

A service evaluation of an occupational health Covid-19 referral pathway

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Background	A rapid management referral pathway was established by a private UK occupational health (OH) provider to offer assessments and advice on managing individual risk relating to Covid-19 in the workplace.
Aims	The aim of this service evaluation was to assess the utilization and effectiveness of the pathway in supporting referrers during a pandemic.
Methods	Referrals between March–August 2020 were analysed by date and industry to assess service utilization. A survey was sent to a convenience sample of referrers throughout this period, requesting feedback on whether the report led to a change in how the worker was managed, and whether it increased referrer confidence in managing the worker.
Results	Five hundred and seventy referrals were made, predominantly from wholesale and retail; professional, scientific and technical; and food and drink production. There was a small peak of referrals from manufacturing in April and a larger peak in July–August from wholesale and retail, and food and drink production. Of 166 surveys sent, 58 were completed (35% response rate). In 71% of cases, referrers indicated that the report led to change in how the worker was managed, and in 86% of cases, referrers reported being more confident in managing the worker.
Conclusions	The pathway was well-utilized. OH assessments and advice have an important role to play in a pandemic, with useful impact on how workers are managed and how confident managers feel in managing workers.
Key words	Covid-19; occupational health services; pandemic; service evaluation.

Introduction

A UK occupational health (OH) provider established a Covid-19 pathway to provide assessments and advice within 48 h of referral. Covid-specific clinical assessment and report templates, and clinical guidance documents were regularly updated. The doctors and nurses conducting the assessments had access to weekly team calls and an online forum to share queries and updates. From June 2020, the Covid-age tool [1] was used as an adjunct to clinical judgment. Reports to managers advised on individual clinical risk profile, on control measures and information on local prevalence once this became relevant. All reports were sent out with a blank template ‘Individual Covid-19 workplace assessment and action plan’ to help manager and worker agree a work plan.

Methods

To our knowledge, there are no standards against which to measure OH effectiveness in a pandemic. Our service evaluation was designed with two main objectives: establish the utilization of the service, and assess the effectiveness of the service. Utilization was assessed in terms of the number of referrals into the service over a 22-week period between 30 March 2020 and 30 August 2020. Effectiveness was evaluated by inviting referrers to complete an anonymous online questionnaire (see [Supplementary Data](#), available as Supplementary data at *Occupational Medicine Online*) within a month of clinical assessment to explore the impact of a Covid-19-focused OH report. No comparable questionnaires were found that could be used or adapted. Therefore, senior

Key learning points

What is already known about this subject:

- A pandemic of a novel virus has major ramifications for businesses.
- As key sites of viral transmission workplaces require expert guidance on managing both individual worker risk and workplace level risk.

What this study adds:

- A rapid turnaround, virus-focused pathway was well-utilized.
- Occupational health reports influence how workers in a range of industries are managed in a pandemic.
- Occupational health reports raise manager confidence in managing workers.

What impact this may have on practice or policy:

- Industry access to occupational health supports business continuity during a pandemic.
- Assessing outcomes of occupational health input could contribute to the literature about the value of occupational health.

physicians within the OH provider developed one. The survey questions focused on the industry and role of the worker, as well as two primary outcomes: whether the OH report changed how an employee was managed (No; Yes it helped me decide to keep this employee at work; Yes it helped me decide to keep the employee off work; Yes it helped me make further adjustments) and whether the OH report increased manager confidence in managing the employee. In order to not overburden referrers, surveys were capped at three per referrer. In-house information governance confirmed that the survey and platform (MS forms) complied with the General Data Protection Regulation 2018 [2].

The referral and survey data sets were analysed using SPSS® version 25.

As this was a service evaluation research ethics approval was not required [3].

Results

Five hundred and seventy referrals were made from 36 separate client organizations. The number of referrals per organization ranged from 1 to 175. The main referring industries were wholesale and retail (38%); professional, scientific and technical (25%); food and drink production (19%); and manufacturing (11%). The referral rate peaked in late July and August 2020 due to wholesale and retail, and food and drink referrals, with a smaller peak at the beginning of lockdown due to manufacturing referrals (Figure 1).

In total, 166 surveys were sent (Figure 2) and 58 responses were received (response rate 35%). A higher proportion of survey respondents came from manufacturing (35%) and a smaller proportion from wholesale and retail (2%) than the overall cases referred into the pathway.

Seventy-one per cent ($n = 41$) of survey respondents reported that the OH report had led to change in how the worker was managed, and 86% ($n = 50$) said

the OH report increased their confidence in managing the worker. No statistically significant differences were found between industry when analysed as a dichotomous variable (manufacturing versus other) and whether the report led to change (odds ratio [OR] = 0.88, 95% confidence interval [CI]: 0.28–2.74; not significant [NS]) or increased confidence (OR = 7, 95% CI: 0.80–61.15, NS).

Discussion

Five hundred and seventy referrals were made into the Covid-19 pathway during the 22-week period. Seventy-one per cent of survey respondents reported that the OH advice led to a change in how the worker was managed, and 86% of referrers felt more confident as a result of the report.

The strengths of this evaluation are that it offers a rare insight into the outcomes resulting from OH provider advice during a pandemic, representing a broad range of client industries, and capturing different stages of the pandemic. The weaknesses are that although a 35% response rate is not unusual, it may introduce non-response bias [4], limiting the external validity of our survey. Capping surveys at three per referrer may under-represent organizations with more centralized referral processes, introducing selection bias. Due to the need to establish evaluation processes rapidly, the questionnaire was not piloted with client organizations. If questions were misunderstood this may have introduced bias [4]. A service evaluation can offer insights into the impact of OH, but causality cannot be inferred, and the results cannot be generalized without using an experimental design that is representative of a particular study population.

Previous research has identified key quality improvement process indicators for OH: timeliness of the consultation and report, and the report being of sufficient quality to assist in the occupational management of the employee [5]. It has been argued that process indicators

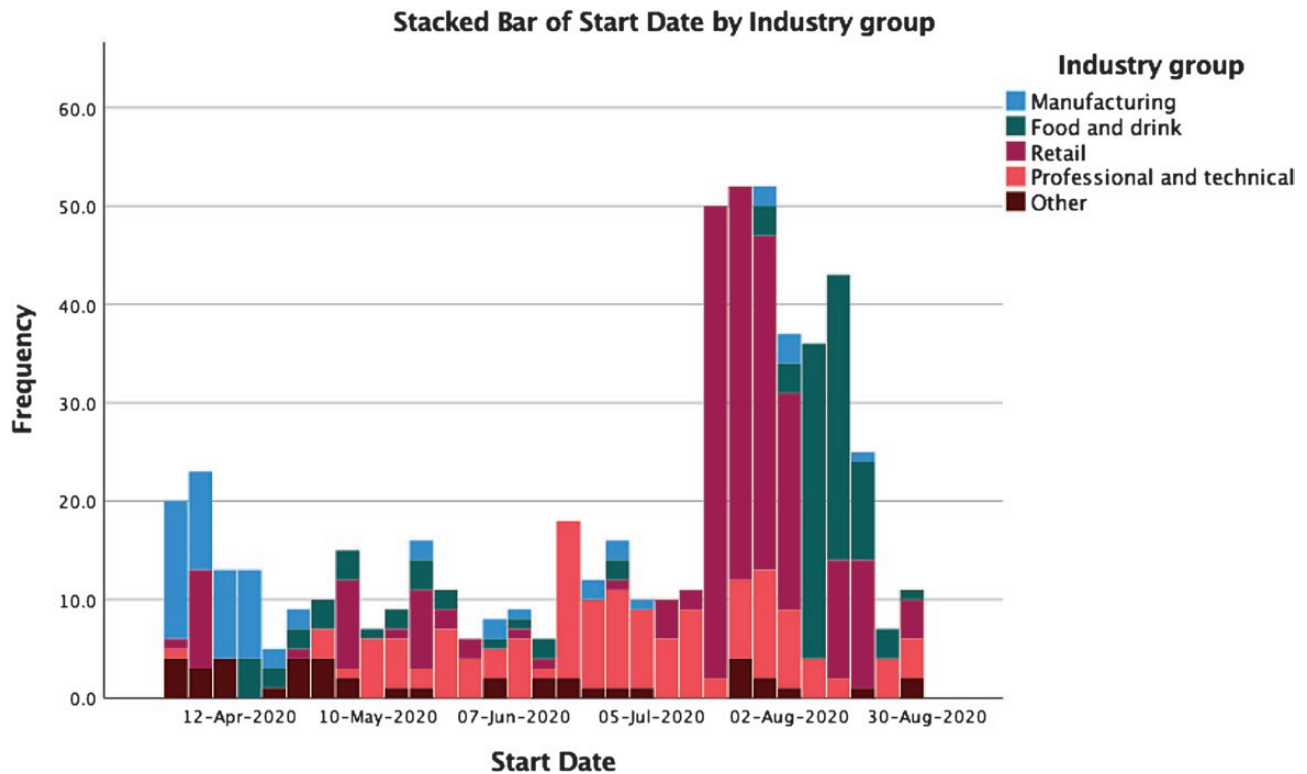


Figure 1. Stacked bar chart displaying frequency of referrals by date and industry group. Each bar represents 5 days.

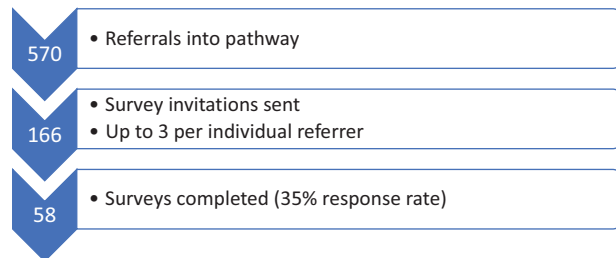


Figure 2. Flow chart showing referrals to responses.

have an advantage over outcome indicators in that they are not influenced by other factors that may play a role in individual worker health outcomes [6]. However, in assessing the role OH takes in a novel situation, outcome indicators have been chosen to offer an insight into the value-added by OH. Researching the impact of OH advice, using pragmatic outcomes that are operationalized in terms of change and confidence may be especially useful in OH, where workers present with a range of health conditions, and work in a wide variety of contexts. However, the mechanisms by which OH reports add value are not known. Future research on OH impact would benefit from behavioural science expertise, and qualitative research with referrers, to better understand how to offer effective input, whether during a pandemic or not.

This evaluation suggests that OH has a crucial role to play in supporting safe working practices in the

face of a pandemic, with a strong majority of referrers implementing change in working practices and reporting improved confidence in managing the worker as a result of OH advice.

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Competing interests

J.N. was involved in designing and implementing the pathway. A.Y.Z. and J.M. also implemented the pathway. A.Y.Z. currently receives research grants from both the National Institute for Health Research and the British Medical Association Foundation for Medical Research.

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