Recurrence of sickness absence episodes certified by general practitioners in the UK

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KEY MESSAGES
- A fifth of patients in the study had, at least, one recurrent episode of sickness certification.
- Mental disorders accounted for the majority of days certified in recurrent episodes within the same diagnostic category.
- Design and evaluation of return-to-work interventions need to consider the sustainability of employment after return.

ABSTRACT
Background: Compared to other areas of sickness certification, recurrence of certified sickness absence has been relatively under-researched.

Objectives: This study aims to report the extent and patterns of recurrence and to identify factors associated with higher rates of recurrence.

Methods: Sickness certification (‘fit note’) data were collected from 68 general practices in eight regions of the UK for 12 months.

Results: Twenty percent of 31,453 patients in the study had a recurrent certified sickness episode, with over half of these having the second episode in the same diagnostic category as their first. Mental health problems accounted for over a half of all days certified in same-diagnosis recurrent episodes. Male gender, residing in an area of social deprivation, a longer episode of initial certified sickness absence, not having return to work (‘may be fit’) advice in the first episode, having a mental disorder or musculoskeletal (particularly back) problem were all independently associated with a higher incidence of recurrence.

Conclusion: Differential risk of recurrence needs to be considered when designing return-to-work interventions. Evaluation of effectiveness of interventions (particularly for sickness absentees with mental health problems) has to consider the sustainability of employment after a return to work.

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Sickness absence; sickness certification; recurrent sickness absence; return-to-work

Introduction
Sickness absence has serious consequences for the individual employee, their employer, and the wider economy (in terms of lost productivity and state spending on sickness benefits). The process of certifying sickness absence can also have a significant impact on limited health service resources, regarding the amount of general practitioner (GP) or hospital consultant time required to fulfil the contractual obligation to issue sickness certificates (‘fit notes’). In the UK it has been estimated that over 130 million working days are lost annually through sickness absence; over 2% of the total working time and 4.5 days per worker.[1] The associated direct costs in state benefit have been calculated to be over £13 billion, with an additional £9 billion paid by employers in the form of sick pay.[2] In addition to the economic and social costs, sickness absence has increasingly been regarded as constituting a public health problem. In particular, levels of sickness absenteeism due to specific health problems (namely mental disorders, respiratory and circulatory diseases) have been reported to be associated with higher mortality rates.[3] Frequent and/or long-term episodes of sickness absence have been related to underlying health problems, and to be predictive of further chronic work incapacity.[4,5]
Most studies in the substantive area of sickness absence and its certification have focused on the risk factors for long-term work incapacity.[6–9] Relatively little attention has been paid to the recurrence of sickness absence, in terms of the employee commencing a second episode after returning to work from an initial one (usually, but not always, for a similar health problem). Recurrence of sickness absence due to a musculoskeletal health problem, particularly back pain, had been the main focus of recurrence studies.[10–12] However, with the increasing prevalence and contribution of common mental health problems to the global prevalence of disability, the recurrence of sickness absence for psychological health problems such as anxiety and depression (whether work-related or not) has become a more recent focus of concern.[15–17] The theoretical underpinning of the renewed interest in the factors associated with recurrence of sickness absence has been the re-conceptualisation of return-to-work as a dynamic process.[16,17]

Previous studies in this area have tended to have organisational work settings, focussing on recurrence of sickness absence within a group or sector of employees.[18,13,14] This study differs from previous studies in its setting within general practice, and its focus on patients who have consulted a GP to have their sickness absence formally certified (via the completion and issue of a sickness certificate). Hence, the study only considers periods of sickness absence that were certified as such and does not include employee self-certified episodes (the first seven days of sick leave in the UK) or any other absences where the employee did not seek certification. A summary of the sickness certification process in the UK is presented in Box 1. Our study aimed to investigate: (1) the association between an initial certified sickness episode and any recurrent episodes within the time frame of the study and (2) the characteristics of patients and their first episodes (in the study period) increasing the risk of a recurrent period(s) of sickness certification.

**Methods**

**Collection of sickness certification data**

Sickness certification (‘fit note’) data for the study were generated from two projects commissioned and funded by the UK Department for Work and Pensions (DWP): the national evaluation of the fit note (2011–2013) and the evaluation of Fit for Work Service (FFWS) pilots (2011–2012). The former recruited 49 general practices from five geographical areas of the UK (Scotland, Wales, Derbyshire, North West and South East England). The latter involved 19 practices sited in three FFWS pilot sites (Greater Manchester, Leicestershire and North Staffordshire).

The 68 general practices used carbonised pads of fit notes for 12 months. It ensured that details of each fit note issued were retained on separate sheets. Data from the copies of the fit notes were anonymised and entered into a spreadsheet by practice staff. In addition to the details of the note (date of issue, diagnosis, period to abstain from work, whether the patient ‘may be fit’ to do some work, whether the patient/employee will need to return to work if the employer could adjust normal working conditions (e.g. amending usual work duties). The GP should also specify the duration of sickness certification and whether the patient needs to return for review at the expiry of the fit note.

- The first seven days of sickness absence are ‘self-certified’ by the employee. The employee will need to complete a ‘self-certification’ form if returning to work within this period.
- If sickness absence exceeds seven days, the employer will request medical evidence of incapacity for work. The sickness absentee will need to obtain a medical statement of unfitness for work (a ‘fit note’) from their GP.
- The fit note issued by the GP will include the diagnosis, and whether the patient/employee will need to abstain from all work or if they ‘may be fit’ to return to work if the employer could adjust normal working conditions (e.g. amending usual work duties). The GP should also specify the duration of sickness certification and whether the patient needs to return for review at the expiry of the fit note.
- The employer is required to pay Statutory Sick Pay (SSP) to the employee for up to 28 weeks sickness absence, provided the employee can provide continuous evidence of incapacity in the form of fit notes.
- After 28 weeks of sickness absence, the employee becomes eligible to make a claim for the main incapacity-related benefit, the Employment and Support Allowance (ESA). However, during the 13-week assessment period for ESA the claimant has to continue obtaining fit notes from their GP.

**Box 1. Summary of the sickness certification system in the UK.**

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The 68 general practices used carbonised pads of fit notes for 12 months. It ensured that details of each fit note issued were retained on separate sheets. Data from the copies of the fit notes were anonymised and entered into a spreadsheet by practice staff. In addition to the details of the note (date of issue, diagnosis, period to abstain from work, whether the patient ‘may be fit’ to do some work, whether the patient needed to be re-assessed at the expiry of the note and the certifying GP) a number of additional items were collected from the patient practice record that has been shown to influence sickness absence risk. These included gender, year of birth and postcode (transformed into a neighbourhood deprivation score). Diagnoses could not be automatically assigned a READ code. Practices uploaded data to a secure project website on a monthly basis.

When receiving the data, the project manager manually assigned the written diagnoses on the fit notes to revised versions of the broad READ
categories (chapters). The original READ categories were significantly adapted to reflect the types of problem that were commonly cited on fit notes issued by the GPs in the studies sourcing the data. Hence, a ‘post-op recovery’ category was used to classify the fit notes of those patients who were advised to abstain from their usual work in order to recover from a recent surgical operation. A ‘back problem’ category was created to differentiate between this common reason for sickness absence and other musculoskeletal problems. When an individual fit note included more than one diagnosis, the first one cited was given primacy in assigning to a category. A research GP who was part of the project team validated the initial categorisation process.

The individual fit notes issued to a patient during the period of data collection were collapsed into certified sickness ‘episodes’. An episode consisted of a period of continuous sickness absence certified by one or more fit notes. A new episode was deemed to have commenced if a fit note was issued more than 14 days after the expiry of a previous fit note. Hence, an individual patient may have had more than one discrete episode of certified sickness absence in the 12-month data collection period. In the event of an episode containing fit notes from different diagnostic categories, the episode was assigned to a diagnostic category based on the diagnosis making the greatest contribution to the total duration of the episode.

A more detailed description of the data collection process is provided elsewhere by the authors.[19]

**Ethics**

Ethical approval for data collection was obtained from the (UK) National Research Ethics Service in June 2011.

**Statistical analysis**

Descriptive statistics report rates of recurrence and time between the end of the first episode and recurrence.

Poisson regression models were run to estimate the effect of patient and first episode characteristics on the recurrence-rate. The log of the exposure time (number of days between the end of the first episode and the final date of data collection at the general practice) was included as an offset. The incidence rate ratio (IRR), along with its 95% confidence intervals (CIs), was reported as an estimate of the risk of a higher or lower rate of recurrence. A conventional criterion of statistical significance \( P < 0.05 \) was used.

Data were analysed using SPSS for Windows 22 and Stata IC 10.

**Results**

**Patient episodes of certified sickness absence**

A total of 42,402 episodes of continuous certified sickness, experienced by 33,768 patients, were identified in the data generated by the two source evaluations. Nearly 7% of these patients \((n = 2,315)\) were recorded as ‘not in work’, and only receiving fit notes from the GP to support a claim for a sickness benefit. These patients (and their 3,468 discrete episodes) were excluded from subsequent analysis.

Of the remaining 31,453 patients, 57% were female, 31% were aged over 50, and 24% lived in one of the 20% most socially deprived neighbourhoods in their respective country. Over 29% had a first episode (within the study data collection period) classified as a mental health problem. In 91% \((n = 28,588)\) of first episodes the GP had recommended that the patient should abstain from all work. In the remaining 9% \((n = 2,865)\) the episode had concluded with the GP advising that the patient ‘may be fit’ to work provided adjustments were made to normal working conditions.

**Recurrence of episodes**

A total of 6,293 (20%) of the patients in the study returned to their GP during the period of data collection to receive sickness certification for a further sickness episode \((n = 4,989, \text{two recurrent episodes} = 1,100, \text{three recurrent episodes} = 167, \text{four or more recurrent episodes} = 37)\).

Recurrence of episodes (for any subsequent health problem) was most prevalent in patients reporting an initial genitourinary problem (24% having a recurrent episode), a non-specified symptom (24%), a circulatory health problem (23%) and a mental disorder (22%). Nearly 18% of patients having a mental health-related first episode had a recurrent episode within the same diagnostic category. Fourteen percent of patients with a first episode classified as a circulatory health problem had a second certified sickness episode for a similar type of problem. Nearly 12% of back problem patients had the first and second episodes within the same diagnostic category (Table 1).
For those patients having a recurrent episode, the interval between the end of the initial episode and the start of the second episode varied across diagnostic groups. The shortest intervals were found for patients having a first episode for cancer/neoplasm (median of 42 days), mental disorder (43 days), circulatory disease (45 days), skin problems (46 days) and a back problem (49 days) (Table 2).

Table 2 also reports the contribution of diagnostic categories to total recurrence days (aggregated duration of recurrent episodes). For total days certified in all recurrent episodes (whether within or without the initial category), the largest contribution was made by patients having an initial episode for a mental disorder (37%). Patients having an initial episode for a non-specified symptom contributed nearly 11% of days certified in recurrent episodes. A similar proportion was estimated for patients initially receiving sickness certification for a back problem. However, when considering the total days of duration of recurrent

### Table 1. The diagnostic category of the first episode and any recurrence in the study period.

| Diagnostic category of first episode | Number of patients | Patients having any recurrent episode(s) | Patients having second episode in same diagnostic category as first |
|-------------------------------------|--------------------|------------------------------------------|---------------------------------------------------------------|
|                                     |                    | N | Row % | N | Row % |
| Mental disorder                     | 9,169              | 2,054 | 22.4 | 1,611 | 17.6 |
| Circulatory                         | 774                | 177 | 22.9 | 108 | 14.0 |
| Back problem                        | 2,963              | 596 | 20.1 | 351 | 11.8 |
| Neoplasm                            | 449                | 89 | 19.8 | 52 | 11.6 |
| Musculoskeletal (excluding back)    | 1,168              | 242 | 20.7 | 128 | 11.0 |
| Skin disorder                       | 338                | 73 | 21.6 | 35 | 10.4 |
| Pregnancy-related                   | 589                | 108 | 18.3 | 52 | 8.8 |
| Nervous system/Sense organ          | 804                | 148 | 18.4 | 67 | 8.3 |
| Symptom (without diagnosis)         | 2,954              | 699 | 23.7 | 233 | 7.9 |
| Injury (including fracture)         | 2,878              | 490 | 17.0 | 198 | 6.9 |
| Genitourinary                       | 493                | 117 | 23.7 | 30 | 6.1 |
| Post op recovery                    | 3,099              | 433 | 14.0 | 186 | 6.0 |
| Digestive                           | 953                | 203 | 21.3 | 57 | 6.0 |
| Respiratory                         | 2,801              | 505 | 18.0 | 146 | 5.2 |
| Infectious/Viral                    | 1,200              | 212 | 17.7 | 44 | 3.7 |
| Other                               | 821                | 147 | 17.9 | 39 | 4.8 |
| Total                               | 31,453             | 6,293 | 20.0 | 3,334 | 10.6 |

†Procedures/investigations, haematological, endocrine and congenital categories.
episodes within the same category as the first episode, mental health-related recurrence contributed the majority (56%) of all duration. Recurrent back problem episodes accounted for 11% of the total days certified.

**Independent effects on recurrence-rate**

Poisson regression was conducted to estimate the independent effect of patient and first episode characteristics on the incidence rate of recurrence (with separate models for all recurrent episodes and only those within the same diagnostic category). IRRs for covariates in the models are reported in Table 3.

Patient gender had a significant effect on the incidence of recurrent episodes occurring within the same diagnostic category as the initial episode. Female patients had a significantly lower incidence rate than did males (IRR = 0.89, 95% CI = 0.83–0.95). Living in one of the most deprived neighbourhoods increased the incidence rate of same-diagnosis recurrence by 17% (IRR = 1.17, 95% CI = 1.08–1.24). Patients with a first episode over 90 days in duration had an incidence rate of recurrence 2.08 times higher than patients with short (lasting up to 30 days) initial episodes. When their initial episode ended with a 'may be fit' note patients had a reduced rate of same-diagnosis recurrence (IRR = 0.72, 95% CI = 0.63–0.81). Compared to the diagnostic reference category, the incidence of recurrent episodes was significantly increased when the initial episode of sickness certification was for a mental disorder (IRR = 4.18, 95% CI = 3.04–5.74), a back problem (IRR = 2.73, 95% CI = 1.96–3.79) or circulatory disease (IRR = 2.58, 95% CI = 1.78–3.73).

**Discussion**

**Main findings**

A fifth of 31,453 patients having a first episode of sickness certification in the data collection period had, at least, one recurrent episode before the end of the study. Recurrence of episodes (for any diagnosis) was most prevalent in groups of patients having initial certification for genitourinary, circulatory and...
mental health problems. The shortest time interval between first and second episodes was for those patients with initial cancer or mental health diagnosis. When the recurrent episode had a similar diagnosis to the first, the highest proportion (nearly 18%) of recurrence was found within the mental disorder category. Over half of the days certified in second (first recurrent) episodes (within the same diagnostic category as the initial episode) were attributed to mental disorders. Male gender, residing in an area of social deprivation, a longer episode of initial certified sickness absence, not having return to work advice (‘may be fit’) in the first episode, having a mental disorder or musculoskeletal (particularly back) problem were all independently associated with a higher incidence (no of recurrent episodes per patient exposure time) of same-diagnosis recurrence.

**Strengths and limitations of the study**

A major strength of the study lies in its use of the largest database of sickness certification compiled in the UK to date. A range of practices provided the fit note data across England, Scotland and Wales, supplying details of every fit note issued to patients in a 12-month period. In a substantive area where there has been relatively little research, this recurrence study has the potential to enhance the existing evidence base. However, an important limitation of the study is the exclusion of patient occupational data from the explanatory models. The patient’s occupation is not routinely recorded in general practice records in the UK, even when the patient is in current receipt of fit notes.

Only medically certified sickness absence episodes were included in the analysis. Self-certified episodes of acute illness, lasting up to seven days, were not able to be included in the study. If it had been possible to include all episodes of sickness absence (medically and self-certified) experienced by patients in the 12 months, it is likely that recurrence-rates within specific diagnostic categories would have been significantly different. In particular, the ‘Respiratory’ and ‘Infectious/Viral’ categories would have had much higher recurrence-rates.

**Relation to other studies**

This study found that patients having an initial certified sickness episode for a mental health problem were most likely to have recurrent episodes due to a similar health problem, and accounted for the largest proportion of recurrence duration. A large Dutch longitudinal study (137,172 employees monitored over a seven-year period) found that recurrence of sickness absence due to mental disorders accounted for 21% of all recurrent sickness absence days. However, musculoskeletal problems made a more significant contribution to the duration of all recurrent episodes (accounting for 37% of recurrent episode days). Our study found that over 22% of those having an initial mental disorder episode had a recurrent period of certified sickness absence. Other studies have found similar rates of recurrence, estimating that 20–30% of workers that return to work after a period of mental health-related sickness absence have a recurrent episode. As stated above, most of the previous research on recurrence has focused upon musculoskeletal problems (particularly back pain). We found that back problems were a significant predictor of same-diagnosis recurrence. This is not surprising considering that low back pain is known to run a recurrent course in the majority of patients, leading to repeated episodes of pain that usually result in more time lost from work. While our study appears to conflict with the findings of other recurrence studies (mostly conducted outside the UK) in identifying mental disorders rather than musculoskeletal problems as the main diagnostic predictor of recurrent episodes, this may only reflect the predominant role that common mental health problems (such as depression, anxiety and stress) play in all sickness certification and claims for long-term disability benefits in the UK.

An unspecified symptom (without a definitive diagnosis) was often cited as a reason for initial sickness certification (9% of patient first episodes), with 24% of these patients returning to the GP for further episodes of certification. However, only 8% of these patients with a symptom-related first episode had recurrent episodes for the same problem. This implies that the second episode may have been required to receive a firm diagnostic justification for the sickness absence. Further analysis found that over 18% of patients with an initial symptom episode, and having recurrent episodes, had, at least, one episode of mental health-related sickness absence. Psychiatric comorbidity has been found to be a common feature of patients with undiagnosed or unexplained medical symptoms.

We found that patients who were male and from a socially deprived neighbourhood had a significantly raised risk of experiencing recurrence of certified sickness episodes for the same health problem. Other studies that have included gender in multivariate models have found no significant effect on the recurrence outcome. The area-based measure of social deprivation used in our study has not been utilised in
previous research in this area. Previous studies using a measure of socio-economic status (usually based on a salary scale) as a potential explanatory variable have found only limited evidence of any association with recurrence of sickness absence.[13,18]

**Implications for policy**

Our study found that patients who had received ‘may be fit’ advice on a fit note at the end of their first episode were significantly less likely to have another episode within the study period. The introduction of the fit note in 2010 represented a major shift in sickness certification policy in the UK. While the previous medical statement that was used to certify sickness absence (the ‘sick note’) had required the GP to advise simply whether the patient was fit for work or not, the new fit note enabled the GP to advise that the patient ‘may be fit’ to return to work provided that appropriate support was available. Possible support options listed on the fit note were for the patient to be allowed by the employer to phase a return to work, have their normal work duties amended, their hours of work altered or for workplace adaptations to be made to facilitate return.[19] Since its introduction there have been concerns expressed about the small proportion of fit notes including ‘may be fit’ advice, particularly those issued to patients with a common mental health problem.[27] However, the findings of this study suggest that, when such advice is included, the risk of recurrence is reduced. Unfortunately, we can only speculate about how the issue of such advice results in a reduction in recurring episodes. We also found that patients with a longer period of initial certified sickness absence were more likely to commence a second episode within the study period. This may reflect the severity of the health condition causing the first episode of sickness certification, but may also be an indication that the return to work after the initial period of sick leave had been premature, and further sickness certification was required.

The evidence from our study (and previous recurrence research) implies that design of interventions to prevent recurrent sickness absence due to mental health problems should be a policy priority, particularly given the potential impact of recurrence on raised risk of disability in later years.[5] However, there have been few policy initiatives or interventions developed and evaluated that have focused specifically on increasing the stability of a return to work after sick leave due to a psychological health problem. In the Netherlands, guidelines developed by the Society of Occupational Medicine to facilitate a return to work for people with mental health problems did include a recommendation that a relapse prevention consultation should take place after return to the workplace. However, it is unclear how often it has been implemented in practice.[28] A problem-solving intervention, based on the same guidelines, was found to be effective in reducing the incidence of sickness absence and increasing the time to recurrence.[29] In terms of clinical interventions, there is some evidence that cognitive-behavioural therapy may have positive effects on the length of mental health-related sickness absence and in the reduction of symptoms.[30] But there is no evidence to date of its efficacy in preventing a recurrence of sick leave for a psychological health problem.

**Conclusion**

The study found a relatively high degree of recurrence of certified sickness absence, particularly for mental health problems. The findings have implications for the design of return-to-work interventions.

**Declaration of interest**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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**References**

[1] Office for National Statistics (ONS). Sickness absence in the labour market, February 2014. http://www.ons.gov.uk/ons/dcp171776_353899.pdf

[2] Black C, Frost D. Health at work: an independent review of sickness absence. London: The Stationery Office 2011.

[3] Head J, Ferrie JE, Alexanderson K, et al. Diagnosis-specific sickness absence as a predictor of mortality; the Whitehall II prospective cohort study. Br Med J. 2008;337:a1469.

[4] Blank N, Diderichsen F. Short-term and long-term sickness leave in Sweden: relationships with social circumstances, working conditions and gender. Scand J Soc Med. 1995;23:265–272.
Koopmans PC, Roelen CAM, Groothoff JW. Risk of future sickness absence in frequent and long-term absenteees. Occup Med. 2008;58:268–274.

Gjesdal S, Bratberg E. Diagnosis and duration of sickness absence as predictors for disability pension: results from a three year multiregister based prospective study. Scand J Public Health. 2003;31:246–254.

Vaez M, Rylander G, Nygren A, et al. Sickness absence and disability pension in a cohort of employees initially on long-term sick leave due to psychiatric disorders in Sweden. Soc Psych Psych Epid. 2007;42:381–388.

Dekkers-Sanchez PM, Hoving JL, Sluiter JK, et al. Factors associated with long-term sick-leave in sick-listed employees: a systematic review. Occup Environ Med. 2008;65:152–157.

Gabbay M, Shiel C, Hillage J. Factors associated with the length of fit note-certified sickness episodes in the UK. Occup Environ Med. 2015;72:467–475.

Lotters F, Hogg-Johnson S, Burdorf A. Health status, its perceptions, and effect on return to work and recurrent sick leave. Spine. 2005;30:1086–1092.

Burdorf A, Jansen JP. Predicting the long term course of low back pain and its consequences for sickness absence and associated work disability. Occup Environ Med. 2006;63:522–529.

Wynne-Jones G, Cowen J, Jordan JL, et al. Absence from work and return to work in people with back pain: a systematic review and meta-analysis. Occup Environ Med. 2014;71:448–456.

Koopmans PC, Bultmann U, Roelen CAM, et al. Recurrence of sickness absence due to common mental disorders. Int Arch Occup Env Health 2011;84:193–201.

Norder G, Bultmann U, Hoedeman R, et al. Recovery and recurrence of mental sickness absence among production and office workers in the industrial sector. Eur J Public Health. 2015;25:419–423.

Arends I, Bultmann U, Nielsen K, et al. Process evaluation of a problem solving intervention to prevent recurrent sickness absence in workers with common mental disorders. Soc Sci Med. 2014;100:123–132.

Young AE, Roessler RT, Wasiak R, et al. A developmental conceptualization of return to work. J Occup Rehabil. 2005;15:557–568.

Christensen KB, Andersen PK, Smith-Hansen L, et al. Analyzing sickness absence with statistical models for survival data. Scand J Work Env Health. 2007;33:233–239.