation included this form of advice. Only four per cent of mild-to-moderate mental health disorder fit notes had the 'may be fit for work' box checked by the GP.

3.2 Types of advice on 'may be fit for work' notes

Table 3.2 lists the types of individual advice, and combinations of advice, included on the 3,670 'may be fit for work' notes. On over seven per cent (n= 273) of notes the GP had checked the 'may be fit for work' option but had subsequently provided no structured or free-text advice. Structured 'amended duties' advice, with additional comments, constituted the most prevalent combination (20 per cent of all 'may be fit for work' notes). Contrary to Department for Work and Pensions (DWP) guidance, for 1,056 (28.8 per cent) of 'may be fit for work' notes one or more of the structured options had been indicated, but no comments had been added by the GP in order to clarify the advice offered to the patient and employer.

Of the individual structured items (representing common approaches to return to work), 'amended duties' was most often indicated by GPs. This box was checked on 1,530 fit notes, either alone or with other types of advice, representing nearly 42 per cent of all 'may be fit for work' notes. A 'phased return' was indicated on 1,366 (37.2 per cent) notes, 'altered hours' on 815 (22.2 per cent) notes and 'workplace adaptations' on 360 (ten per cent) notes.

Table 3.2   Combinations of advice provided by GPs on 'may be fit for work' notes

Advice	N	Column %
Amended duties/comments	735	20.0
Phased return to work/comments	445	12.1
Phased return to work	403	11.0
Free-text comments only	376	10.2
Amended duties	243	6.6
Altered hours/comments	230	6.3
Altered hours	108	2.9
Phased return to work/altered hours/comments	104	2.8
Phased return to work/amended duties/comments	93	2.5
Amended duties/workplace adaptations/ comments	80	2.2
Workplace adaptations/comments	73	2.0
Altered hours/amended duties/comments	68	1.9
Phased return to work/altered hours	67	1.8
Phased return/altered hours/amended duties/ workplace adapt.	64	1.7
		Continued

Table 3.2   Continued

Advice	N	Column %
Phased return to work/amended duties	50	1.4
Phased return/altered hours/amended duties/comments	50	1.4
Altered hours/amended duties	38	1.0
Workplace adaptations	29	0.8
Phased return/altered hours/amended duties	27	0.7
Phased return/altered hours/amended duties/workplace adaptations/comments	25	0.7
Amended duties/workplace adaptations	23	0.7
Other combination	66	1.8
No structured or free-text advice	273	7.4
Total	**3,670**	**100**

Source: IES/University of Liverpool fit note database, 2013.

The type of advice varied with the health problem that had been the cause of the patient's work incapacity. Table 3.3 reports the number of individual items of advice as a proportion of all 'may be fit for work' notes within each diagnostic category. For the 890 'may be fit for work' notes issued to a patient with mild-to-moderate mental health disorder, the most common structured item of advice was for the patient to be allowed to phase a return to work (on 57 per cent of 'may be fit for work' notes). However, for the more physical causes of sickness absence (back problem, other musculoskeletal and fractures) advice about returning to work was more likely to involve amending normal work duties. This structured item was checked on over 60 per cent of 'may be fit for work' notes in each category.

3.3   Comments on 'may be fit for work' notes

3.3.1   Missing comments and no structured advice

As reported in Table 3.2, 273 fit notes had the 'may be fit for work' box ticked by the GP, but none of the four structured options had been selected and no text was entered in the 'additional comments' section.

In terms of any association with the patient's health problem, this type of fit note including no specific advice was more prevalent in three categories: respiratory, digestive and pregnancy-related illness (19 per cent, 17 per cent and 15 per cent respectively).

However the distribution of this type of note across practices suggests an explanation may lie at the individual practice or GP levels. Although they were issued within 37 practices in all, 42 per cent of these notes were issued to patients in one practice, 21 per cent in another, and a further 11 per cent in a third.

Table 3.3   Prevalence of individual advice items within diagnostic categories for patients assessed as 'may be fit for work'

Diagnostic category	N of 'may be fit for work' notes	% advising phased return	% advising altered hours	% advising amended duties	% advising workplace adaptations	% with free-text comments
Mild-to-moderate mental health disorder	890	56.5	32.2	22.5	8.0	58.4
Severe mental health disorder	21	81.0	19.0	23.8	14.3	61.9
Back problem	462	23.8	17.7	61.7	14.5	68.2
Other musculoskeletal	167	24.0	17.4	64.7	12.0	71.3
Bone fracture	139	30.2	14.4	63.3	14.0	63.3
Other injury	258	20.9	11.6	55.8	10.0	69.0
Causes of injury	23	39.1	17.4	47.8	4.3	60.9
Infectious/parasitic	94	47.9	29.8	25.5	5.3	63.8
Neoplasm	58	53.4	22.4	25.9	5.2	55.2
Endocrine/nutrition/ metabolic	23	34.8	21.7	26.1	4.3	69.6
Haematology	9	66.7	22.2	22.2	0	66.7
Nervous system/ sense organ	97	32.0	21.6	40.2	15.5	66.0
Circulatory	135	45.9	23.0	34.1	14.1	63.7
Respiratory	110	28.2	22.7	30.0	4.5	60.9
Digestive	77	24.7	19.5	28.6	9.1	62.3
Genito-urinary	32	31.2	28.1	46.9	6.2	65.6
Pregnancy/childbirth	54	18.5	33.3	37.0	3.7	72.2
Skin	31	29.0	9.7	29.0	16.1	67.7
Congenital	10	20.0	50.0	60.0	20.0	60.0
Symptoms	381	22.8	18.9	53.5	12.6	63.8
Procedures/invest/ treatments	43	18.6	25.6	44.2	2.3	67.4
Post-op recovery	504	43.1	18.7	43.3	7.1	66.5

Note: Row percentages total more than 100. Individual fit notes may contain more than one advice item.
Source: IES/University of Liverpool fit note database, 2013.

3.3.2   Comments, without structured advice

Over ten per cent of fit notes where the GP had checked the 'may be fit for work' box had free-text comments made by the GP but none of the four structured options indicated.

It was hypothesised that in such cases the GP may be providing advice to the patient and employer about a means of returning to work not covered by the four structured options.

However, content analysis of these notes found that:

• for 153 (41 per cent) of these fit notes, it would have been appropriate for the GP to check one or more of the structured options. These notes included comments relating to one of the common approaches to return to work incorporated in the four structured options;

- a further 104 notes (28 per cent) advised that the patient was fit to return (to normal duties) immediately or soon after assessment. The majority of the patients receiving this type of advice appear to have been requested to return to the GP for re-assessment at the expiry of their previous fit note. However, the current system of sickness certification does not require a medical statement to be issued in order to confirm the patient is fully fit for work. The issue of these 104 fit notes appears to have been unwarranted;

- on 23 (six per cent) notes there was a recommendation that the patient should receive some professional support (e.g. counselling, occupational therapy, physiotherapy) to support a return to work;

- the remaining fit notes included comments that referred, in more general terms, to the patient's condition itself.

3.3.3   Structured advice, without additional comments

Department for Work and Pensions (DWP) guidance stipulates that where the 'may be fit for work' box has been ticked, the GP should complete the 'additional comments' section, providing information on the functional effects of the patient's condition, and how these might prevent an immediate return to full work responsibilities.

If one of the four structured return-to-work items had been ticked, it might be anticipated that the GP would use the comments section to elaborate on this basic advice. For instance, where the 'phased return' box had been checked, the GP should provide written advice relating to the number of days a week a patient should commence to work, and how the hours worked might increase over time. For 'altered hours', the maximum number of hours a day the patient would be expected to work would provide useful information for the employer. If the 'amended duties' box had been ticked, it would be desirable for the GP to specify the work duties that the patient's condition enabled them to perform. An indication of 'workplace adaptations' may require the GP to inform the employer about the nature of such adaptations (e.g. whether they would be physical or organisational).

However, over 29 per cent (n=1,076) of 'may be fit for work' notes had one or more structured options ticked, but no subsequent comment made by GPs. There was no clear association between the issue of this type of note and diagnostic reasons for certified sickness, although 'may be fit for work' notes issued to patients with a mild-to-moderate mental health disorder had a higher than average proportion (37 per cent) of these notes with no additional written advice from the GP. This
may be because GPs are less aware of what to recommend in these circumstances.

3.3.4   Structured advice and comments

For nearly 53 per cent (n=1,945) of 'may be fit for work' notes the GP appeared to have complied with official guidance and had provided written comments to supplement the completion of a structured return-to-work item. The vast majority of the free-text advice (although usually concise) was relevant to the structured item(s) that the GP had checked. A small minority (approximately four per cent) of these notes included comments that were not directly linked to the structured advice, in the sense that it consisted of: (i) general comments about the patient's condition or circumstances; (ii) simply repeated the wording of the structured item ('phased return' etc); or (iii) confirmed that the patient was now fit to return to work (e.g. 'RTW').

3.4 Duration and timing of 'may be fit for work' notes

3.4.1 Period of certification on 'may be fit for work' notes

Even on notes including advice on a provisional return to work, the period for which the fit note applies should be specified by the GP. If the employer is unable (or unwilling) to accept GP advice on modifications to allow the patient to return to work, the fit note in effect becomes a conventional 'sick note', i.e. the patient is advised to abstain from all work for a specified period of time. However, in the evaluation database, 758 (21 per cent) of the fit notes with 'may be fit for work' advice included no period of certification. If GP advice is not followed, and there is no specified period of certification, there is a possibility that the patient may be obliged to resume full work responsibilities before being fully fit to do so.

Where a certification period was specified on 'may be fit for work' notes, it tended to be of shorter duration than that found on other fit notes. A median period of two weeks was certified on 'may be fit for work' notes compared to three weeks for notes in the rest of the study. The differences were more pronounced in the case of 'may be fit for work' notes issued for specific diagnoses. 'May be fit for work' notes issued for mild-to-moderate mental health disorder had a median duration of two weeks compared to four weeks for other types of mild-to-moderate mental health disorder fit note. Corresponding figures for circulatory disease were 2.6 weeks and four weeks, and for post-op recovery, two weeks and three weeks.

3.4.2 Fit notes issued after a 'may be fit for work' note

The timing of the issue of a 'may be fit for work' note is important. It might be anticipated to represent a key point in the process leading to eventual resumption of normal work duties.

However, of the 2,990 patients receiving one or more 'may be fit for work' notes, over 25 per cent returned to the practice to receive another fit note after being issued their only (or first) 'may be fit for work' note. Re-attendance rates were higher for patients receiving fit notes for a specific diagnosis. Nearly 29 per cent of back problem patients and 28 per cent of those with a mild-to-moderate mental health disorder collected another fit note within the study period, while only 16 per cent of patients with a bone fracture and 15 per cent of those receiving certification for post-op recovery returned to the practice for another fit note.

There were no significant associations between rates of re-attendance and patient gender, age or location of their practice. However, patients living in the 20 per cent most socially deprived areas of the country were more likely to re-attend for another note. Nearly 30 per cent of these patients issued with a 'may be fit for work' note received a further fit note, compared to 25 per cent of patients living in other areas.

3.5 Need to re-assess patient

Along with the 'may be fit for work' options, the fit note provides the GP with the option to state whether the patient's condition needs to be assessed again when the current medical statement expires. The completion of this item at the end of the fit note provides some indication of the GP's evaluation of the functional effects of the condition and whether another medical statement may be required at the expiry of the current one.

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Of all fit notes submitted to the evaluation database, 25,368 (43.7 per cent) did not have this important item completed. The distribution of the missing data suggests that some practices are more thorough than others in ensuring all fit notes issued to patients have an indication of whether or not they are expected to return for re-assessment. In 18 practices the 'need to re-assess' item was completed for all fit notes. However in contrast, ten practices had not completed this item for over 90 per cent of fit notes they submitted to the evaluation. It appears that any intervention to address this problem may be more effective if targeted at practices rather than individual GPs.

4 Episodes of certified sickness

People could receive more than one fit note for a continued period of sickness and in this chapter we look at discrete episodes of certified sickness absence (i.e. where a series of linked fit notes relates to the same incidence of ill-health) and the factors associated with type and length of patient episodes. Overall, there were 31,000 separate episodes identified in the fit note database.

The key points from this chapter are:

- four out of five (79 per cent) patients had only one episode of ill-health during the course of the study;

- the median length of an episode was four weeks, although almost one in five sickness episodes (18 per cent) lasted over 12 weeks and four per cent lasted longer than 28 weeks;

- the shortest episodes tended to be for respiratory conditions. The diagnoses most likely to lead to a longer-term period of absence (i.e. of at least 12 weeks) were neoplasm, severe mental health disorders, musculoskeletal conditions other than back problems, circulatory problems or mild-mental health disorders (mild-to-moderate mental health disorders);

- males were 29 per cent more likely than females to have a 12-week or longer episode of sickness absence. Episodes experienced by patients living in the most socially deprived areas were over twice as likely to be over 12 weeks in duration, compared to those patient episodes in the least socially deprived areas.

4.1 What is an 'episode'?

In those cases where a patient received more than one fit note within the period of data collection, and there was a period of two weeks or more between the expiry of one fit note and the issue of another one, it was assumed that the latter note was the first in a new episode of certified sickness. Where the intervening period was less than two weeks, the issued fit note was taken to be part of a continuing episode.

Where an individual episode included fit notes allocated to different diagnostic categories, the diagnostic category with the majority of constituent fit notes was considered the 'index category' for that episode. Where there was no majority for a diagnostic category, the diagnosis on the first fit note in the episode was used to indicate the index category.

The same method was used to assign a 'certifying GP' to those episodes where more than one GP had issued notes during a continuous episode of certified sickness.

The duration (or length) of a single episode was defined as that period between the issue of the first fit note in the episode and the expiry date of the final note. The duration of the episode only refers to the period of sickness absence certified by a single fit note (or more than one linked fit note), and does not include the seven days of sickness absence self-certified by an employee prior to the receipt of a first fit note.

4.2   Episodes of continuous certified sickness

A total of 31,705 certified sickness episodes were identified within the fit note data. Twenty three per cent of all episodes were experienced by patients in the North West England practices, 17 per cent in South East England, 22 per cent in the East Midlands, 22 per cent in Wales and 16 per cent in Scotland. Over 58 per cent of episodes were assigned to female patients and 31 per cent to patients aged over 50. Patients living in one of the most deprived 20 per cent of local areas in their respective country contributed over 28 per cent of the episodes. Seventy one per cent of all episodes were certified by GPs for patients in urban or suburban practices.

Over 58 per cent (n=18,573) were single fit note episodes, 90 (0.3 per cent) included ten or more notes. The maximum number of fit notes in a single episode was 15. Episodes due to a mild-to-moderate mental health disorder or a circulatory health problem had the highest number of fit notes per episode (Table 4.1).

Over 79 per cent (n=19,927) of patients only had the single episode of certified sickness absence in the collection period. Nearly 17 per cent (n=4,196) had two episodes, while 28 patients (0.1 per cent) had five discrete episodes of certification. Where patients had all episodes within a specific index diagnostic category, the highest rate of episodes per patient was for mental health disorders (Table 4.1).

Table 4.1   Mean numbers of fit notes in episodes and episodes per patient

	Mean number of fit notes per episode	Mean number of episodes per patient
Mild-to-moderate mental health disorder	2.07	1.23
Neoplasm	2.07	1.13
Circulatory	2.06	1.16
Other musculoskeletal	1.99	1.11
Back problem	1.95	1.14
Haematological	1.87	1.05
Symptoms	1.85	1.10
Endocrine/nutrition/metabolic	1.80	1.11
Severe mental health disorder	1.74	1.16
Nervous system/sense organ	1.72	1.11
Other injury	1.71	1.06
Procedures/invest/treatments	1.71	1.02
Post-op recovery	1.71	1.06
Skin	1.68	1.11
Causes of injury	1.67	1.04
Bone fracture	1.66	1.08
Genito-urinary	1.65	1.07
Digestive	1.64	1.07
Pregnancy/childbirth	1.61	1.10
Infectious/parasitic	1.50	1.05
Respiratory	1.47	1.06
Congenital	1.36	1.06

Source: IES/University of Liverpool fit note database, 2013.

In relation to allocation of episodes to a specific diagnostic category, the distribution was similar to that for fit notes. Episodes of work incapacity due to mild-to-moderate mental health disorders contributed the highest proportion, 32 per cent. Nine per cent of all episodes were due to a back problem, nine per cent in order to enable the patient to recover from a recent operation and eight per cent were certified for a respiratory health problem (Table 4.2).

Table 4.2   Allocation of certified sickness episodes to (index) diagnostic categories

	Episodes in category	
Index category	**N**	**Column %**
Mild-to-moderate mental health disorder	9,972	31.5
Post-op recovery	2,952	9.3
Back problem	2,900	9.2
Symptoms	2,855	9.0
Respiratory	2,541	8.0
Other injury	1,490	4.7
Other musculoskeletal	1,241	3.9
Infectious/parasitic	1,142	3.6
Digestive	939	3.0
Bone fracture	828	2.6
Nervous system/sense organ	830	2.6
Circulatory	810	2.6
Pregnancy/childbirth	513	1.6
Neoplasm	462	1.5
Genito-urinary	465	1.5
Severe mental health disorder	351	1.1
Skin	333	1.1
Procedures/invest/treatments	339	1.1
Endocrine/nutrition/metabolic	257	0.8
Causes of injury	201	0.6
Congenital	129	0.4
Haematological	79	0.2
Total	**31,629[1]**	**100**

[1]   A further 76 episodes could not be allocated to a category.

Source: IES/University of Liverpool fit note database, 2013.

4.3   Duration of certified sickness episodes

The median length of an episode was four weeks (with an inter-quartile range of 1.57 to 9.14 weeks). Episodes assigned to the respiratory and infection categories tended to be of short duration. As Table 4.3 reports, 82 per cent of episodes caused by a respiratory problem and 76 per cent of those due to infection did not exceed three weeks in duration. Other high rates (over 60 per cent) of short-term duration were found for certified sickness episodes due to digestive, genito-urinary, skin and pregnancy-related problems.

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Table 4.3   Duration of episode by index diagnostic category

	3 weeks or less		3-12 weeks		12-28 weeks		Over 28 weeks		Total episodes
	N	Row %	N	Row %	N	Row %	N	Row %	
Mild-to-moderate mental health disorder	2,943	29.5	4,620	46.3	1,872	18.8	536	5.4	9,971
Severe mental health disorder	35	10.0	167	47.6	109	31.1	40	11.4	351
Back problem	1,327	45.8	1,021	35.2	409	14.1	142	4.9	2,899
Other musculoskeletal	378	30.5	463	37.3	274	22.1	126	10.2	1,241
Bone fracture	268	32.4	472	57.0	72	8.7	16	1.9	828
Other injury	876	58.8	503	33.8	97	6.5	14	0.9	1,490
Causes of injury	128	67.7	54	26.9	17	8.5	2	1.0	201
Infectious/parasitic	873	76.4	204	17.9	46	4.0	19	1.7	1,142
Neoplasm	67	14.5	177	38.3	161	34.8	57	12.3	462
Endocrine/nutrition/metabolic	97	37.7	104	40.5	42	16.3	14	5.4	257
Haematological	32	40.5	35	44.3	9	11.4	3	3.8	79
Nervous system/sense organ	398	40.0	263	31.7	122	14.7	47	5.7	830
Circulatory	217	26.8	344	42.5	184	22.7	65	8.0	810
Respiratory	2,074	81.6	326	12.8	101	4.0	40	1.6	2,541
Digestive	609	64.9	235	25.0	73	7.8	22	2.3	939
Genito-urinary	290	62.4	121	26.0	42	9.0	12	2.6	465
Pregnancy/childbirth	328	63.9	166	32.4	19	3.7	-	-	513
Skin	213	64.0	87	26.1	25	7.5	8	2.4	333
Congenital	10	7.8	29	22.5	55	42.6	35	27.1	129
Symptoms	1,508	52.8	929	32.5	330	11.6	88	3.1	2,855
Procedures/invest/treat	187	56.2	114	33.6	29	8.6	9	2.7	339
Post-op recovery	1,293	43.8	1,322	44.8	294	10.0	43	1.5	2,952
All	**14,151**	**44.7**	**11,756**	**37.2**	**4,382**	**13.9**	**1,338**	**4.2**	**31,627**

Source: IES/University of Liverpool fit note database, 2013.

Almost one in five sickness episodes (18.1 per cent) last over 12 weeks and four per cent last longer than 28 weeks. High long-term (over 12 weeks) episode rates within categories were found for neoplasm (cancer) and severe mental health disorder. Both had over 40 per cent of all their episodes exceeding 12 weeks in duration. Nearly 31 per cent of episodes where the patient had a specific type of circulatory disease lasted longer than 12 weeks while only 24 per cent of all mild-to-moderate mental health disorder episodes were for this length of time. It has already been reported that patients with these psychological health problems were more likely to have a recurrent episode.

4.4 Mild-to-moderate mental health disorder and back problem episodes

Table 4.4 reports proportions of patients having any episode of certified sickness due to a mild-to-moderate mental health disorder or a back problem. Patients are assigned to groups based on location of their practice, patient gender and age, and social deprivation of their area of residence.

Again, proportions reported were similar to those for patients receiving fit notes for the same groups of diagnoses. Proportions of patients having mild-to-moderate mental health disorder episodes were significantly higher at the study practices in North West England (38 per cent compared to 30 per cent of patients in other regions). Proportions were significantly higher for patients in urban/suburban practices (34 per cent compared to 28 per cent of patients in more rural practices) and for female patients (34 per cent experiencing at least one mild-to-moderate mental health disorder episode compared to 30 per cent of males). The oldest age group (i.e. those aged over 50) of patients had the lowest rate of mild-to-moderate mental health disorder episodes (25 per cent), and patients living in the most deprived neighbourhoods had a significantly higher proportion of mild-to-moderate mental health disorder episodes (39 per cent, compared to 28 per cent of patients in the least socially deprived areas).

Patients at the Scottish practices had a lower proportion of certified back problem episodes than patients in the rest of the evaluation. The difference was statistically significant, but by no means a large one (eight per cent of patients at Scottish practices compared with ten per cent of the rest). Male patients (12 per cent compared to nine per cent of females), patients aged over 40 (11 per cent compared to nine per cent of younger patients) and patients in the most socially deprived areas (11 per cent, compared to eight per cent of those in the least socially deprived areas) had higher rates of episodes due to a back problem. However,

no significant association was found between proportion of back pain episodes and being registered at an urban or rural practice.

Table 4.4   Characteristics of patients issued fit notes for mild-to-moderate mental health disorder or back problem episodes

	N (%) of patients having a mild-to-moderate mental health disorder episode	P	N (%) of patients having a back problem episode	P
Region/county				
North West England	2,209 (38.1)		520 (9.0)	
South East England	1,193 (28.0)		436 (10.2)	
East Midlands	1,588 (28.2)	**<0.001**	630 (11.2)	**<0.001**
Wales	1,795 (32.9)		618 (11.3)	
Scotland	1,302 (32.6)		334 (8.4)	
Location of practice				
Urban/suburban	6,034 (33.7)		1,817 (10.2)	
Rural/semi-rural	2,053 (28.3)	**<0.001**	721 (9.9)	0.61
Gender				
Male	3,266 (29.9)		1,276 (11.7)	
Female	4,821 (33.9)	**<0.001**	1,262 (8.9)	**<0.001**
Age				
16-29	1,707 (34.4)		407 (8.2)	
30-39	1,854 (38.1)	**<0.001**	488 (10.0)	**<0.001**
40-49	2,373 (35.4)		763 (11.4)	
50 and over	2,147 (25.0)		874 (10.2)	
Residence in LSOA or DZ				
Quintile 1 (living in one of 20% most socially deprived areas in patient's country)[1]	2,591 (39.1)		698 (10.5)	
Quintile 2	1,406 (33.8)		470 (11.3)	
Quintile 3	1,462 (29.5)		526 (10.6)	
Quintile 4	1,279 (28.8)		419 (9.4)	
Quintile 5 (living in one of 20% least socially deprived areas in patient's country)[2]	1,177 (27.5)	**<0.001**	357 (8.3)	**<0.001**

[1]   Residing in one of most deprived LSOAs or DZs in either England, Scotland or Wales.
[2]   Residing in one of least deprived LSOAs or DZs in either England, Scotland or Wales.
Results significant at the 95 per cent confidence level shown in **bold**.
Source: IES/University of Liverpool fit note database, 2013.

4.5   Independent effects of patient and diagnostic factors on long-term episodes

A number of key patient factors and the range of diagnostic categories were entered into two multilevel logistic regression models in order to estimate independent effects on the likelihood of: (i) an episode exceeding 12 weeks in duration; (ii) an episode reaching a threshold of 28 weeks duration (Table 4.5).

In relation to the over-12-week outcome, males were 29 per cent more likely than females to have a certified episode of this length. A ten-year age difference in patients increased the likelihood of the 12-week outcome by 16 per cent. Episodes experienced by patients living in the most socially deprived areas were 2.22 times more likely to be over 12 weeks in duration, compared to those patient episodes in the least socially deprived areas.

After controlling for patient factors, and compared to the reference diagnostic category (episodes for respiratory problems), mild-to-moderate mental health disorder episodes were 5.95 times more likely to be over 12 weeks. When the episode was due to a severe mental health disorder, the likelihood increased to 14.5. Back problem episodes were four times more likely and other musculoskeletal 8.7 times more likely to result in a long, over-12-week episode. As may be anticipated, pregnancy-related sickness episodes were not significantly associated with long-term 12-week outcomes.

When considering the 28-week outcome (which represents the maximum period of Statutory Sick Pay (SSP) entitlement), episodes experienced by males were 40 per cent more likely to reach 28 weeks in duration than were female patient episodes. Although the effect of age was less pronounced in this model, it was still statistically significant, with a ten-year increase raising the likelihood by four per cent. Living in the most socially deprived areas raised the likelihood of 28-week outcome by 170 per cent (compared to episodes experienced by patients in the least deprived neighbourhoods).

After adjustment for patient effects, an episode due to a mild-to-moderate mental health disorder was 3.7 times more likely to result in a 28-week period of continuous sickness than was one in the reference category. An episode caused by a severe mental health disorder was 6.57 times, back problem 2.91 times and other musculoskeletal problem 6.97 times more likely to result in a 28-week outcome.

Certified sickness episodes of 28 weeks or longer were not significantly associated with bone fracture, infection, haematological, digestive, genito-urinary or skin problems. The patient undergoing procedures, investigations or treatments had no significant effect on the likelihood of long-term certified sickness. Pregnancy-related episodes were not included in this model.

Table 4.5 Logistic regression[1] of long-term episode outcomes by specified patient factors and diagnostic categories

	Over 12 weeks episode		Episode 28 weeks or longer	
	Odds ratio[2] (95% CI)	P	Odds ratio[2] (95% CI)	P
Gender of patient				
Female	1.0		1.0	
Male	1.29 (1.21-1.38)	**<0.001**	1.40 (1.24-1.57)	**<0.001**
Age of patient				
10 years older	1.16 (1.13-1.19)	**<0.001**	1.04 (1.01-1.07)	**<0.001**
Residence of patient				
Living in one of 20% least deprived neighbourhoods	1.0		1.0	
Living in one of 20% most deprived neighbourhoods	2.22 (1.98-2.49)	**<0.001**	2.70 (2.08-3.39)	**<0.001**
Diagnostic category of fit note				
Respiratory	1.0		1.0	
Mild-to-moderate mental health disorder	5.96 (4.92-7.23)	**<0.001**	3.70 (2.58-5.31)	**<0.001**
Severe mental health disorder	14.5 (10.6-20.0)	**<0.001**	6.57 (4.03-10.6)	**<0.001**
Back problem	4.01 (3.24-4.94)	**<0.001**	2.91 (2.02-4.19)	**<0.001**
Other musculoskeletal	8.73 (6.91-11.0)	**<0.001**	6.97 (4.79-10.2)	**<0.001**
Bone fracture	2.00 (1.47-2.71)	**<0.001**	1.01 (0.55-1.90)	0.95
Other injury	1.34 (1.02-1.77)	**0.03**	0.50 (0.26-0.94)	**0.03**
Causes of injury	1.76 (1.03-3.03)	**0.04**	0.56 (0.13-2.37)	0.43
Infectious/parasitic	1.04 (0.75-1.43)	0.82	1.12 (0.64-1.94)	0.70
Neoplasm	19.6 (14.5-26.3)	**<0.001**	9.58 (6.17-14.9)	**<0.001**
Endocrine/nutrition/metabolic	4.24 (2.89-6.24)	**<0.001**	3.04 (1.59-5.83)	**0.002**
Haematological	2.71 (1.27-5.77)	**<0.001**	2.62 (0.76-9.04)	0.13
Nervous system/sense organ	4.66 (3.58-6.07)	**<0.001**	3.74 (2.41-5.83)	**<0.001**
Circulatory	7.51 (5.81-9.72)	**<0.001**	4.50 (3.27-7.57)	**<0.001**
Digestive	1.91 (1.42-2.56)	**<0.001**	1.39 (0.81-2.39)	0.23
Genito-urinary	2.39 (1.67-3.41)	**<0.001**	1.65 (0.85-3.2)	0.14
Pregnancy-related	0.76 (0.44-1.29)	0.31	-	
Skin	1.82 (1.20-2.86)	**0.005**	1.48 (0.68-3.26)	0.32
Symptoms	2.98 (2.44-3.70)	**<0.001**	1.92 (1.31-2.82)	**<0.001**
Procedures/invest/treatments	2.36 (1.57-3.55)	**<0.001**	1.77 (0.84-3.76)	0.13
Post-op recovery	2.26 (1.82-2.82)	**<0.001**	0.96 (0.62-1.49)	0.86

[1] Multilevel mixed-effects model: Levels: (i) episode; (ii) patient (see Appendix A).

[2] Odds ratio adjusted for other co-variates in the model (see Appendix A).

Results significant at the 95 per cent confidence level shown in **bold**.

Source: IES/University of Liverpool fit note database, 2013.

5   GPs' use of fit notes

In this chapter we look at the data collected on the GPs who issued the fit notes and whether there is any association between GP characteristics and certified outcomes.

The key points from this chapter are:

- there was considerable variation among GPs within the same practice about whether they issued a long-term (over four weeks) fit note or a fit note with a mild-to-moderate mental health disorder diagnosis, with the greatest variation in the larger practices;

- GPs who were partners and were working full-time had a significantly increased likelihood of issuing a fit note longer than four weeks. Practice partners were also more likely to certificate a sickness absence episode that lasted longer than 12 weeks.

5.1   Characteristics of the GP and duration of issued fit notes

A total of 566 general practitioners issued the 58,695 fit notes in the evaluation database. The median number of fit notes issued per GP was 103.6. Basic information was available for 354 of these GPs, accounting for a vast majority (n=51,370) of the fit notes in the database[3]. Nearly 49 per cent of these certifying GPs were female, 26 per cent were aged over 50, 56 per cent were partners in the practice and over 51 per cent worked full-time.

A higher proportion of fit notes issued by the male GPs were over four weeks in duration (Table 5.1). Thirty per cent of the fit notes issued by males were of this length while only 26 per cent of those issued by their female counterparts exceeded four weeks in duration. A lower proportion of fit notes issued by males was for a period of one week or less (21 per cent compared to 24 per cent for females).

The middle age category (aged 35-50) of GPs issued the highest proportion of long-term (over four weeks) fit notes (30 per cent, compared to 27 per cent of younger and older GPs). Higher rates of long-term notes issued were found for GP partners (29 per cent of all the notes they issued, compared to 27 per cent of those issued by salaried GPs) and GPs working full-time (30 per cent, compared to 25 per cent of notes issued by part-time GPs).

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[3]   All GPs in the study issued fit notes. However, a total of 212 GPs contributed only 7,325 fit notes. Nearly all of these GPs were 'locums', not directly employed by the practice. Basic information, such as age and gender, was not available for these GPs and they (and their fit notes) were subsequently excluded from analysis.

Table 5.1   Characteristics of certifying GPs and duration of fit notes

GP characteristic	1 week or less N (%)	1-4 weeks N (%)	Over 4 weeks N (%)	P	Total fit notes
Gender					
Male	6,199 (21.2)	14,237 (48.5)	8,870 (30.3)		29,306
Female	4,891 (23.6)	10,522 (50.7)	5,337 (25.7)	**<0.001**	20,750
Age					
Under 35	2,088 (22.8)	4,946 (50.8)	2,409 (26.3)		9,143
35-50	5,571 (22.3)	12,032 (48.1)	7,401 (29.6)	**<0.001**	25,004
Over 50	3,470 (21.7)	8,116 (50.8)	4,403 (27.5)		15,989
Partner					
No	3,100 (22.6)	6,947 (50.6)	3,677 (26.8)		13,724
Yes	8,029 (22.1)	17,847 (49.0)	10,536 (28.9)	**<0.001**	36,412
Full-time					
No	3,938 (23.6)	8,526 (51.2)	4,192 (25.2)		16,656
Yes	7,152 (21.4)	16,235 (48.6)	10,013 (30.0)	**<0.001**	33,400

Results significant at the 95 per cent confidence level shown in **bold**.
Source: IES/University of Liverpool fit note database, 2013.

5.2   Intra-practice variation in GP issue of long-term fit notes

GPs working within the same practice often varied considerably in the proportion of their fit notes that were long-term (i.e. over four weeks). Figure 5.1 presents information on GPs with the lowest rate and the highest rate of long-term fit note certification within each of 48 practices. One practice only had a single certifying GP, and has been excluded from this analysis. Only GPs contributing more than 20 fit notes to the evaluation were included.

The dotted line in Figures 5.1 and 5.2 represents the proportion (per cent) of long-term fit notes (i.e. for over four weeks in duration) issued (by all GPs) at each practice. The distance between the lower and upper unbroken lines represents the range between the GPs issuing the least and most long-term fit notes within each practice.

Thirty-one practices had a difference of over 20 percentage points in the proportion of long-term notes certified by the GP issuing the lowest proportion and the GP issuing the highest proportion. However, not surprisingly, the widest range in GP rates within practices tended to be in the larger practices, employing many GPs. A strong positive correlation (r=0.72) was found between number of GPs in a practice and the size of the intra-practice variation in long-term fit note issue. Minimum and maximum GP rates for practices are reported in Table D.1.

Figure 5.1   Difference between lowest and highest GP rates of issuing long-term fit notes (over four weeks), within practices

Source: IES/University of Liverpool fit note database, 2013.
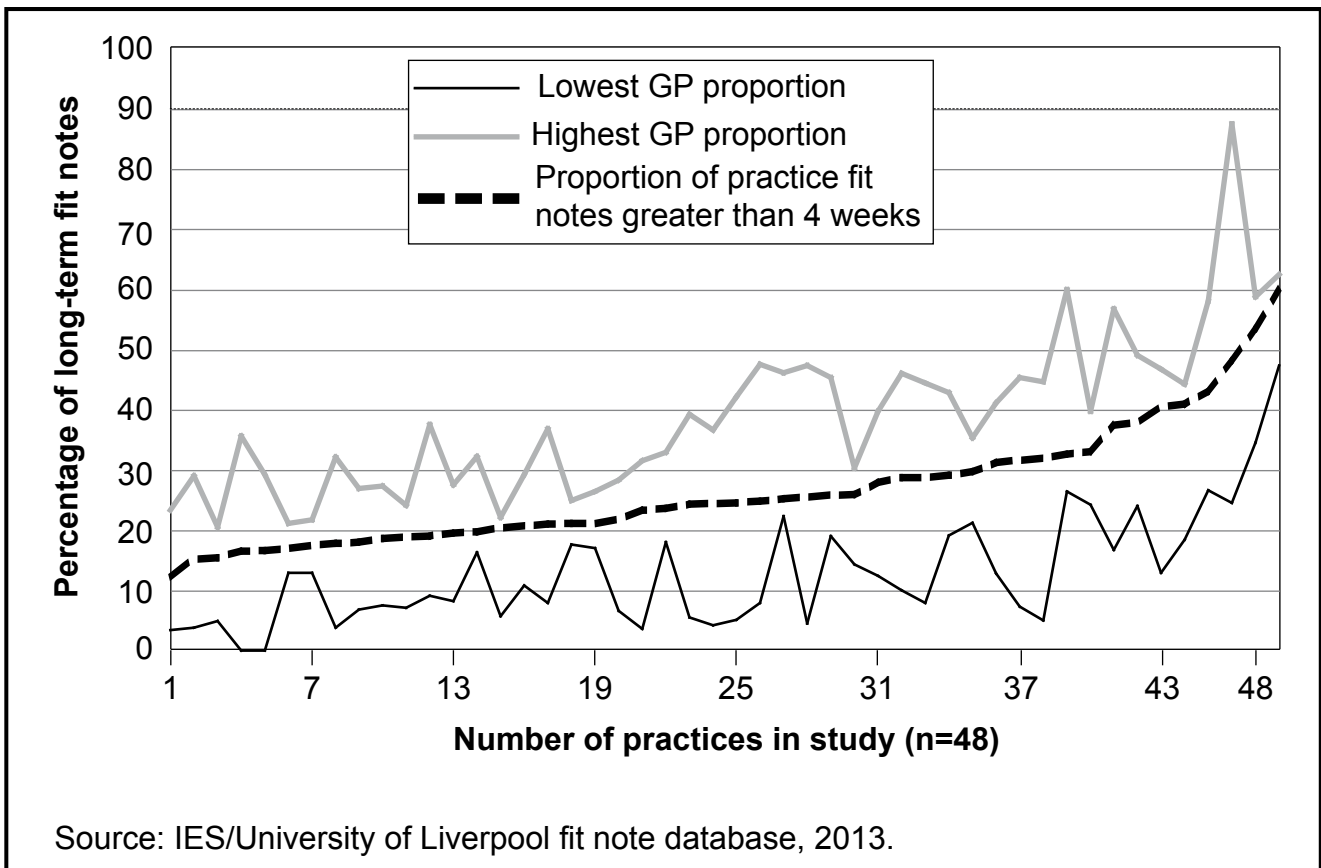
A similar trend was found when considering the proportions of individual mild-to-moderate mental health disorder notes that were over four weeks in duration. Figure 5.2 presents data demonstrating the range in long-term certification for mild-to-moderate mental health disorder by GPs within practices. In 40 practices, the difference between GPs in the rate of long-term certification is over 20 percentage points. However, again, there is a strong correlation (r=0.70) between the minimum-maximum range within practices and the size of the practice (number of certifying GPs). Figures for minimum and maximum GP certification of long-term fit notes for mild-to-moderate mental health disorders are reported in Table D.2.

Figure 5.2   Difference between lowest and highest GP rates of issuing long-term fit notes (over four weeks) for mild-to-moderate mental health disorders, within practices

Source: IES/University of Liverpool fit note database, 2013.
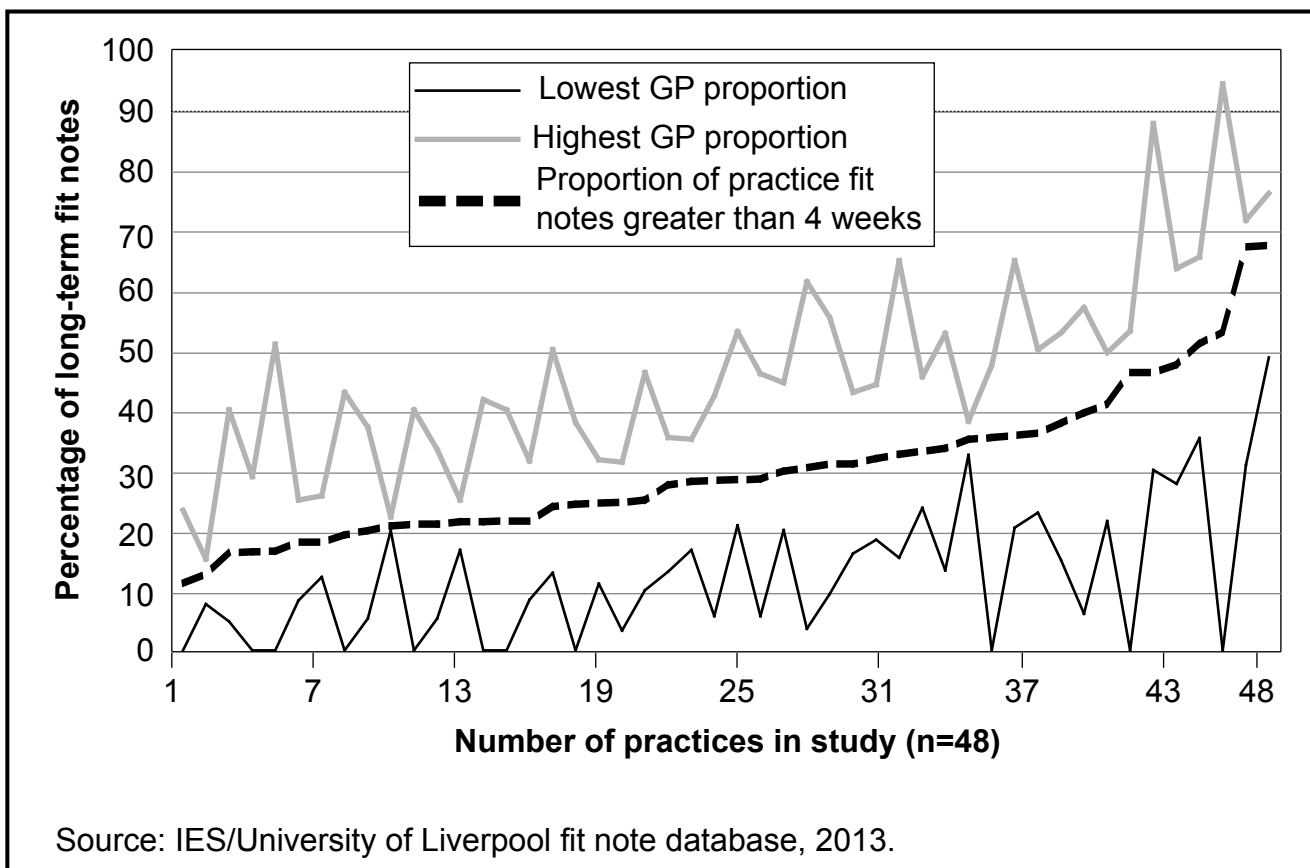
5.3   Independent association of GP characteristics with long-term fit note outcome

Logistic regression models were developed in order to test for significant association between any of the four GP characteristics and the likelihood of issuing a long-term (i.e. over four week) fit note to a patient. In model A (Table 5.2), the four GP factors were entered simultaneously into the model. Full-time GPs were 33 per cent more likely to issue a long-term fit note than were part-time GPs, after controlling for the other three GP co-variates. In model B, patient factors (age, gender, social deprivation) and the diagnostic category of the fit note were added to the four potential explanatory GP variables. After adjustment for the additional patient and diagnostic effects, GPs who were partners and were working full-time had a significantly increased likelihood of issuing a fit note longer than four weeks. Compared to salaried GPs (employed by the practice itself or another NHS agency), GP partners were 1.25 times more likely to issue a long-term certificate. Being full-time rather than part-time increased the likelihood by 21 per cent.

Table 5.2 **Logistic regression[1] of long-term fit note (over four weeks) outcome by GP characteristics**

	Model A[2] Odds ratio (95% CI)	P	Model B[3] Odds ratio (95% CI)	P
Gender				
Male	1.0		1.0	
Female	0.89 (0.79-1.09)	0.27	0.91 (0.77-1.07)	0.26
Age				
Under 35	1.0		1.0	
35-50	1.21 (0.94-1.57)	0.13	1.20 (0.97-1.48)	0.08
Over 50	1.08 (0.80-1.46)	0.59	1.06 (0.83-1.36)	0.63
Partner				
No	1.0		1.0	
Yes	1.20 (0.96-1.51)	0.11	1.25 (1.03-1.51)	**0.02**
Full-time				
No	1.0		1.0	
Yes	1.33 (1.08-1.62)	**0.005**	1.21 (1.02-1.43)	**0.03**

[1]   Multilevel mixed effects model: Levels: (i) fit note; (ii) patient; (iii) GP (see Appendix A).
[2]   Estimates adjusted for other GP characteristics.
[3]   Estimates adjusted for other GP characteristics **and** patient age, gender, social deprivation and diagnostic category of fit note.
Results significant at the 95 per cent confidence level shown in **bold**.
Source: IES/University of Liverpool fit note database, 2013.

# 5.4 Independent effects of GP factors on the likelihood of a longer-term patient episode

For patient episodes including more than one fit note the method of determining the certifying GP for the episode was similar to that used for assigning mixed episodes to index diagnostic categories. (Section 4.1). The GP issuing all or the majority of the fit notes was determined to be the certifying GP for the episode. If no one GP issued a majority, the GP issuing the first note was used in the analysis of episodes.

Regression models were developed and run in order to estimate the independent effects of GP factors on the likelihood of a patient certified sickness episode exceeding 12 weeks in duration. In model A (Table 5.3), the certifying GP being a partner in the practice increased the likelihood by 20 per cent. After patient and diagnostic factors were taken into account (model B), the GP partner variable retained its significant independent association with the longer-term episode outcome. It is not clear why this variation should occur from this study, although it is noted that a higher frequency of visits for fit notes would increase the number of consultations per fit note patient and hence, eat into GP resource for other consultations.

Table 5.3   **Logistic regression[1] of long-term sickness episode (over 12 weeks) outcome by GP characteristics**

	Model A[2]		Model B[3]	
	Odds ratio (95% CI)	P	Odds ratio (95% CI)	P
Gender				
Male	1.0		1.0	
Female	0.98 (0.85-1.12)	0.75	0.99 (0.89-1.12)	0.99
Age				
Under 35	1.0		1.0	
35-50	0.91 (0.79-1.08)	0.34	0.91 (0.78-1.06)	0.22
Over 50	0.93 (0.76-1.13)	0.49	0.92 (0.77-1.09)	0.34
Partner				
No	1.0		1.0	
Yes	1.20 (1.02-1.49)	**0.02**	1.25 (1.09-1.44)	**0.002**
Full-time				
No	1.0		1.0	
Yes	1.09 (0.95-1.26)	0.20	1.02 (0.91-1.16)	0.47

[1]   Multilevel mixed effects model: Levels: (i) episode; (ii) patient; (iii) GP (see Appendix A).

[2]   Estimates adjusted for other GP characteristics.

[3]   Estimates adjusted for other GP characteristics **and** patient age, gender, social deprivation and diagnostic category of episode.

Results significant at the 95 per cent confidence level shown in **bold**.

Source: IES/University of Liverpool fit note database, 2013.

6 Comparisons with the 'sick note' data in the North West

Comparative 'sick note' data collected in a previous study by the Mersey Primary Care R&D Consortium in 2001/02 used a similar methodology as in seven practices in the study. In this chapter we compare the data collected from the fit notes in practices that had taken part in a study of sick notes over ten years previously in the North West.

The key points from this chapter are:

• comparisons between the data from the two studies need to be made with caution, but show:

  – mild-to-moderate mental health disorders (mild-to-moderate mental health disorders) (such as anxiety, depression and stress) have increased in importance as a cause of certified sickness absence and respiratory-related sickness absence has become less prevalent;

  – the proportion of single fit notes with durations over four weeks issued to patients decreased between studies. At five of the practices, the likelihood of a long-term sickness certificate being issued in the fit note evaluation was significantly reduced, compared to the sick note study, after controlling for patient and diagnostic factors;

  – in three of the practices, the use of the fit note was independently associated with a reduction in sickness absence episodes of longer than 12 weeks.

6.1 The practices

For eight practices in the evaluation (practices NW01, NW02, NW03, NW05, NW06, NW07, NW08, NW09) there was comparative 'sick note' (MED3 and MED5 medical statements) data collected by the Mersey Primary Care R&D Consortium in 2001/02. This was the first time in the UK that this method of recording routine practice certification data, via GPs' use of 'carbonised' pads, had been implemented. Practices were requested to collect data for a minimum of 12 months.

In order to enable them to be used in the 'before and after' analysis, a number of variables in the 2001/02 dataset were re-coded in order to make them consistent with those measured in the later fit note evaluation. The diagnostic category of the sick note was re-classified using the 2013 system of classification. The patient area deprivation score was calculated using the 2004 Index of Multiple Deprivation (IMD).

One of the practices (NW04) had a large number of missing patient age and deprivation values in the sick note study, and it was subsequently decided to exclude it from the comparative analysis. For five of the remaining practices the complete 12 months of sick note data was used in the analysis. However, in order to conform to the period of fit note data collection, only six months' and 11 months' sick note data were used for practices NW09 and NW08 respectively.

Table 6.1 summarises specific changes in the number of registered patients and certifying GPs at the seven practices in the decade between studies. The most striking aspect of

the table is the large increase in the patient list size at practice NW01. This practice was primarily providing a student health service in 2002, although there was a still a 'rump' of socially deprived non-student patients. Since then, the practice has adopted a policy of registering patients other than university students, and has also incorporated another inner city practice (of 6,000 patients). As a result, patient numbers have increased by over 15,000. While the core number of GP principals remain, the practice has employed a large number of salaried GPs in order to address the increased workload. Another of the study practices, NW09, also incorporated an existing practice population, and increased its list size by nearly 2,000. Practice NW09, set in a rural setting, increased its patient population by over 1,000 in the interim period. While all practices saw an increase in the number of GPs issuing medical statements to patients, there was also a large turnover in GP personnel. Only about 45 per cent of GPs issuing sick notes at the seven practices in 2002 were still issuing fit notes at the start of data collection for the evaluation in 2011.

Table 6.1   Change in practice list size and number of GPs (2002 to 2013)

| | Patient list size | | No of GP partners | | No of GPs issuing medical statements in collection period[1] | |
Practice reference	2002	2013	2002	2013	2001-2002	2011-2013
NW01	11,822	27,002	5	6	11	34
NW02	8,420	8,917	5	5	7	9
NW03	9,233	8,405	6	6	11	19
NW05	2,262	2,284	1	1	4	7
NW07	5,272	6,386	3	4	4	7
NW08	12,003	12,406	7	6	10	12
NW09	9,949	11,945	8	8	10	14

[1] Includes GP partners, salaried GPs and locums.
Source: IES/University of Liverpool fit note database, 2013.

6.2   Characteristics of sick note and fit note recipients

There were a number of differences in the characteristics of patients receiving a medical statement from a GP in the previous 'sick note' study and the current 'fit note' research. In the latter, the proportion of female patients receiving a sickness certificate was higher than in the initial sick note study (57 per cent compared to 55 per cent respectively) (Table 6.2). Patients receiving medical statements in the later study were significantly older than those in the sick note study. Over 58 per cent were aged over 40, compared to only 46 per cent in the first study. A higher proportion of 2013 fit note patients in the seven practices were living in one of the 20 per cent most deprived lower super output areas (LSOAs) in England (deprivation status based on 2004 IMD for sick note recipients and 2010 IMD for fit note patients). Nearly 58 per cent of fit note patients were residing in the most deprived national quintile compared to 51 per cent of the earlier sick note patients.

6.3   Sick notes and fit notes issued by practices

There was a 23 per cent increase (from 8,722 sick notes to 11,340 fit notes) in the number of medical statements issued by the seven practices in a similar data collection period for the two studies. A large part of this increase may be explained by a rise in total number of patients registered at the practices and, for example, one practice (NW1) doubled its patient list size during the intervening decade (Table 6.1).

Table 6.2   Profile of patients in sick note and fit note samples

	2002 sick note study N (%)	2013 fit note evaluation N (%)	P
Gender			
Male	1,906 (45.1)	2,061 (42.7)	
Female	2,318 (54.9)	2,766 (57.3)	
Total[1]	4,224 (100)	4,827 (100)	0.02
Age			
Under 30	1,050 (25.1)	1,043 (21.6)	
30-39	1,217 (29.0)	981 (20.3)	**<0.001**
40-49	935 (22.3)	1,300 (27.0)	
50 and over	988 (23.6)	1,498 (31.1)	
Total[2]	4,190 (100)	4,822 (100)	
Social deprivation			
Living in most deprived quintile of LSOAs in England:	2,057 (50.8)	2,756 (57.6)	
Quintile 2	878 (21.7)	977 (20.4)	
Quintile 3	702 (17.3)	656 (13.7)	**<0.001**
Quintile 4	365 (9.0)	372 (7.8)	
Living in least deprived quintile of LSOAs in England:	51 (1.3)	26 (0.5)	
Total[3]	**4,053 (100)**	**4,787 (100)**	

[1] Gender data missing for 14 sick note patients.

[2] Age data missing for 48 sick note patients and 5 fit note patients.

[3] Social deprivation data missing for 185 sick note patients and 40 fit note patients.

Results significant at the 95 per cent confidence level shown in **bold**.

Source: IES/University of Liverpool fit note database, 2013.

In terms of the relative practice contribution of medical statements to the two studies, the main change over time involved the proportional increase in NW01 notes (Table 6.3). The contribution of this practice increased from 14 per cent of all sick notes submitted by the seven practices, to 24 per cent in the later fit note evaluation. As already noted, this practice experienced major organisational changes in the period between studies.

Table 6.3   Number and proportions of medical statements and sickness episodes contributed by each practice to the studies

	Sick notes and fit notes		Sickness episodes	
Practice reference	**2002 sick note study** **N (%)**	**2013 fit note evaluation** **N (%)**	**2002 sick note study** **N (%)**	**2013 fit note evaluation** **N (%)**
NW01	1,236 (14.2)	2,704 (23.8)	759 (13.6)	1,540 (25.2)
NW02	1,640 (18.8)	1,573 (13.9)	934 (16.8)	800 (13.1)
NW03	1,756 (20.1)	1,956 (17.2)	1,132 (20.3)	1,085 (17.7)
NW05	486 (5.6)	476 (4.2)	272 (4.9)	258 (4.2)
NW07	730 (8.4)	658 (5.8)	488 (8.8)	306 (5.0)
NW08	1,593 (18.3)	2,370 (20.9)	1,011 (18.1)	1,292 (21.1)
NW09	1,278 (14.7)	1,603 (14.1)	977 (17.5)	838 (13.7)
Total	**8,722 (100)**	**11,340 (100)**	**5,573 (100)**	**6,119 (100)**

Source: IES/University of Liverpool fit note database, 2013.

6.4   Diagnostic classification of sick notes and fit notes

Mild-to-moderate mental health disorders (such as anxiety, depression and stress) increased in importance as a cause of certified sickness absence (Table 6.4). While in 2002, this type of psychological health problem was cited on 32 per cent of sick notes and was mainly responsible for 26 per cent of sickness episodes at the seven practices, the corresponding figures for 2013 had risen to 41 per cent and 38 per cent respectively. In the 2001/02 period, there appears to have been a much higher than average prevalence of respiratory-related sickness absence. Over ten per cent of fit notes issued by the practices and 13 per cent of patient sickness episodes were reportedly due to this health problem. In the later fit note evaluation, proportions had fallen to six per cent of fit notes and seven per cent of episodes.

Table 6.4   Diagnostic categories of medical statements and sickness episodes

Practice reference	Sick notes and fit notes		Sickness episodes	
	2002 sick note study N (%)	**2013 fit note evaluation** N (%)	**2002 sick note study** N (%)	**2013 fit note evaluation** N (%)
Mild-to-moderate mental health disorder	2,776 (32.2)	4,641 (41.0)	1,401 (25.6)	2,305 (37.7)
Severe mental health disorder	58 (0.7)	204 (1.8)	47 (0.9)	114 (1.9)
Back problem	753 (8.7)	983 (8.7)	445 (8.1)	507 (8.3)
Other musculoskeletal	353 (4.1)	468 (4.1)	223 (4.1)	238 (3.9)
Bone fracture	182 (2.1)	184 (1.6)	110 (2.0)	121 (2.0)
Other injury	565 (6.6)	425 (3.8)	412 (7.5)	257 (4.2)
Causes of injury	70 (0.8)	72 (0.6)	54 (1.0)	42 (0.7)
Infectious/parasitic	332 (3.9)	287 (2.5)	212 (3.9)	185 (3.0)
Neoplasm	72 (0.8)	161 (1.4)	30 (0.5)	86 (1.4)
Endocrine/nutrition/ metabolic	71 (0.8)	102 (0.9)	40 (0.7)	63 (1.0)
Haematological	22 (0.3)	29 (0.3)	12 (0.2)	18 (0.3)
Nervous system/ sense organ	167 (1.9)	266 (2.3)	225 (4.1)	149 (2.4)
Circulatory	275 (3.2)	310 (2.7)	177 (3.2)	149 (2.4)
Respiratory	893 (10.4)	682 (6.0)	717 (13.0)	443 (7.3)
Digestive	259 (3.0)	305 (2.7)	207 (3.8)	187 (3.1)
Genito-urinary	93 (1.1)	171 (1.5)	86 (1.2)	99 (1.6)
Pregnancy/childbirth	125 (1.1)	132 (1.2)	76 (1.4)	88 (1.4)
Skin	103 (1.2)	148 (1.3)	64 (1.2)	87 (1.4)
Congenital	23 (0.3)	34 (0.3)	14 (0.3)	23 (0.4)
Symptoms	724 (8.4)	887 (7.8)	508 (9.2)	496 (8.1)
Procedures/invest/ treatments	139 (1.6)	118 (1.0)	74 (1.3)	54 (0.9)
Post-op recovery	555 (6.4)	713 (6.3)	380 (6.9)	399 (6.5)
All[1]	**8,610 (100)**	**11,322 (100)**	**5,505 (100)**	**6,110 (100)**

[1]   No diagnostic data on112 sick notes; no diagnostic data on 18 fit notes: 68 sick note episodes and nine fit note episodes not assigned to diagnostic category.

Source: IES/University of Liverpool fit note database, 2013.

6.5   Duration of certified sickness in both studies

The proportion of long-term (over four weeks) medical statements issued to patients decreased between studies. In 2002, 42 per cent of all sick notes were of this length, while only 36 per cent of fit notes in the later evaluation were for longer than four weeks (Table 6.5). A higher proportion of fit notes were for less than a week (ten per cent, compared to seven per cent of sick notes).

However, approximately the same proportion (19-20 per cent) of episodes in each study exceeded the 12-week threshold of continuous certified sickness.

Fit note episodes contained more constituent medical statements (mean of 1.8 per episode) than did episodes consisting of sick notes (1.6 per episode).

Table 6.5   Length of medical statements and sickness episodes in both studies

	2002 sick note study N (%)	2013 fit note evaluation N (%)
Sick note/fit note duration		
One week or less	578 (6.6)	1,086 (9.8)
1-4 weeks	4,476 (51.4)	6,006 (54.0)
Over 4 weeks	3,657 (42.0)	4,026 (36.2)
Total[1]	8,711 (100)	11,118 (100)
Certified sickness episodes		
Under 4 weeks	3,450 (63.6)	3,222 (53.5)
4-12 weeks	920 (16.5)	1,646 (27.3)
Over 12 weeks	1,109 (19.9)	1,158 (19.2)
Total[2]	5,569 (100)	6,026 (100)

[1]   Duration data missing for 11 sick notes and 222 fit notes.
[2]   Four sick note episodes and 93 fit note episodes with missing data.
Source: IES/University of Liverpool fit note database, 2013.

A logistic regression model was developed in order to compare the fit note with the sick note in relation to the likelihood of the issue of a long-term (over four weeks) medical statement, after adjustment for patient factors (gender, age, social deprivation) and the diagnostic category of the note. The model was run for each of the seven practices (Table 6.6).

At five of the practices, the likelihood of a long-term sickness certificate being issued in the fit note evaluation was significantly reduced, compared to the sick note study, after controlling for patient and diagnostic factors. In NW01, there was a 52 per cent reduction in the likelihood of a long-term sickness certificate, in NW02 a 42 per cent reduction, in NW03 a 36 per cent reduction, in NW09 a 60 per cent reduction and a 36 per cent reduction in NW07). In another practice, NW08, the fit note effect approximated statistical significance. No significant effect was found in NW05.

Table 6.6   Logistic regression[1] of long-term medical statement (over four weeks) outcome in seven general practices

		Adjusted[2] odds ratio (95% CI)	P
NW01	Sick note study	1.0	
	Fit note evaluation	0.48 (0.37-0.63)	**<0.001**
NW02	Sick note study	1.0	
	Fit note evaluation	0.58 (0.44-0.75)	**<0.001**
NW03	Sick note study	1.0	
	Fit note evaluation	0.64 (0.51-0.81)	**<0.001**
NW05	Sick note study	1.0	
	Fit note evaluation	0.99 (0.62-1.61)	0.98
NW07	Sick note study	1.0	
	Fit note evaluation	0.64 (0.43-0.95)	**0.03**
NW08	Sick note study	1.0	
	Fit note evaluation	0.82 (0.66-1.01)	0.06
NW09	Sick note study	1.0	
	Fit note evaluation	0.40 (0.30-0.51)	**<0.001**

[1]   Multilevel mixed-effects model: Levels: (i) fit/sick note; (ii) patient (see Appendix A).
[2]   Adjusted for patient age, gender, social deprivation, and diagnosis on sick note or fit note.
Results significant at the 95 per cent confidence level shown in **bold**.
Source: IES/University of Liverpool fit note database, 2013.

Regression analysis was also conducted in order to estimate the independent effect of the type of study (fit note compared to sick note) on long-term (over 12 weeks) certified episodes, after controlling for patient characteristics and the index diagnostic category of the episode. The model was run for each of the seven practices (Table 6.7).

In three of the practices, the use of the fit note was independently associated with a reduction in long-term sickness episodes. The odds ratios of fit note (relative to sick note) were 0.39 in NW01, 0.51 in NW03 and 0.64 in NW09. No significant effects were found in the other four practices.

Table 6.7 **Logistic regression[1] of long-term certified sickness episode (over 12 weeks) by use of fit note in seven general practices**

		Adjusted[2] odds ratio (95% CI)	P
NW01	Sick note study	1.0	
	Fit note evaluation	0.39 (0.31-0.51)	**<0.001**
NW02	Sick note study	1.0	
	Fit note evaluation	0.80 (0.59-1.06)	0.12
NW03	Sick note study	1.0	
	Fit note evaluation	0.51 (0.40-0.66)	**<0.001**
NW05	Sick note study	1.0	
	Fit note evaluation	0.73 (0.42-1.29)	0.28
NW07	Sick note study	1.0	
	Fit note evaluation	0.92 (0.57-1.47)	0.72
NW08	Sick note study	1.0	
	Fit note evaluation	0.85 (0.67-1.08)	0.18
NW09	Sick note study	1.0	
	Fit note evaluation	0.64 (0.45-0.92)	**0.02**

[1] Multilevel mixed-effects model: Levels: (i) episode; (ii) patient (see Appendix A).

[2] Adjusted for patient age, gender, social deprivation, and index diagnostic category of episode.
Results significant at the 95 per cent confidence level shown in **bold**.
Source: IES/University of Liverpool fit note database, 2013.

6.6 Interpreting the effect of the fit note

For a number of reasons, care should be taken in the interpretation of the results presented in Tables 6.6 and 6.7:

- the seven practices may not be representative of the total sample of practices recruited to the national fit note evaluation. They are geographically-based (six on Merseyside) and include five of the most socially deprived practices in the national sample. Unfortunately, no similar sick note data was available for the other practices in the evaluation;

- the time period between the end of the sick note study and the start of data collection for the fit note evaluation was nearly ten years (eight years to introduction of the fit note in 2010);

- practices are likely to have changed in terms of GP and patient composition. Only approximately half of GPs issuing sick notes at one of the seven practices in 2002 were still issuing fit notes at the start of 2012. Practice patient populations may have changed in size and composition in the intervening years;

- as in other regression models used in the evaluation, there is likely to be a degree of 'specification error'. Some patient factors (including domestic circumstances), with potential effect on outcomes, were not able to be measured in either study. Employment data was not collected for the sick note study, and only partially collected for the fit note evaluation. Inclusion of additional variables in models may have modified the reported effect of the fit note on long-term certification outcomes.

Despite these caveats, we are reasonably confident that the results do show a significant reduction in long-term sickness absence (as measured either by the length of an individual fit note or by the length of a sickness absence episode) in some of the practices included in both studies over time, although it is not clear why this result has been seen across all seven.

7   Conclusions

The new fit note was introduced in April 2010 to improve communication between GPs and their patients about whether and how they could return to work after a period of sickness absence. The aim was to bring about a reduction in long-term sickness absence and support people with health conditions to get back to work more quickly. This study sought to provide a quantitative assessment of the effect of the fit note, by collecting almost 60,000 fit notes from a cross-section of 49 separate GP practices around Great Britain for a period of a year. In so doing, we have developed a unique and comprehensive dataset that will facilitate a greater understanding of both the use of the new fit note and also sickness absence more generally.

In this final section we draw some conclusions about the how the fit note is being used by GPs, its effect on sickness absence and the pattern of certificated absence more generally.

7.1   Prevalence of mild-to-moderate mental health disorders

One of the most striking findings is the prevalence of mild-to-moderate mental health disorders and the indications that the incidence of such diagnoses is rising. Over a third of the fit notes issued over the period of the study were for mild-to-moderate mental health disorders and 33 per cent of patients received at least one fit note with a mild-to-moderate mental health disorder diagnosis. Although care must be taken when drawing comparisons between the data from this study and the previous 'sick note' study in the North West in 2001/02, it looks like there has been an increase in the importance of psychological health problems over the intervening period.

The rising incidence of mild-to-moderate mental health disorders mirrors the trends of increasing antidepressant prescriptions[4]. It is not clear whether this is due to an increase in incidence, or reducing stigma or better access to services that is encouraging patients to attend GPs with mental health issues seeking help. Work-related stress, chronic illness with associated mental health problems, caring responsibilities and other socio-economic factors may also be potential causes of the apparent rise.

Depression was the most common form of mental health disorder identified, followed by stress and anxiety. Younger people and women are the most likely to receive a fit note with a mild-to-moderate mental health disorder (younger patients are more likely to receive a note for depression, and women more likely than men to have a mild-to-moderate mental health disorder fit note for stress). Of particular interest is the finding that patients from the more socially deprived areas in the study were most likely to suffer from a mental health problem and require a medical certificate.

We have some (albeit incomplete) data on patient's employment status and it is also interesting to note that those with a mild-to-moderate mental health disorder diagnosis were less likely to be in work and this may suggest that being at work is associated with reduced incidence of depression, stress or anxiety or that being unemployed increased the risk of a mental health problem.

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[4]   See, for example, *Anti-depressant prescriptions account for largest annual rise in items dispensed in the community*, Health and Social Care Information Centre, 27 July 2012.

7.2 Over one in ten respondents were given a 'may be fit for work' assessment at some point

Six per cent of fit notes had the 'may be fit for work' option ticked. The proportion of patients receiving at least one 'may be fit for work' note was higher at 12 per cent as it is generally only for the last note in any period of absence that the 'may be fit for work' option would apply, although in a quarter of cases another fit note was provided after a 'may be fit for work' note had been issued. There was no change in the pattern of use of the 'may be fit for work' option during the 12 months of the study, suggesting that GPs had not gradually developed their understanding of the option since the introduction of the new statement.

Completion rates of the 'may be fit for work' option varied considerably by GP practice from one per cent in one case, to a high of 15 per cent in another. There appears to be an association between using the 'may be fit for work' option and the social deprivation of the area in which a practice is situated. Four of the five practices with the highest proportions of 'may be fit for work' notes were classed as having moderate to very low deprivation levels. Eight of the 12 practices with the lowest rates of completing 'may be fit for work' advice were sited in highly or very highly socially deprived areas. The 'may be fit for work' option was more likely to be used for physical rather than mental ill-health conditions.

Nearly all the notes with the 'may be fit for work' option offered advice on the circumstances in which a return to work may be appropriate. Most of the cases where no advice was provided at all took place in just three practices, suggesting they had an incomplete understanding of the expected process. Generally, advice was provided via ticking one or more of the boxes on the notes, e.g. suggesting amended duties or a phased return to work, supplemented by additional written comments.

7.3 The introduction of the fit note has led to greater communication between GPs, patients and employers

One of the objectives of the fit note was to improve communication between GPs, patients and their employers about what employees could do at work given their health condition. Whilst this study has not looked directly at, for example, patients' and employers' understanding of the advice their GPs have provided and the use to which the advice has been put, it is evident that the introduction of the fit note has facilitated greater communication between these parties.

7.4 Variation across GPs

We found significant variation in GPs' use of the fit note both within and between practices. In addition to the examples outlined above, in nearly half of the notes where the 'may be fit for work' option had been ticked no additional written comments were provided. Diagnosis of mild-to-moderate mental health disorders and the use of long-term (i.e. over four weeks) fit notes also varied considerably between practices, and between GPs in the same practice.

We do not know the proportion of GPs in the study who had taken part in any training in the use of the fit note or when they had received any training but the variation in practice that we have found suggests that some GPs still need further guidance and support in how to use the fit note to best effect. We also found four out of ten notes did not have the option as to whether the patient's condition needed to be assessed again completed. In some practices there was 100 per cent completion, while by contrast in ten practices GPs hardly responded to this item at all, suggesting that any intervention to address this problem needed to be targeted at practices rather than individual GPs. However, the introduction of the electronic fit note, with the possibility of default and/or mandatory responses, may results in a higher completion rate.

7.5   Long-term sickness absence is in decline

One of the main reasons for introducing the fit note was to try to encourage employees to return to work as early as possible after a period of long-term sickness absence. The average length of a certified sickness episode was around four weeks (plus a self-certification period of up to seven days). Almost one in five sickness episodes lasted over 12 weeks and four per cent lasted longer than 28 weeks. Older people, males and those living in areas of social deprivation were more likely to have a long-term sickness episode. The diagnoses most likely to lead to a longer-term period of absence (i.e. of at least 12 weeks) were neoplasm, severe mental health disorder, a musculoskeletal condition other than a back problem, circulatory problems or a mild-to-moderate mental health disorder.

This indicates that long-term sickness absence is still a significant concern. However, our study does suggest some good news as a result of the introduction of the fit note.

Comparisons between the latest fit note study and the previous sick note study do need to be treated with caution. The comparison is based on data from just seven practices in one particular region and the composition of GPs and patients will have changed in the intervening period between studies. Also there will be factors influencing sickness absence behaviour that have not been included in our analysis. Nevertheless it is worth highlighting that, although there are a lot more medical statements being issued now, they tend to be for shorter periods and overall episodes are shorter. We found the proportion of longer-term medical statements (i.e. of over four weeks) decreased between the two studies. Furthermore, the use of the fit note was independently associated with a reduction in long-term sickness episodes of 12 weeks or more. There is, therefore, some evidence that the introduction of the fit note is having a positive effect in reducing long-term sickness absence. Other evidence from this study suggests that with further training and guidance for GPs, particularly in relation to mental health disorders and work, the effect could be even greater.

Appendix A
Methodology

A.1 Overall design

The aim was to collect data from a range of practices, varying by region (i.e. covering Scotland, Wales and different parts of England) and within each area varying by size of practice and location (i.e. rural or urban, etc). In this way it was intended to collect data from a cross-section of practices and patients.

A.2 Method of data collection

A.2.1 Practices collecting data for the fit note evaluation

To recruit practices for the evaluation, a short-list was developed, categorising practices by geographical location, size and population density. Short-listed practices were contacted by the research team to explain the purpose of the study, what participation would involve and how practices would be supported. Relevant Primary Care Research Networks (PCRNs) were also informed of the research.

A total of 49 practices, in five geographical regions, were recruited to assist in collecting data for the fit note evaluation. Information on size, location and social deprivation status of practices is provided in Table A.1.

Twelve practices are located in the East Midlands (centred on Derbyshire), ten in Wales, 11 in South East England (centred on Brighton), nine in North West England (centred on Liverpool) and seven in Scotland.

It was intended to recruit a range of small- (less than 5,000 patients), medium- (5,000-10,000 patients) and large- (10,000+) practices. Medium sized practices are slightly overrepresented in the practice sample (22 practices of this size, compared to 14 and 13 in the smaller and larger sized categories respectively). Two of the larger practices, NW01 and S03, have sizeable proportions of students, not seeking paid employment, registered as patients.

It was also an objective of recruitment to obtain a satisfactory 'rural/urban' mix of practices. Largely on the basis of information provided by practice managers, practices were classified into four categories of geographical status.

- urban: the practice is located within three miles of a city centre. Twelve practices were in this category;

- suburban: the practice is located in the suburbs of a city or in the centre of a smaller town. Nineteen practices met one of these criteria;

- rural: the practice has a largely rural catchment area. Nine practices were in this category;

- semi-rural: the practice is located in a town but has a significant number of registered patients living in a surrounding rural area. Nine practices met this criterion.

Evaluation of the Statement of Fitness for Work (fit note)

The social deprivation status of individual practice populations was not available at the outset of the evaluation. However, after subsequent analysis of all fit notes submitted by practices to the evaluation, it was possible to infer practice deprivation status from the proportions of their fit notes issued to the most deprived patients. Practices issuing over 70 per cent of their total fit notes to patients living in one of the 40 per cent most deprived lower super output areas (LSOAs)/data zones (DZs) in the respective country (England, Scotland or Wales) were assigned a status of 'very high deprivation'. (50-70 per cent, 'high deprivation'; 20-50 per cent 'moderate deprivation'; 10-20 per cent 'low deprivation'; under 10 per cent 'very low deprivation'.) Using these criteria, 16 practice populations were classed as having high or very high deprivation, 21 had low or very low deprivation and 12 were assigned a status of 'moderate deprivation'. An additional column reporting this information has been added to the practice size and location details in Table A.1.

Table A.1   Practices collecting data for the fit note evaluation

Practice ref.	Patient list size	Geographical status	Social deprivation status
Derbyshire			
DE01	medium	rural	Moderate deprivation
DE02	small	rural	Very low deprivation
DE03	medium	suburban	Moderate deprivation
DE04	medium	rural	Very low deprivation
DE05	small	suburban	Very low deprivation
DE06	medium	semi-rural	Very low deprivation
DE07	large	urban	High deprivation
DE08	large	suburban	High deprivation
DE09	large	suburban	Very low deprivation
DE10	medium	suburban	Very low deprivation
DE11	small	urban	Very high deprivation
DE12	small	semi-rural	Very low deprivation
Wales			
W01	medium	rural	Very low deprivation
W02	small	suburban	Moderate deprivation
W03	large	urban	Very low deprivation
W04	medium	rural	Low deprivation
W05	small	semi-rural	Very high deprivation
W06	large	urban	Moderate deprivation
W07	small	rural	Very low deprivation
W08	medium	semi-rural	High deprivation
W09	medium	suburban	Moderate deprivation
W10	medium	suburban	Very high deprivation
SE England			
SE01	large	semi-rural	Very low deprivation
SE02	small	suburban	Moderate deprivation
SE03	medium	suburban	Moderate deprivation
SE04	small	rural	Very low deprivation

Table A.1   Continued

Practice ref.	Patient list size	Geographical status	Social deprivation status
SE05	small	rural	Very low deprivation
SE06	large	urban	Moderate deprivation
SE07	small	urban	Very high deprivation
SE08	medium	semi-rural	Very low deprivation
SE09	large	suburban	Moderate deprivation
SE10	medium	suburban	Low deprivation
SE11	medium	suburban	Moderate deprivation
NW England			
NW01	large	urban	Very high deprivation
NW02	medium	suburban	High deprivation
NW03	medium	urban	Very high deprivation
NW04	small	suburban	Very high deprivation
NW05	small	suburban	Very high deprivation
NW06	large	semi-rural	Moderate deprivation
NW07	medium	rural	Very low deprivation
NW08	large	urban	Very high deprivation
NW09	large	suburban	High deprivation
Scotland			
S01	medium	semi-rural	Low deprivation
S02	medium	urban	Very low deprivation
S03	large	urban	Very high deprivation
S04	small	suburban	Very low deprivation
S05	medium	semi-rural	Moderate deprivation
S06	medium	suburban	Very high deprivation
S07	large	urban	Low deprivation

Source: IES/University of Liverpool fit note database, 2013.

Data collection in most practices started in November 2011, although a number of general practices in Scotland and North West England were recruited relatively late, and only commenced collecting and submitting data in early 2012. Table A.2 reports the number of fit notes submitted by each practice to the central fit note database. All but two practices submitted data representing approximately 12 months' issue of fit notes to patients at the practice. One practice, W03, citing insufficient resources, withdrew within four months of commencement. Another practice, NW09, in Liverpool, was only able to submit approximately six months' data to the evaluation.

Table A.2   Fit notes submitted by practices to evaluation database

Practice ref.	Start date of data collection	Date of last fit note submitted	No. of fit notes submitted	Mean weekly no. of notes issued per practice
Derbyshire				
DE01	04/11/11	30/10/12	1,614	31.3
DE02	01/11/11	31/10/12	281	5.4
DE03	01/11/11	24/10/12	1,030	20.1
DE04	03/11/11	31/10/12	703	13.6
DE05	09/11/11	31/10/12	345	6.8
DE06	08/11/11	31/10/12	1,069	20.9
DE07	01/11/11	30/10/12	2,338	45.0
DE08	31/10/11	24/10/12	2,885	56.3
DE09	01/11/11	31/10/12	775	14.9
DE10	07/11/11	30/10/12	732	14.3
DE11	31/10/11	31/10/12	550	10.5
DE12	01/11/11	31/10/12	423	8.1
Wales				
W01	01/12/11	30/11/12	635	12.2
W02	02/11/11	31/10/12	690	13.3
W03	19/10/11	30/01/12	352	23.9
W04	09/12/11	22/11/12	666	13.4
W05	03/11/11	12/11/12	732	13.7
W06	04/11/11	31/10/12	3,570	69.0
W07	01/11/11	30/10/12	268	5.2
W08	28/10/11	01/11/12	2,155	40.8
W09	29/10/11	31/10/12	2,706	51.5
W10	01/11/11	30/10/12	1,246	24.0
SE England				
SE01	07/11/11	01/11/12	935	18.2
SE02	04/11/11	31/10/12	186	3.6
SE03	01/11/11	31/10/12	999	19.2
SE04	01/11/11	30/10/12	392	7.5
SE05	08/11/11	30/10/12	373	7.3
SE06	22/10/11	29/10/12	1,358	25.5
SE07	10/11/11	31/10/12	628	12.3
SE08	13/11/11	31/10/12	839	16.6
SE09	03/11/11	31/10/12	1,267	24.4
SE10	27/10/11	31/10/12	1,054	19.3
SE11	02/11/11	31/10/12	1,198	23.0

<div align="right">Continued</div>

Table A.2   Continued

Practice ref.	Start date of data collection	Date of last fit note submitted	No. of fit notes submitted	Mean weekly no. of notes issued per practice
NW England				
NW01	07/11/11	31/10/12	2,704	52.7
NW02	26/10/11	30/10/12	1,573	29.8
NW03	02/12/11	30/11/12	1,956	37.6
NW04	04/01/12	03/01/13	578	11.1
NW05	09/11/11	14/11/12	476	9.0
NW06	17/11/11	29/10/12	1,755	35.4
NW07	01/11/11	01/11/12	658	12.6
NW08	05/11/11	03/10/12	2,370	49.8
NW09	26/02/12	25/08/12	1,603	61.7
Scotland				
S01	04/01/12	31/12/12	1,967	38.0
S02	26/01/12	19/01/13	983	19.3
S03	30/12/11	31/12/12	1,861	35.5
S04	06/01/12	31/12/12	741	14.4
S05	06/01/12	31/12/12	1,640	31.9
S06	15/01/12	03/01/13	1,586	31.4
S07	04/01/12	04/01/13	1,250	24.0

Source: IES/University of Liverpool fit note database, 2013.

There are no data on the overall population of fit note recipients other than the data collected for this study and therefore, we cannot determine the representative nature of the sample or weight it to the overall population. We could (in time) use Census information to see the differences between this population and, for example, the general population of adults in work or seeking work who have been absent from work for at least eight days in the past year. While the comparison would not be between exactly the same group of people, this would help us understand more about the extent to which our sample reflects the situation in the population as a whole.

A.2.2   Collecting the data from the fit notes

Details of fit notes issued to patients at each participating general practice were collected via the use of 'carbonised' pads of fit notes. These specially commissioned pads enabled the retention of the details of each individual fit note issued to a patient within the data collection period. After the GP had issued a fit note to a patient, a duplicate copy of the note was retained for use in the evaluation.

At each practice participating in data collection the new pads of carbonised fit notes replaced the conventional pads and all GPs were requested to use them for a period of 12 months. A designated staff member at each practice was responsible for regularly collecting the duplicate copies of the issued fit notes from GP offices, and entering the anonymised details of the notes into the input sheet of a specialised data collection tool. After data entry, these duplicate copies were then shredded by the practice. Each practice was paid a monthly fee to cover staff data entry costs. The data collection tool was an Excel template, consisting

of the data entry sheet itself, along with instructions on entering the data and a look-up file of local post codes and deprivation scores. The latter file enabled the generation of a neighbourhood deprivation score for each patient being issued with a fit note. All data items collected for the evaluation are listed below.

At the end of each month, practices collecting data were requested to upload existing data sets to a central secure website, set up by the Institute for Employment Studies (IES). Each practice had a unique user name and password to access their part of the site. All data received from practices were incorporated into a central database set up by the evaluation team at the University of Liverpool. In the process of maintaining the database, data from all practices were merged, cleaned and enhanced through the creation of additional variables.

A.3　Data collected for the evaluation

For each fit note issued in the collection period, the practice recorded a number of data items in the entry sheet of the data collection tool. The details recorded included:

- a unique patient study number. This was usually the practice register number of the patient receiving the fit note. The recording of such a patient number enabled the tracking of patients receiving more than one fit note in the 12-month collection period. Practices were given clear instructions that no directly identifiable patient details (their name, address, etc.) should be entered in the data collection entry sheet. The only patient identifier used would be their practice register number, and **not** their full formal NHS number;

- the year of birth of the patient receiving the fit note;

- the gender of the patient receiving the fit note;

- the neighbourhood deprivation score of the LSOA or DZ containing the post code of the fit note recipient. LSOA deprivation scores were taken from Indices of Multiple Deprivation (IMD) for England (2010) and Wales (2011). For Scottish patients, the 2009 IMD for DZs was used. Indices of Multiple Deprivation are computed differently in the three countries, and are subsequently not directly comparable;

- the employment status (if known) of the patient receiving the fit note. This is a free-text entry using any relevant information contained in the patient medical record;

- the date the patient was assessed by the GP and fit note issued;

- the health problem recorded on the fit note;

- the GP assessment of the patient's fitness for work (No (not fit)/Yes (may be fit));

- the GP advice about patient's potential fitness to work, subject to modification of working conditions (Tick box: No/Yes);

- if potentially fit for work, GP advice to patient/employer to phase a return to work;

- if potentially fit for work, GP advice to patient/employer to alter patient's hours of work;

- if potentially fit for work, GP advice to patient/employer to amend patient's duties at work;

- if potentially fit for work, GP advice to patient/employer to make adaptations to the work environment of the patient;

- free-text comments section. If potentially fit to work, other advice to patient/employer, including any functional effects of the patient's condition;

- period of certification. Advice to patient/employer about how long the patient should (fully or partially) refrain from work;

- GP advice about need to re-assess patient's fitness for work at end of current certified period (No/Yes);

- the certifying GP code;

A number of new variables were created in post-hoc transformation of original data items.

- patient age at time of the issue of a fit note was generated from year of birth;

- patient age was assigned to an age group category;

- neighbourhood deprivation score was transformed into a national deprivation rank. In England a rank of one represented the most deprived LSOA in the country; a rank of 32,482 indicated the least deprived LSOA. In Wales, rank one indicated the most deprived LSOA, 1,898 represented the least deprived in that country. In relation to the geographically smaller DZs used as units of deprivation score in Scotland, a DZ ranked one was the most deprived and 6,505 the least deprived;

- the national deprivation ranks were transformed into national quintiles of deprivation. From this, it was possible to determine if a fit note recipient was living in one of the 20 per cent most deprived LSOAs or DZs in their respective country (England, Scotland or Wales), the least deprived 20 per cent, or in one of the LSOA/DZs in intermediate deprivation quintiles;

- the health problem cited as the reason for work incapacity on each individual fit note was assigned to a broad diagnostic category.

A.3.1   Diagnostic categories

The health problem giving rise to sickness certification was assigned to a broad diagnostic category. The system of classification was based loosely on ICD-10 categories, but was modified substantially for use in classifying health problems commonly presented in primary care. For instance, new categories such as Back Problem and Bone Fracture were created.

All fit notes recorded in the database have been assigned to one of the following categories:

1 **mild-to-moderate mental health disorder**: This category includes common psychological problems presented by patients seeking a fit note. Fit note entries include 'depression', 'anxiety', 'stress', 'bereavement reaction' and 'substance misuse';

2 **severe mental health disorder**: Includes the more severe neurotic and psychotic mental health disorders, including 'schizophrenia', 'bipolar disorder' and 'personality disorder';

3 **back problem**: Any back problem given as the reason for work incapacity on the fit note. Includes 'back pain' (see category 20) and 'back injury'. (See category 6);

4 **other musculoskeletal**: This category includes a range of diagnoses from 'tennis elbow' to the potentially disabling 'arthritis' and 'osteoarthritis';

5 **bone fracture**: Any reference on a fit note to a 'break' or 'fracture' of a limb or other bone;

6 **other injury**: Includes 'strain', 'sprain', 'dislocation', 'rupture' and 'injury'. However 'back injury' is assigned to category 3;

7   causes of injury: Occasionally, the GP will cite the reason for the injury, rather than the nature of the injury, on the fit note. Common examples are 'road traffic accident' and 'fall';

8   infectious/parasitic: Examples range from the general 'viral infection' to the more specific 'hepatitis' and 'mumps';

9   neoplasm: Any cancer, regardless of bodily site;

10 endocrine/nutrition/metabolic: A range of disorders including 'gout', 'thyroid problem' and 'diabetes';

11 haematological: Any blood disorder, including 'anaemia', but excluding 'leukaemia'. (See category 9);

12 nervous system/sense organ: Any health problem (acute or chronic) affecting the ear or eye. Also, potentially debilitating diagnoses such as 'migraine', 'epilepsy' and 'multiple sclerosis';

13 circulatory: Any cardiac problems such as 'angina' and 'recent myocardial infarction'. Also, 'stroke', 'transient ischaemic attack (TIA)' and 'cerebrovascular accident (CVA)';

14 respiratory: Any problem affecting the respiratory system, from the acute 'upper respiratory tract infection' and 'flu' to the more serious 'asthma' and 'chronic obstructive pulmonary disease (COPD)';

15 digestive: Any reason for incapacity related to a digestive problem, including 'diarrhoea', 'gasteroenteritis', 'gallstones' and 'duodenal ulcer';

16 gentitourinary: Diagnoses on fit notes ranging from 'urinary tract infection' to 'renal failure'. Also includes gynaecological problems presented by females.

17 pregnancy/childbirth: Any pregnancy-related health problem, ranging in gravity from 'hyperemisis' to 'miscarriage';

18 skin: Includes common disorders such as 'acne', 'eczema' and 'dermatitis', along with more serious skin conditions such as 'psoriasis';

19 congenital: Any disorder suffered from birth, such as 'learning difficulty';

20 symptoms: GPs commonly enter a symptom on a fit note without a specific diagnosis. Examples would include 'headache', 'vomiting' (without diarrhoea), 'breathlessness' and 'pain in…'. However, 'back pain' has been classified to category 3;

21 procedures/investigations/treatments: Any non-invasive procedure, investigation or course of treatment. Including 'x-ray', 'investigation for…' and 'radiotherapy';

22 post-op recovery: Any fit note issued to enable the patient to recover from a recent invasive surgical procedure.

A.3.2 Missing data

In terms of 'completeness', 197 (0.3 per cent) have no or indecipherable diagnostic data, 1,527 (2.6 per cent) have no or incomplete information on period of certification, 723 (1.2 per cent) have no record of the certifying GP and 25,368 (43.7 per cent) have no indication of whether the GP needs to re-assess the patient again. Original missing 'date of issue' items were able to be imputed using information in other data fields. All fit notes now have a date of issue.

In terms of the data items extracted from the patient record in order to supplement the fit note data, the patient's year of birth was missing for 34 (0.06 per cent) of the fit notes, gender for two (0.003 per cent), neighbourhood deprivation score for 1,169 (1.9 per cent) and employment information for 32,475 (55.3 per cent).

A.4 Data on GPs

A brief questionnaire was sent to all the practices involved in the study asking for information about the GPs signing the fit notes. Details covering gender, age, contractual status and hours of working were collected for 354 GPs who had signed the vast majority (88 per cent) of the fit notes in the database.

A.5 Data analysis

When describing distribution of fit notes and episodes across various patient groups, simple proportions are reported. In patient- and GP-based analyses, univariate statistical tests have been conducted in order to estimate significance of association between patient/GP categories and binary outcomes. Chi-square and 'tests for trend', such as the Cochran-Armitage test[5], were the main tests used. For bivariate correlation testing, spearman's rank coefficient is reported. The Mann-Whitney U-test was used for investigating significance of inter-group differences in duration of certified sickness. For all tests, an associated P-value is reported. A distinction should be made between practical and statistical significance. I.e. the very large number of cases included in analysis may result in a relatively minor difference in group proportions (1 or 2 percentage points) being reported as statistically significant.

We also developed multilevel mixed-effects logistic regression models in order to estimate the independent effects of patient, fit note and certifying GP factors on the likelihood of outcome. A random-intercept multilevel model was deemed the most appropriate for the analysis of data with a hierarchical structure (fit note/episode/patient/certifying GP/general practice). For each covariate in regression models, the odds ratio, 95 per cent confidence intervals and the associated P-value are reported. In all univariate and multivariate tests, a conventional criterion of statistical significance ($P<0.05$) has been applied.

The odds ratio is a simple measure of risk, for example an outcome with an odds ratio of two is twice as likely to occur as the base outcome.

Data were analysed using SPSS for Windows 20 and STATA IC/10.

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[5] The Cochran-Armitage test is used for tables with 2 by 3+ cells. It is very similar to chi-square, but takes into account ordered categories of an explanatory variable. For instance, age categories from youngest to oldest, or deprivation quintiles from least to most deprived.

Appendix B
Practice rates of mild-to-moderate mental health disorder and back problem diagnoses and 'may be fit for work' notes

Table B.1   Proportion of mild-to-moderate mental health disorder, back problem and 'may be fit for work' fit notes at each practice

Practice ref.	No. of fit notes submitted	% of notes with mild-to-moderate mental health disorder diagnosis	% of notes with back problem diagnosis	% of notes with 'may be fit for work' option
Derbyshire				
DE01	1,614	34.2	8.7	11.0
DE02	281	30.4	3.6	15.3
DE03	1,030	35.2	9.1	7.9
DE04	703	29.5	10.5	14.1
DE05	345	27.8	8.5	13.6
DE06	1,069	22.0	10.8	9.6
DE07	2,338	30.4	12.4	5.6
DE08	2,885	32.5	11.1	8.1
DE09	775	33.0	6.6	8.1
DE10	732	27.5	11.8	7.8
DE11	550	22.5	16.9	2.5
DE12	423	26.6	13.3	5.4
Wales				
W01	635	33.3	10.1	5.5
W02	690	36.1	13.2	3.2
W03	352	30.2	11.1	5.7
W04	666	24.4	7.4	3.9
W05	732	35.0	9.2	3.0
W06	3,570	38.5	9.7	6.2
W07	268	34.5	13.9	8.2
W08	2,155	34.2	12.3	1.8
W09	2,706	37.0	11.7	3.7
W10	1,246	31.9	12.5	12.4

Table B.1   Continued

Practice ref.	No. of fit notes submitted	% of notes with mild-to-moderate mental health disorder diagnosis	% of notes with back problem diagnosis	% of notes with 'may be fit for work' option
SE England				
SE01	935	24.0	6.1	7.8
SE02	186	34.9	10.2	12.9
SE03	999	27.9	10.8	1.5
SE04	392	34.3	6.4	6.6
SE05	373	25.0	5.6	8.8
SE06	1,358	41.2	10.4	5.7
SE07	628	36.5	11.2	10.7
SE08	839	24.9	8.8	8.8
SE09	1,267	37.4	9.0	6.2
SE10	1,054	26.9	9.2	4.1
SE11	1,198	30.5	13.8	8.3
NW England				
NW01	2,704	54.1	5.7	6.7
NW02	1,573	33.0	12.2	6.4
NW03	1,956	42.7	7.4	6.6
NW04	578	43.9	8.3	1.0
NW05	476	27.2	12.0	4.0
NW06	1,755	37.6	8.5	5.3
NW07	658	27.7	7.9	6.1
NW08	2,370	40.3	9.1	1.9
NW09	1,603	35.2	10.6	5.2
Scotland				
S01	1,967	35.1	6.7	8.4
S02	983	28.6	8.9	5.0
S03	1,861	39.2	6.6	4.1
S04	741	30.1	8.5	7.8
S05	1,640	36.2	8.9	6.8
S06	1,586	39.0	7.3	2.5
S07	1,250	39.0	5.6	8.8

Source: IES/University of Liverpool fit note database, 2013.

Appendix C
Diagnostic classification of fit notes at different levels of social deprivation

Table C.1   Diagnostic classification of fit notes issued to patients in English 'neighbourhoods' at different levels of social deprivation

	LSOA residence of patient									
	Most deprived 20% of LSOAs in England		Quintile 2		Quintile 3		Quintile 4		Least deprived 20% of LSOAs in England	
Diagnostic category	N	%	N	%	N	%	N	%	N	%
Mild-to-moderate mental health disorder	4,246	41.2	2,334	37.1	2,193	30.4	1,664	31.1	1,709	27.8
Severe mental health disorder	222	2.2	89	1.4	69	1.0	24	0.4	44	0.8
Back problem	988	9.6	684	10.9	738	10.2	494	9.2	458	8.0
Other musculoskeletal	386	3.7	271	4.3	370	5.1	215	4.0	238	4.1
Bone fracture	173	1.7	124	2.0	133	1.8	151	2.8	121	2.1
Other injury	404	3.9	222	3.5	317	4.4	239	4.5	264	4.6
Causes of injury	68	0.7	45	0.7	44	0.6	42	0.8	34	0.6
Infectious/parasitic	254	2.5	168	2.7	216	3.0	171	3.2	261	4.6
Neoplasm	98	1.0	110	1.8	120	1.7	139	2.6	87	1.5
Endocrine/nutrition/metabolic	120	1.2	56	0.9	55	0.8	25	0.5	26	0.5
Haematology	25	0.2	10	0.2	17	0.2	18	0.3	20	0.3
Nervous system/sense organ	258	2.5	159	2.5	211	2.9	153	2.9	148	2.6
Circulatory	291	2.8	173	2.8	179	2.5	158	2.9	139	2.4
Respiratory	552	5.4	365	5.8	508	7.0	388	7.2	414	7.2
Digestive	272	2.6	163	2.6	205	2.8	129	2.4	160	2.8
Genito-urinary	127	1.2	80	1.3	108	1.5	71	1.3	100	1.7
Pregnancy/childbirth	115	1.1	74	1.2	115	1.6	92	1.7	91	1.6
Skin	105	1.0	54	0.9	88	1.2	52	1.0	54	0.9
Congenital	53	0.5	19	0.3	23	0.3	27	0.5	8	0.1
Symptoms	917	8.9	548	8.7	752	10.4	467	8.7	563	9.8
Procedures/invest/treatments	73	0.7	78	1.2	93	1.3	68	1.3	90	1.6
Post-op recovery	564	5.5	457	7.3	662	9.2	572	10.7	706	12.3
Total[1]	10,311	100	6,283	100	7,213	100	5,359	100	5,735	100

1   Missing diagnostic and/or deprivation data: 746 fit notes not included in analysis.
Source: IES/University of Liverpool fit note database, 2013.

Table C.2   Diagnostic classification of fit notes issued to patients in Welsh 'neighbourhoods' at different levels of social deprivation

| | LSOA residence of patient | | | | | | | | | |
| | Most deprived 20% of LSOAs in Wales | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Least deprived 20% of LSOAs in Wales | |
Diagnostic category	N	%	N	%	N	%	N	%	N	%
Mild-to-moderate mental health disorder	1,456	39.7	647	33.4	824	33.2	864	34.6	660	34.6
Severe mental health disorder	33	0.9	35	1.8	9	0.4	8	0.3	11	0.6
Back problem	400	10.9	285	14.7	283	11.4	243	9.7	161	8.4
Other musculoskeletal	164	4.5	77	4.0	155	6.2	141	5.6	75	3.9
Bone fracture	85	2.3	54	2.8	79	3.2	54	2.2	53	2.8
Other injury	159	4.6	105	5.4	116	4.7	117	4.7	87	4.6
Causes of injury	18	0.5	10	0.5	9	0.4	9	0.4	14	0.7
Infectious/parasitic	67	1.8	9	0.5	44	1.8	65	2.6	44	2.3
Neoplasm	32	0.9	41	2.1	34	1.4	27	1.1	46	2.4
Endocrine/nutrition/metabolic	40	1.1	13	0.7	10	0.4	21	0.8	18	0.9
Haematology	13	0.4	2	0.1	1	0.05	3	0.1	11	0.6
Nervous system/sense organ	66	1.8	41	2.1	49	2.0	52	2.1	51	2.7
Circulatory	125	3.4	48	2.5	62	2.5	64	2.6	52	2.7
Respiratory	163	4.4	105	5.4	122	4.9	165	6.6	143	7.5
Digestive	101	2.8	41	2.1	61	2.5	72	2.9	51	2.7
Genito-urinary	36	1.0	26	1.3	37	1.5	19	0.8	14	0.7
Pregnancy/childbirth	65	1.8	31	1.6	44	1.8	38	1.5	34	1.8
Skin	20	0.5	18	0.9	25	1.0	33	1.3	27	1.4
Congenital	15	0.4	4	0.2	10	0.4	4	0.2	1	0.1
Symptoms	334	9.1	154	7.9	238	9.6	257	10.3	145	7.6
Procedures/invest/treatments	22	0.6	16	0.8	29	1.2	26	1.0	15	0.8
Post-op recovery	251	6.8	177	9.1	243	9.8	214	8.6	193	10.1
Total[1]	3,665	100	1,938	100	2,484	100	2,496	100	1,906	100

1   Missing diagnostic and/or deprivation data: 531 fit notes not included in analysis.

Source: IES/University of Liverpool fit note database, 2013.

Table C.3 Diagnostic classification of fit notes issued to patients in Scottish 'neighbourhoods' at different levels of social deprivation

LSOA residence of patient

Diagnostic category	Most deprived 20% of DZs in Scotland		Quintile 2		Quintile 3		Quintile 4		Least deprived 20% of DZs in Scotland	
	N	%	N	%	N	%	N	%	N	%
Mild-to-moderate mental health disorder	863	44.9	741	39.0	640	35.0	766	32.4	587	30.5
Severe mental health disorder	15	0.8	7	0.4	13	0.7	17	0.7	6	0.3
Back problem	128	6.7	134	7.0	168	9.2	158	6.7	142	7.4
Other musculoskeletal	65	3.4	51	2.7	60	3.3	98	4.1	61	3.2
Bone fracture	57	3.0	38	2.0	54	2.9	89	3.8	63	3.3
Other injury	66	3.4	97	5.1	76	4.2	136	5.8	97	5.0
Causes of injury	8	0.4	8	0.4	7	0.4	5	0.2	7	0.4
Infectious/parasitic	63	3.3	69	3.6	88	4.8	74	3.1	87	4.5
Neoplasm	15	0.8	26	1.4	29	1.6	44	1.9	35	1.8
Endocrine/nutrition/metabolic	20	1.0	4	0.2	21	1.1	25	1.1	4	0.2
Haematology	6	0.3	17	0.9	2	0.1	6	0.3	0	0
Nervous system/sense organ	47	2.4	25	1.3	69	3.8	67	2.8	54	2.8
Circulatory	51	2.7	89	4.7	46	2.5	65	2.8	77	4.0
Respiratory	93	4.8	126	6.6	118	6.4	191	8.1	148	7.7
Digestive	43	2.2	38	2.0	66	3.6	64	2.7	57	3.0
Genito-urinary	35	1.8	22	1.2	22	1.2	26	1.1	21	1.1
Pregnancy/childbirth	24	1.2	8	0.4	18	1.0	24	1.0	20	1.0
Skin	19	1.0	10	0.5	13	0.7	28	1.2	21	1.1
Congenital	6	0.3	1	0.1	10	0.5	1	0.01	3	0.2
Symptoms	156	8.1	164	8.6	136	7.4	206	8.7	174	9.0
Procedures/invest/treatments	25	1.3	27	1.4	34	1.9	25	1.1	16	0.8
Post-op recovery	119	6.2	200	10.5	141	7.7	248	10.5	244	12.7
Total[1]	**1,924**	**100**	**1,902**	**100**	**1,831**	**100**	**2,363**	**100**	**1,924**	**100**

1 Missing diagnostic and/or deprivation data: 84 fit notes not included in analysis.
Source: IES/University of Liverpool fit note database, 2013.

Appendix D
Intra-practice rates of long-term (over four weeks) fit notes

Table D.1 **Lowest and highest proportion of long-term fit notes (over four weeks) issued by GPs within practices**

Practice ref.	Lowest proportion (%) issued by individual GP	Highest proportion (%) issued by individual GP
Derbyshire		
DE01	9.2	37.5
DE02	17.0	26.4
DE03	12.9	21.7
DE04	0.0	29.2
DE05	10.0	46.0
DE06	7.9	36.8
DE07	16.7	56.8
DE08	5.0	44.6
DE09	4.2	36.6
DE10	7.1	24.2
DE11	34.6	58.8
DE12	12.9	21.1
Wales		
W01	17.9	32.9
W02	24.2	39.7
W03	7.9	47.5
W04	19.1	45.3
W05	12.9	46.7
W06	5.1	42.1
W07	26.4	60.0
W08	12.4	39.7
W09	7.9	44.4
W10	5.7	22.1

Table D.1   Continued

Practice ref.	Lowest proportion (%) issued by individual GP	Highest proportion (%) issued by individual GP
SE England		
SE01	8.3	27.5
SE02	-	-
SE03	17.6	24.9
SE04	3.6	31.6
SE05	16.3	32.2
SE06	7.3	45.3
SE07	18.4	44.3
SE08	4.9	20.5
SE09	12.9	41.4
SE10	7.5	27.4
SE11	6.6	28.3
NW England		
NW01	24.5	87.5
NW02	14.3	30.3
NW03	24.0	49.1
NW04	47.4	62.5
NW05	21.2	35.4
NW06	5.5	39.2
NW07	22.3	46.2
NW08	26.7	58.1
NW09	3.9	32.1
Scotland		
S01	4.6	47.3
S02	0.0	35.7
S03	19.1	42.9
S04	3.5	23.3
S05	10.8	29.3
S06	6.9	26.9
S07	3.9	29.0

Source: IES/University of Liverpool fit note database, 2013.

Table D.2   Lowest and highest proportion of long-term mild-to-moderate mental health disorder notes issued by GPs within practices

Practice ref.	Lowest proportion (%) issued by individual GP	Highest proportion (%) issued by individual GP
Derbyshire		
DE01	0.0	42.9
DE02	16.7	25.0
DE03	12.2	25.6
DE04	0.0	40.0
DE05	10.0	46.1
DE06	0.0	28.9
DE07	30.6	87.5
DE08	0.0	47.4
DE09	0.0	41.7
DE10	0.0	40.0
DE11	48.7	75.9
DE12	7.7	15.2
Wales		
W01	8.3	25.0
W02	18.4	44.2
W03	15.4	64.7
W04	20.8	52.9
W05	0.0	53.1
W06	3.6	61.2
W07	32.4	38.1
W08	16.1	42.9
W09	20.3	64.7
W10	19.9	22.2
SE England		
SE01	5.7	42.2
SE02	-	-
SE03	16.7	35.1
SE04	23.7	45.5
SE05	20.0	44.4
SE06	6.1	56.9
SE07	21.4	49.4
SE08	5.3	33.3
SE09	15.0	52.7
SE10	11.1	31.7
SE11	0.0	37.8

Table D.2   Continued

Practice ref.	Lowest proportion (%) issued by individual GP	Highest proportion (%) issued by individual GP
NW England		
NW01	0.0	94.1
NW02	3.3	31.3
NW03	27.7	63.4
NW04	30.7	71.4
NW05	22.9	50.0
NW06	5.7	46.0
NW07	12.9	50.0
NW08	35.3	65.4
NW09	5.3	37.0
Scotland		
S01	9.4	55.2
S02	0.0	50.9
S03	13.3	52.7
S04	0.0	23.3
S05	13.1	35.3
S06	8.4	31.5
S07	4.8	40.0

Source: IES/University of Liverpool fit note database, 2013.