

Uptake and quality of health surveillance for hand-arm vibration and noise exposure

A telephone based survey among dutyholders

Prepared by the **Health and Safety Laboratory**
for the Health and Safety Executive

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Health surveillance (HS) is the systematic supervision of workers looking for early signs of work-related ill health in employees exposed to certain hazards. Health surveillance for hand-arm vibration (HAV) is largely based on the collecting of appropriate symptoms in individual workers, while quantitative pure-tone audiometry is a large element of HS activity for noise.

This report details a telephone-based questionnaire study on the uptake and quality of HS for the hazards of noise and HAV. The study was undertaken during 2009-2010 and was centred on an agreed number of industry sectors, where the risks from such hazards are generally considered to be high. A total of 632 companies were involved.

The levels of uptake of HS presented in this report appear better than data collected in 1995 and similar to that from 2004 for HAV. The size of the firm, rather than industry sector, is important in defining the uptake of HS, with smaller firms having a lower uptake. The results clearly demonstrate and provide further evidence of the specific needs of SMEs in relation to HS for noise and HAV.

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KEY MESSAGES

In a telephone survey involving a total of 632 companies within industry sectors where the risk from exposure to HAV (hand-arm vibration) or noise would be considered significant, the following key results were obtained:

- The mean uptake of health surveillance was 18% for HAV and 25% for noise in companies where it is likely that health surveillance should be in place.
- The survey covered companies from micro to large size and the uptake of health surveillance for both noise and HAV was found to be dependent on the size of the firm surveyed. Smaller companies were far less likely to have health surveillance in place.

Within those firms surveyed that had health surveillance in place:

- A substantial majority (80-90%) of firms undertook health surveillance at, or even more frequently, than suggested in current guidance for HAV and noise
- There still remains room for improvement in the implementation of health surveillance. For example, only half of the HAV firms and considerably less for noise firms had undertaken some form of proactive checking of the competence of those undertaking their health surveillance.

EXECUTIVE SUMMARY

Health surveillance (HS) is the systematic supervision of workers looking for early signs of work-related ill health in employees exposed to certain hazards. Health surveillance for hand-arm vibration (HAV) is largely based on the collecting of appropriate symptoms in individual workers, while quantitative pure-tone audiometry is a large element of HS activity for noise. The establishment of new regulations in 2005 for both hazards clearly mandated when HS would be necessary for a worker or groups of workers and is linked, by a risk assessment process, to the likely extent of their regular exposure above defined action levels for both hazards. There is very limited information on the uptake and nature of HS for HAV and noise, and none since the introduction of the 2005 regulations. This report attempts to gather largely descriptive data to help address this knowledge gap. It focuses on information gained from the dutyholder or manager responsible for day-to-day health and safety issues in the organisations surveyed.

This report details a telephone-based questionnaire study on the uptake and quality of HS for the hazards of noise and HAV, and involved a total of 632 companies. This survey was carried out during 2009-2010. It centred on an agreed number of industry sectors, where the risks from such hazards are generally considered to be high. For HAV this included manufacture of machinery, metal products, aerospace and railway rolling stock, together with boat building/repairs and the construction of structures; for noise the industry sectors were the manufacture of wood, plastic, concrete, plaster and cement products, the cutting and shaping of stone, and site preparation within the construction industry. Firms were chosen randomly from commercial business databases such that the proportion of organisations surveyed in the targeted industries matched the relative UK size distribution of these sectors. Efforts were made to ensure that the interviewee was the person responsible for day-to-day health and safety within each company.

The questionnaire contained both open and closed questions and was similar in structure for noise and HAV, but appropriately tailored for each hazard. Each questionnaire involved establishing the size of the firm, confirming that they fell within the target sectors, asking whether an appropriate risk assessment had been conducted and whether health surveillance was in place. It included risk questions aimed at establishing whether the hazards posed a significant risk in that workplace such that any positive response placed that firm into a 'higher risk' category where it is likely that health surveillance would be required. The last part of each questionnaire focussed on those firms with health surveillance in place. It covered the guidance used to establish health surveillance, how occupational health service providers (OHSP) were chosen and their competence ensured. Other questions included the frequency of HS assessments, action taken by firms on any feedback from HS, record keeping and sources of information and training for employees.

A total of 825 and 2218 companies were selected for contact and 246 (30%) and 386 (17%) interviews were completed for noise and HAV respectively. The main reasons for not completing interviews were that the company refused to take part (28%), a company contact could not be obtained on the telephone (26% and 15% for noise and HAV respectively), or the firms were not in the selected industries or doing activities where exposures to noise or HAV were experienced (approximately 10% of each group). The study confirmed a high prevalence (55%) of micro firms (less than 10 employees) and 30% of small enterprises (firms with between 10-50 employees) in the targeted industries. The likelihood of a risk assessment having been carried out was strongly influenced by the size of the firm for both hazards with larger firms more likely to have undertaken a risk assessment.

The overall mean uptake of HS in the ‘higher risk’ firms, where it is likely that HS should be in place, was 18% (confidence interval 13%-24%) for HAV and 25% (confidence interval 19%-32%) for noise. The overall figures of HS uptake appear marginally better for noise and substantially better for HAV when compared with a 15 year old study^[1], albeit with limited data on HAV. For HAV the overall uptake figure is comparable with a more recent study of SMEs^[2] with vibration exposure in which, like this study, the construction sector predominated.

The average uptake varied by industry sector being between 13%-50% for HAV and 17%-38% for noise, and for HAV particularly being affected by a low uptake in the specific construction sector (Standard Industrial Classification code 45.2, construction of complete constructions) that formed over 50% of this cohort. However, the predominant factor on whether HS was in place was the size of the firm, such that the overall uptake of HS was less than 10% for both HAV and noise in micro enterprises, as compared to 55% and 75% respectively in large organisations.

Greater than 85% of those firms with HS in place stated that they used HSE guidance to help them run their HS schemes. In response to an open, non-leading question the HSE website was identified as a popular source of information (30% of replies for both hazards). Twenty-six percent and 14% mentioned guidance in relation to noise and HAV respectively. About 25-30% suggested that they had handed over all organisation and management to external consultants or providers.

A high majority of firms (>80%) undertaking HS reported that they had formal procedures for managing workers exposed to the hazards. Lower percentages (55-68%) reported that their HS providers had been given copies of risk assessments and procedures for managing exposed workers. About 60% of firms reported that someone involved in providing their HS had visited their firm to see what workers did and their likely exposure to HAV and noise.

A majority (63% and 74% for HAV and noise respectively) stated that they had undertaken some checking of the qualifications of those undertaking their HS. About 15% in each cohort stated they had not checked qualifications. However, an open question about the nature of any checking gave widely variable responses. About 13% in both cohorts implied that they relied on employing a reputable company. Just over 50% for HAV, but only 12% in the noise cohort seemed to be pro-active in terms of asking for qualifications, certificates, *curricula vitae* etc. For noise 7% suggested that competence in HS was implicit because the hearing tests were done within the local health authority, a private clinic or university.

Around 70-75% of HAV respondents had carried out pre-exposure assessments and annual assessments for established workers, which are in-line with the current HSE guidance. For noise only 12% and 7% specified the HS frequency for new and established workers in the current guidance (annually and triannually respectively); almost 90% stated the routine HS for noise was carried out more frequently than the current guidance.

About 80% of respondents for both hazards reported feedback from HS was on individual workers. Although there is only a requirement for the OHSP to report ‘fitness for work’ decisions on an individual basis 50-70% of those receiving individual feedback reported that they received both ‘fitness for work’ and information on the severity of impairment. A smaller percentage (approximately 40%) of respondents reported receiving ‘grouped anonymised data’ on HS outcomes. Around 10% seemed to receive no feedback for either grouped or individual workers, this was confined to micro and small firms.

About 60% of respondents stated that they had reviewed their risk assessment as a consequence of feedback from HS; 60% and 40% for HAV and noise respectively stated that they had reduced an individual’s exposure based on HS. While 50% and 22% stated that they had

removed a worker from any further vibration or noise exposure respectively. Overall the responses suggest that the roles of HS towards protecting the individual worker, and as a general part of the control of exposure process, are apparent.

Only about 10% of firms involved in HS admitted not keeping health records, largely within small and micro-enterprises, and especially for noise. In terms of obtaining training and information material for workers, high percentages (roughly 90%) claimed to be involved in this activity and using a wide variety of source material. The importance of websites in providing such material is noted.

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1 INTRODUCTION

Health surveillance (HS) involves putting in place systematic, regular and appropriate procedures to detect early signs of work-related ill-health. It has long been employed where hazards of noise and hand-arm vibration (HAV) are significant and considered useful for risk management. Since 2005, it has been a legal requirement where employees are regularly exposed above specific exposure action levels. It is the employer's responsibility to provide suitable HS for their employees. Guidance has been produced to comply with the Control of Noise/Vibration at Work regulations ^[3, 4]. For HAV these regulations mandate health surveillance for those workers likely to be regularly exposed to vibration in excess of an action exposure level of 2.5 m/s² A(8) and for those workers frequently exposed to noise above the upper action value of 85dB (A) daily or weekly personal noise dose.

It is unclear to what extent dutyholders are complying with current regulations and guidance. A recent small telephone poll of dutyholders in the foundry or heavy fabrication industries showed that of 85 contacts, 23 had vibrating tool use that may be of concern, but that only 4 of these had HS in place, indicating a 17% uptake of health surveillance (personal communication). These results suggested that there may be a lack of uptake of HS. However, it is unclear how representative these data are, as they were mainly focussed in the Yorkshire and North East region, the numbers were small and it was restricted to two industries. One previous publication reported that when they surveyed companies in engineering, utilities and foundries, prior to the 2005 regulations, that HS was not uniformly undertaken ^[5]. A survey conducted in the mid 1990s by the Institute for Employment Studies, which investigated HS in Great Britain for a wide range of hazards, reported that where at least one serious hazard was present, only 29% of the companies had regular HS in place ^[1]. This figure reduced to 20% for companies where noise had been specifically identified as a hazard, and for HAV the equivalent figure was around 5%. Furthermore, this same study highlighted that smaller companies were less likely to provide HS when compared to the larger companies.

More recently, in 2004 a telephone based study was conducted of SMEs (<250 employees) where HAV may be significant. HS was being utilised in 9% of all companies surveyed and in 18% of firms where the questionnaire suggested that exposure may be over the current action level and HS should be applied ^[2]. The industries/jobs involved in this study were building contractors, masons, gardeners/groundsmen. Those firms with fewer than 10 employees (micro enterprises) were shown to have an uptake of HS, about one third of that seen in firms with 10 or more employees.

In addition to concerns raised regarding the uptake of HS there is also concern regarding the quality of HS provided by OHSPs. There is anecdotal evidence that there is often a lack of specialist training of health professionals, lack of policy and protocols and poor provision of feedback to employers. One previous publication, prior to the current regulations, found in a survey of companies involved in engineering, utilities and foundries that HS was not uniformly undertaken ^[5]. Some of these issues have been addressed through the joint Health and Safety Executive (HSE)/Faculty of Occupational Medicine (FOM) initiative in developing a training syllabus and certificated examination for hand-arm vibration syndrome (HAVS) courses. In addition, dutyholders sometimes fail to appreciate the extent of their responsibilities, and/or may purchase HS that is inappropriate for their company.

The studies conducted previously in this area give limited information regarding the current state of HS for HAV and noise. The HSE-funded postal survey ^[1] is almost 15 years old and was conducted before the recent regulations and guidance on both HAV and noise. Importantly it

covered all types of HS in Great Britain, such that noise and especially HAV, were not well represented in the sample. The more recent study was only in SMEs and did not study noise^[2].

The current study presented here aimed to gather representative survey data from a sample of dutyholders in high-risk industries for HAV and noise regarding both the uptake and quality of the HS that they receive.

2 IMPLICATIONS

The levels of uptake of HS presented in this report appear better than data collected in 1995 and similar to that from 2004 for HAV. The size of the firm, rather than industry sector, is important in defining the uptake of HS, with smaller firms having a lower uptake. The results clearly demonstrate and provide further evidence of the specific needs of SMEs in relation to HS for noise and HAV.

Generally the implemented HS, as gauged from the dutyholders' perspective, covers the dual roles of giving feedback on the general control of exposure and of protecting individual workers. A majority of dutyholders undertake some 'competence checking' activity in terms of who provides their health surveillance. A large majority receive some form of feedback from the HS and had taken some action, either towards general exposure or for the individual. Feedback from HS on individual workers (including information on the severity of the condition) is more common than the anonymised group data, but may simply reflect the prevalence of small firms involved with HAV and noise, and where feed-back on an anonymised group basis is impractical. Whilst it is not necessary for individual consent to be obtained to release 'fitness for work' information it would be necessary for the release of other information such as the severity or staging of HAVS. We did not ask whether individual workers had consented to this in the current survey.

There remains a minority where HS is in place without any regard to the competence of the provider and an even smaller minority who appear not to receive any form of feedback that would help their knowledge of how well they are controlling exposure.

These results provide evidence that will be useful for future activity to enable improvements in compliance with the Regulations on provision of appropriate HS for noise and HAV.

3 METHODOLOGY

3.1 OVERVIEW OF METHODOLOGY

This was a cross-sectional study of the uptake and quality of HS using tailored telephone-based questionnaires targeted towards the hazards of HAV and noise. Firms within an agreed number of standard industrial classification codes (SIC) codes, that were expected to have significant HAV or noise hazards, were selected for contact from commercial business databases. Contacts within each SIC code were randomly chosen from a business database, but the number of contacts chosen for each code reflected the relative size of the sector within the UK.

There are issues of potential bias in using a telephone-based questionnaire methodology to study the uptake and quality of health surveillance;

- the methodology relies on the interviewer having found the individual within each firm who has appropriate knowledge of the subject to complete the questionnaire.
- interpreting the meanings of an individual's responses to some questions may introduce some uncertainty.
- employers may wish to present their activities in a favourable light and so provide biased answers.
- there may be some variation between responses depending upon who completed the telephone questionnaire.

To attempt to address some of these potential biases, a maximum number of 8 telephone attempts were allowed for each firm in order to try and ensure that the appropriate person was contacted, but without unduly bothering the firm. A balance between some open and closed questions was used so as not to lead the interviewee to the 'right answer' while attempting not to allow for the introduction of too much uncertainty related to the interviewee's response. An experienced independent company (Harris Interactive) conducted the telephone interviews and each time they contacted a firm they stressed that any information given was anonymous and that their replies would have no repercussions for their company. HSL did not receive any details about the company apart from post-codes and industry sector.

Two criteria were used to estimate the sample size. These criteria were (a) being able to estimate the uptake of HS with a +/-5% uncertainty, assuming an uptake of HS of approximately 15%, and (b) to have forty responses for both noise and HAV that allowed the investigation of the quality of health surveillance.

A pilot study of 250 contacts each for noise and vibration was set-up to establish an estimate of the number of contacts that would be required to achieve the sample size criteria. It also aimed to trial the questionnaire, identify any issues with questions within the questionnaire, and trial the accuracy of SIC categorisation in the business database used to gain the contact information.

Following the pilot study the main phase was carried out without any modification of the questionnaire such that data from the pilot and main phases could be combined.

The study received approval through survey control procedures.

3.2 SELECTION OF APPROPRIATE FIRMS FOR INCLUSION IN THE STUDY

The industry sectors surveyed (Table 1) within the study were selected as high-risk for HAV or noise based upon discussions with interested parties in HSE including the Corporate Medical Unit, Chief Scientists Advisory Group and noise/vibration specialist inspectors. It was decided that the same industry sectors would not be selected for both noise and HAV questionnaires. The industries selected as high risk for HAV were manufacture of fabricated metal, manufacture of machinery, building/repairing ships and boats, manufacture of locomotives and rolling stock, manufacture of aircraft and spacecraft, manufacture of other transport and construction of complete structures. Industries selected as high risk for noise exposure were manufacture of wood and products of wood (not furniture), manufacture of plastic products, manufacture of other articles of concrete, plaster and cement, manufacture of furniture and site preparation within construction. The SIC codes for each of these industries were identified and the relative size of these sectors in the UK derived from a commercial business database (Table 1). Two SIC codes associated with construction (one within the HAV cohort and one within the noise cohort) were to be investigated. Albeit both within the construction division, they cover different activities. SIC 45.2 in the HAV cohort covers the building of complete constructions or parts thereof, including domestic, commercial, bridges, pipelines, roads/motorways, erection of roofs etc. While SIC 45.1 is about site preparation including demolition or wrecking of buildings, earth moving, clearing of site, building site drainage and test bores.

Table 1 Agreed SIC codes to be investigated, their descriptors and relative number of firms in each SIC Code

Agreed SIC Codes	Description	Relative number of firms in each selected SIC code.
HAV		
28	Manufacture of fabricated metal products except machinery	16%
29	Manufacture of machinery	7%
35.1	Building/repairing ships and boats	2%
35.2	Manufacture locomotives and rolling stock	
35.3	Manufacture of aircraft and spacecraft	
35.5	Manufacture of other transport	
45.2	Construction of complete constructions	75%
Noise		
20	Manufacture of wood and products of wood, not furniture	38%
25.2	Manufacture of plastic products	18%
26.66	Manufacture of other articles of concrete, plastic and cement	6%
26.7	Cutting, shaping and finishing of ornamental/building stone	
36.1	Manufacture of furniture	28%
45.1	Construction: site preparation	10%

The pilot study involved the selection of 250 companies falling into agreed SIC codes for HAV and 250 companies for noise using a commercial business database. Sampling was randomised

within each SIC code such that the distribution of firm size should attempt to reflect the UK situation. This sampling strategy was also used for the main phase of the study.

3.3 QUESTIONNAIRES

Individual questionnaires, specific for HAV and noise were developed. The two questionnaires are provided in the appendix to this report. Both questionnaires consisted of three sections. An initial section gained information on the nature of the activity of the company; allowing a check that the SIC coding provided from the business database was correct and fitted the project profile. It also identified the size of the company in terms of number of employees, banded according to standard criteria (a) <10 employees (b) 10-50 employees (c) 50-250 employees and (d) >250 employees.

The second section of each questionnaire asked questions about whether an appropriate risk assessment had been carried out and whether HS was utilised in their company. Descriptions of HS were included to be read to interviewees in order to clarify its meaning. Additionally, in this section there were questions that were devised such that a positive response in any of them would suggest that exposure to noise or HAV was above the level where HS would be appropriate for some or all employees.

For HAV the ‘risk questions’ were:

1. *Do any employees use hand-held hammer action tools or equipment (e.g. hammer drills, power hammers and chisels, road breakers) for more than 15 minutes a day in total?*
2. *Do any employees use hand-held rotary tools or equipment (e.g. hand-held grinders, jig-saws, polishers, stone saws) for more than 1 hour a day in total?*
3. *Do any employees use hand-guided tools (e.g. rollers, vibratory compaction plates) or hand-fed tools (e.g. pedestal grinders, planers) for more than 1 hour a day in total?*

The ‘risk questions’ for noise were:

1. *Do any employees spend more than 1-2 hours a day using noisy tools or machines?*
2. *Do any employees spend time regularly in compulsory hearing protection zones?*
3. *Do any employees work for 45 minutes in an environment where they have to shout to have a conversation when 1 meter apart or 2 hours where they have to shout to have a conversation when 2 meters apart?*
4. *Do you have any employees working where they are exposed to noise above a daily exposure of 85dB?*

Firms were assigned to a ‘higher risk’ category for any positive response to these questions and a ‘lower risk’ categorisation where all responses were negative. However, the sectors were chosen as potentially high risk for HAV/noise and there has been no formal validation of the risk questions in terms of their predictive value in identifying where HS might be necessary for some employees. Therefore those replying negatively to the risk questions should be considered as ‘lower risk’ rather than ‘no risk’. ‘Higher risk’ means a likelihood that the employer has at

least some employees who are regularly exposed above the action value that triggers the requirement to provide health surveillance.

4 RESULTS

4.1 OVERVIEW OF HAV AND NOISE COHORTS

Table 2 shows a breakdown of how the HAV and noise cohorts that went on to complete the questionnaires were derived from the selected initial contacts. Completed responses (to the end of section 2 of the questionnaire) were obtained in 17% of the HAV and 30% of the noise cohort respectively. Both the overall participation and refusal rates for the two questionnaires were similar to those reported in a 2004 telephone study of SMEs ^[2].

Table 2 Major categories of outcome from main study telephone questionnaires

Major categories of outcomes of telephone contacts	HAV	Noise
Number of firms selected for contacting	2218 (100%)	825 (100%)
Exceeded maximum number of calls before reaching appropriate person within firm	322 (15%)	212 (26%)
Number of firms non-qualifying during screening and section 1 of the questionnaire	190 (9%)	84 (10%)
Refused participation prior to or during screening	614 (28%)	227 (28%)
Participation to at least the end of section 2 of the questionnaire.	386 (17%)	246 (30%)

There were 386 (48 from the pilot plus 338 from the main study) respondents for HAV who met the SIC criteria and completed the questionnaire up to section 2; for noise the number of respondents were 246, with 78 from the pilot and 168 from the main study. A breakdown of the two cohorts by SIC coding is shown in Table 3. The larger number of contacts for HAV was due to the lower uptake of HS found in the pilot study and the need to meet the study criteria of forty firms for both HAV and noise with HS in place. Forty HAV firms and forty-two noise firms reported having HS in place and completed the section of the questionnaire that was concerned with the quality of health surveillance.

It can be seen that, as expected, the HAV respondents are dominated by the particular construction activity; this was expected from the distribution shown in Table 1. There is less domination by a single SIC coding within the noise database. Both questionnaire databases contain at least two selected SIC codes where the prevalence of respondents is small (<3% of the total). The proportion of respondents shown in Table 3 closely matches the proportions shown in Table 1.

Fifty-one percent of the HAV firms and 64% of the noise firms were considered to be at ‘higher risk’ by answering affirmatively to one of the risk questions within section 2 of the

questionnaire and therefore considered to have HAV or noise exposures for some, or all, of their workforce that suggested HS was appropriate.

Table 3 A breakdown of respondents by SIC coding for the cohorts

SIC coding	Description	Number of respondents
HAV risk (386 respondents)		
28	Manufacture of fabricated metal products except machinery	85 (22%)
29	Manufacture of machinery	36 (9%)
35.1	Building/repairing ships & boats	5 (1%)
35.2	Manufacture of locomotives & rolling stock	0 (0%)
35.3	Manufacture of aircraft and spacecraft	4 (1%)
35.5	Manufacture of other transport	3 (1%)
45.2	Construction of complete constructions	253 (66%)
Noise risk (246 respondents)		
20	Manufacture of wood and products of wood, not furniture	89 (36%)
25.2	Manufacture of plastic products	54 (22%)
26.66	Manufacture of other articles of concrete, plaster & cement	3 (1%)
26.7	Cutting, shaping and finishing ornamental/building stone	8 (3%)
36.1	Manufacture of furniture	70 (29%)
45.1	Construction: site preparation	22 (9%)

An analysis of the size of respondent firms is shown in Figure 1. It is noticeable that the distribution of firm size is very similar between the two hazards, with micro-enterprises (<10 employees) predominating. Firms had been chosen randomly from within the appropriate SIC codes. Some caution needs to be applied in accepting that the size distribution is accurate as there may be conflicting potential biases such as:

- the difficulty in finding the appropriate person to answer the questionnaire in large firms leading to their loss by exceeding the maximum number of telephone contacts,
- the pressure in small companies in finding time to participate in such questionnaires.

Our data on the distribution of firm size is largely in line with that reported in the 2004 study on the implications of the Physical Agents Directive for SMEs [2], where their sample included 63% in micro-enterprises (<10), 22% in small firms (10-50 employees) and 15% in medium sized firms (50-250 employees).

For the HAV cohort, there was no statistically significant difference in the distribution of firm sizes between the various SIC codes (p=0.06). For noise there was a significant difference (p=0.003) due to over representation of medium sized companies (50-250 employees) in noise firms associated with the manufacture of plastic products in comparison with the other SIC codes.

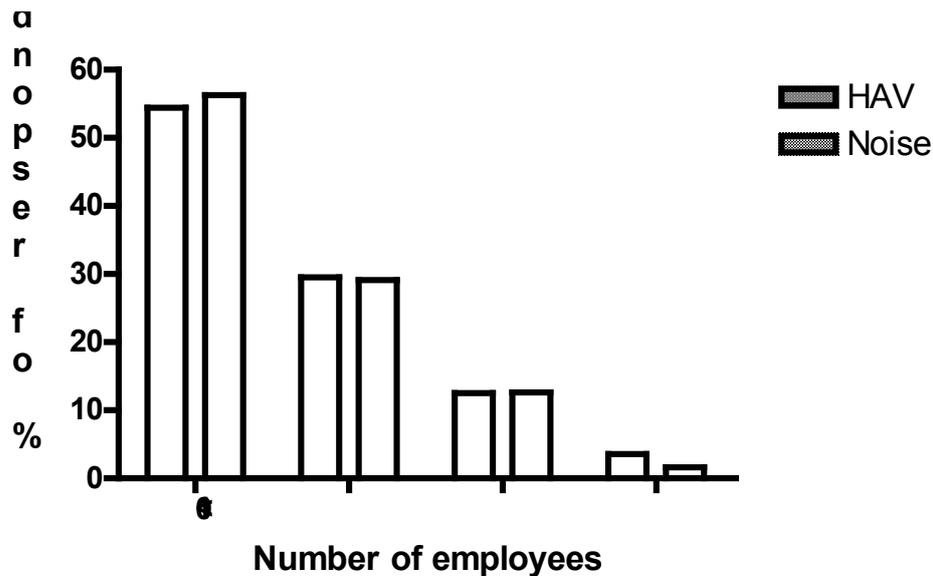


Figure 1 Breakdown of noise and HAV cohorts by firm size

Key points on the sample in the survey:

- The proportion of respondents in each SIC code was representative of the UK distribution of these industries.
- The sample was dominated by SME's with 50% of firms being micro-enterprises (less than 10 employees) and 30% in small firms (10-50 employees).

4.2 RISK ASSESSMENT

Sixty-six percent and 74% of the HAV and noise respondents respectively reported that their company had conducted a risk assessment. A breakdown of these figures by SIC coding is shown in Table 4. Excluding those SIC codes where low numbers are present, the figures are consistently greater than 60%, except for SIC 28 (Manufacture of fabricated metal products except machinery) where the positive response rate was only 54% and significantly lower than SIC 45.2 (Construction of complete constructions).

Table 4 Percentage of both cohorts who had reported completing a risk assessment, broken down by SIC coding

SIC coding	Description	% respondents completed a risk assessment
HAV risk (386 respondents)		
28	Manufacture of fabricated metal products except machinery	54% #
29	Manufacture of machinery	61%
35.1	Building/repairing ships & boats	80% **
35.2	Manufacture of locomotives & rolling stock	-
35.3	Manufacture of aircraft and spacecraft	75% **
35.5	Manufacture of other transport	66% **
45.2	Construction of complete constructions	70% #
Noise risk (246 respondents)		
20	Manufacture of wood and products of wood, not furniture	76%
25.2	Manufacture of plastic products	76%
26.66	Manufacture of other articles of concrete, plaster & cement	100% **
26.7	Cutting, shaping and finishing ornamental/building stone	75% **
36.1	Manufacture of furniture	71%
45.1	Construction: site preparation	73%

** involves very low number of responses and therefore not a representative figure. # indicates a statistically significant difference in completion of risk assessments between SIC 28 and 45.2 at the p=0.012 level.

Further statistical analyses showed that the size of the firm, and being categorised as ‘higher risk’, were significant influences on the prevalence of a risk assessment in the HAV firms, with larger firm size (p=0.0001) and ‘higher risk’ status (p=0.0012) being associated with an increase in the likelihood of a risk assessment having been undertaken. For the noise cohort, only firm size was significant (p<0.0001), with larger firm size being associated with an increased likelihood of a risk assessment having been conducted.

Figure 2 shows a breakdown of firms that have undertaken a risk assessment by size. It is apparent that it is within micro-enterprises that there is a significant decrease in undertaking risk assessments in comparison with small, medium and large enterprises, even though the requirement for such a risk assessment applies across firms of all sizes.

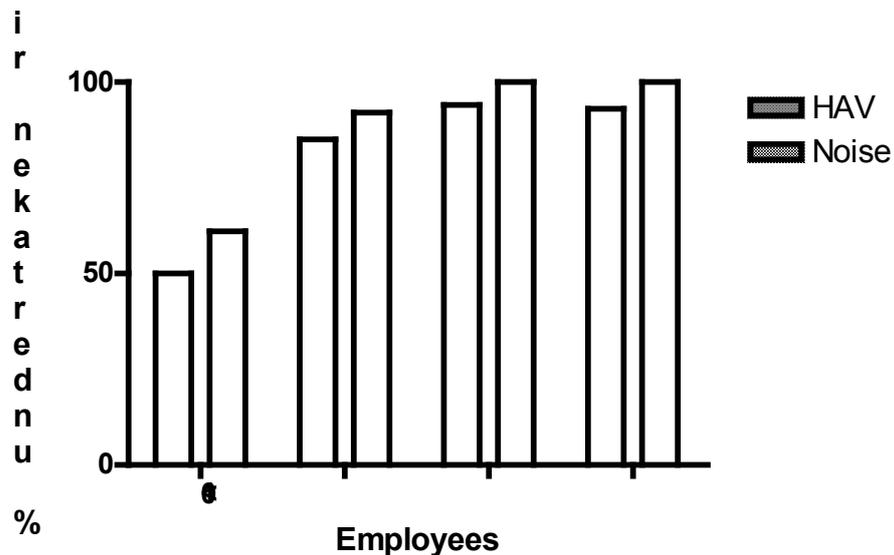


Figure 2 Breakdown of firms by size that have undertaken a risk assessment

Key points on risk assessment:

- A large proportion (66% and 74% for HAV and noise respectively) of firms reported that they had conducted a risk assessment.
- Large firms and those in the ‘higher risk’ category were more likely to have performed a risk assessment.

4.3 UPTAKE OF HEALTH SURVEILLANCE

The mean uptake of HS for vibration exposure was 10% in all the respondents to the HAV questionnaire. A further 2% were unclear whether it was in place. Similar analysis within the noise cohort suggested 17% having HS for noise in place with <1% unclear whether it was in place.

There was a strong relationship between HS being in place and being in the ‘higher risk’ category for HAV (Chi-square=24.8; $p < 0.0001$) and noise (Chi-square=20.19; $p < 0.0001$). These results may substantiate the use of such questions as simple indicators on the need for HS with these two hazards.

Thus within the 'higher risk' category the mean uptake of HS was 18% (95th percentile confidence interval 13-24%) for HAV and for noise was 25% (95th percentile confidence interval 19-32%).

- These figures are marginally better for noise in comparison with Honey's study ^[1] in 1995.
- For HAV substantially better than the 5% estimate, albeit on a very small sample in Honey's study ^[1].
- Similar to the figure quoted for SMEs in 2004 ^[2] that was based on a sample of approximately 50 firms with exposure to HAV (largely construction industry related) considered to need HS under current regulations from reported vibrating tool usage.

In a logistic regression using firm size and risk category to explain the presence of HS or not in the HAV cohort, both larger firm size and being in the 'higher risk' category were significant ($p < 0.0001$) explanatory variables. For the noise cohort a similar logistic regression showed that firm size was a far more significant explanatory variable ($p < 0.0001$) than being in the higher risk category ($p = 0.018$).

Table 5 shows a breakdown of the uptake of HS by SIC coding for the HAV and noise cohorts and those in the 'higher risk' categories. The mean uptake of HS for HAV in the overall cohort and 'higher risk' subgroup (10% and 18% respectively) appears strongly influenced by the low uptake in the construction activity group, which represents more than 50% of the HAV firms studied. Other industrial activities suggest HAVS HS uptakes in the order of 35%, excluding those SIC codes representing sectors with low numbers of firms. Uptake of HS for noise in the 'higher risk' category varied between 17% and 38% depending on SIC coding.

Logistic regressions were carried out within both the HAV and noise cohorts to explore whether size of firm or being in a particular SIC code influenced the uptake of health surveillance. Within the HAV cohort, the SIC code did not significantly influence the odds of HS being in place ($p = 0.211$), even when adjusted for firm size ($p = 0.66$). The large number of firms represented by SIC code 45.2 and the relatively few firms in other SIC codes precluded investigating whether there is an interaction between firm size and SIC code. For noise, no statistically significant difference was found between the SIC codes in the uptake of HS for noise, with or without adjusting for firm size ($p = 0.331$ and 0.083 respectively), and no interaction between firm size and SIC code ($p = 0.4$) was found. For both HAV and noise the odds ratio for trend by firm size were highly significant and similar (odds ratio 5.55; CI 3.18-9.69, $p < 0.001$), even after adjusting for SIC code. These analyses highlight the importance of firm size as a key factor in the uptake of health surveillance.

Table 5 Percentage of cohorts employing health surveillance broken down by SIC coding. Data is shown for all respondents and those in the 'higher risk category'

SIC coding	Description	% respondents within SIC code using health surveillance	% respondents in 'higher risk' category within SIC code using health surveillance
HAV risk (386 respondents)			
28	Manufacture of fabricated metal products except machinery	11%	35% ##
29	Manufacture of machinery	17%	36% #
35.1	Building/repairing ships & boats	20% **	33% **
35.2	Manufacture of locomotives & rolling stock	-	-
35.3	Manufacture of aircraft and spacecraft	25% **	50% **
35.5	Manufacture of other transport	33% **	0% **
45.2	Construction of complete constructions	9%	13%
-	Overall uptake of health surveillance	10%	18%
Noise risk (246 respondents)			
20	Manufacture of wood and products of wood, not furniture	11%	17%
25.2	Manufacture of plastic products	24%	38%
26.66	Manufacture of other articles of concrete, plaster & cement	0% **	-
26.7	Cutting, shaping and finishing ornamental/building stone	0% **	0% **
36.1	Manufacture of furniture	17%	23%
45.1	Construction: site preparation	32%	38%
-	Overall uptake of health surveillance	18%	25%

** involves very low number of responses and therefore not representative figure. # and ## suggest significant difference between indicated SIC code and SIC 45.2 at $p < 0.05$ and $p < 0.01$ levels respectively.

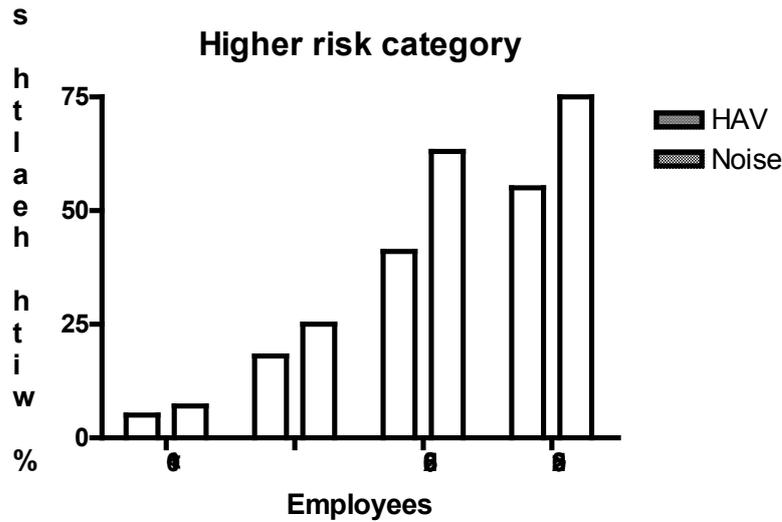


Figure 3 Percentage uptake of health surveillance within micro, small, medium and large enterprises that were characterised as 'higher risk'

It is known that the uptake of HS is poorer in smaller companies [2]. Figure 3 demonstrates this for the 'higher risk' firms within the noise and HAV cohorts. There is a clear reduction in the uptake of HS in the small and micro enterprises. The relationship between firm size and uptake of HS is similar between the two hazards, although uptake appears somewhat higher for noise in all size categories. There was a 5 to 7 fold difference in the reported uptake of HS between micro-enterprises and large employers. The relative disparity in uptake for HAV exposure between micro, small and medium enterprises appears to be even greater than that reported by Mitchell [2] in 2004.

Key points on uptake of health surveillance:

- The mean uptake of health surveillance in the 'higher risk' group was 18% for HAV and 25% for noise.
- The proportion of firms with health surveillance was highly dependent upon the size of the firm, with the smaller firms having a lower uptake than the larger firms.

4.4 QUALITY OF HEALTH SURVEILLANCE

Forty firms in the HAV cohort and 42 firms in the noise cohort replied that they had HS in place. Figure 4 suggests that the distribution of firms undertaking HS by SIC codes is similar to the distribution of firms across the cohort.

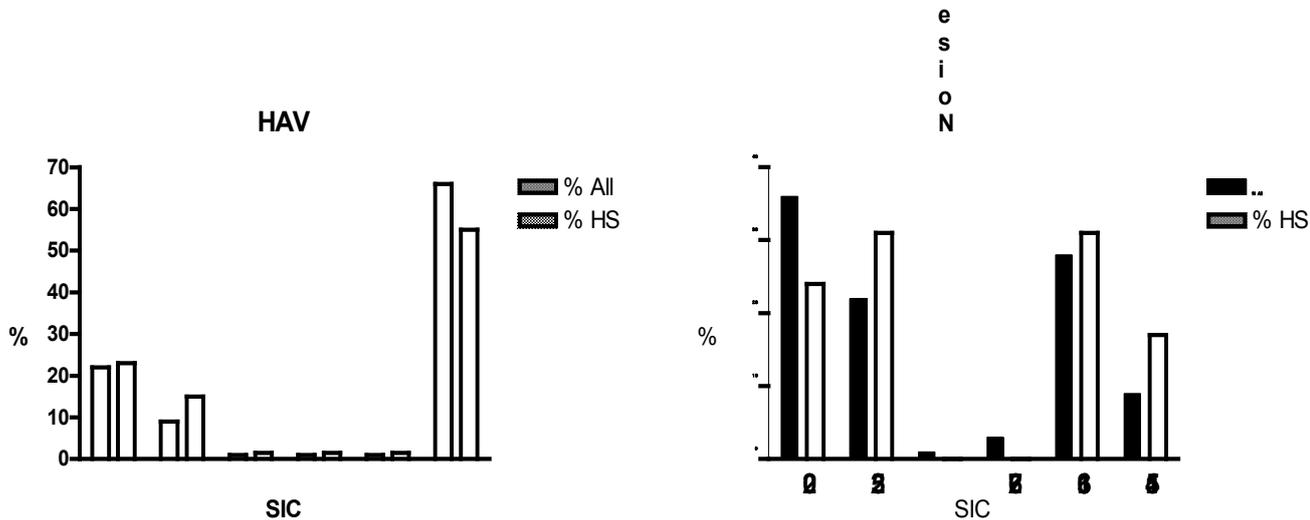


Figure 4 A breakdown by SIC coding for the complete HAV and noise cohorts and those with health surveillance in place

4.4.1 Guidance used for health surveillance

Ninety and 86% of the HAV and noise cohorts respectively that had HS in place, reported using HSE guidance in helping run their current health surveillance.

In response to an open question about what guidance they use, the following responses were received:-

For the HAV cohort: 31% mentioned the HSE website, 14% mentioned guidance/legislation, 11% mentioned HSE's booklets/pamphlets and 3% mentioned phoning HSE. Twenty five percent implied that consultants or external advisors handled everything. No reply specifically mentioned the current guidance (L140)^[3] or the earlier guidance, HSG88^[6].

For the noise cohort: 26% replied to using the HSE website and 26% HSE guidance, 30% implied that consultants or external advisors handled everything. Small percentages (4%) replied to using HSE booklets, including the superseded MS26 (Guide to audiometric testing) and also guidance from HILTI. No reply specifically mentioned the current guidance for HS for noise (L108)^[4].

However, it must be borne in mind that the interviewee might not be immediately involved in delivering HS and so may not be familiar with exactly the nature of the guidance being used.

4.4.2 Reporting of who is involved in health surveillance and how competence is ensured

Eighty-three and 90% reported that they have formal procedures for managing workers exposed to HAV and noise respectively.

Table 6 shows a breakdown of those professionals the respondents thought were involved in their health surveillance. Both cohorts showed the prominent role, in the view of the dutyholder, played by the occupational health nurse within HS processes. For noise the role of audiometry, and the audiologist is apparent.

Specifically related to HAV HS 68% reported that the OHSP had been provided with a copy of their risk assessment and 60% reported that a copy of procedures for managing exposed workers had been similarly provided. There was a high level of agreement between these two questions ($p < 0.0001$). A similar percentage (65%) reported that the OHSP had visited their company to see what their employees do and the type of HAV exposure. Kinoulty ^[7] had reported in her 2004/4 study that site visits were not routine as firms would not pay for this service. There was a high level of agreement between these three questions ($p < 0.0001$).

Slightly lower figures were reported for the noise HS group; with 55% and 57% providing their risk assessment and procedures for managing exposed workers respectively to either an occupational health professional or audiologist. Sixty percent of the firms reported that the occupational health professionals or audiologist had visited the workplace to look at what the employees did and their exposure to noise. While there was a significant association ($p < 0.001$) between occupational health professionals having been supplied with a copy of firms' risk assessment and procedures for managing workers exposed to noise, there was no association ($p > 0.05$) between occupational health professionals having visited the firms to see what was done and whether they had received a risk assessment or policy.

Table 6 The professional parties reported to be involved within health surveillance

Professional involved in health surveillance	HAV	Noise
Occupational health doctor	38%	26%
GP	8%	19%
Occupational health nurse	60%	48%
Occupational health technician	15%	19%
Responsible person	48%	-
Don't know	0%	14%
Other	8%	0%
Audiologist/audiometrician	-	40%

A majority of respondents (63%) from the HAV cohort affirmed that they had checked that suitably qualified doctors and nurses were involved in their health surveillance. However, when asked in an open question about the exact mechanism they used to ensure that they were suitably qualified, there was a wide variety of responses, many of which would not necessarily identify if someone were suitably qualified. While no-one specifically mentioned an FOM certificate from one of the current HAVS training courses, just over half suggested that they took an active role, by asking for certificates and /or curriculum vitae of those that would undertake the health surveillance, or attempting to enquire about competence from third party sources. Twelve percent of responses suggested reliance was on using a 'reputable' company. One response was;

'came from the hospital 200 yards away'

Seventy-four percent from the noise cohort with HS in place stated that they had checked that the audiometry was being conducted by someone with appropriate training, while 14% stated that they did not check and 9% did not know. Of those who claimed to have checked that hearing tests were being done by a suitably qualified person, there was a wide variety of answers. Fourteen percent seemed to simply state that they used a 'bona-fide' or reputable company, 5% handed the task to outside consultants; while 12% had used recommendations from other firms or from trade bodies. Seven percent suggested that competence was implicit because hearing tests were being done by the local health authority, a private clinic or someone from a university. Twelve percent appeared to have been more proactive, either through asking to see appropriate certification, or qualifications, checking the providers procedures or having specifically attended a training course to become aware of what is necessary to undertake health surveillance. Some of the other comments suggest a much less rigorous approach;

'my wife works for doctors, so I asked her to recommend someone'

or even someone who appeared uncommitted to hearing tests;

'I don't feel it as employees (sic employers) duty to mass screen. Some employees do object'

There was no evidence that firm size was a factor amongst those HAV and noise respondents that stated they had not checked competency.

4.4.3 Frequency of health surveillance

Interestingly, only 75% of HAV respondents stated that new workers who would be under health surveillance, would have an initial assessment prior to exposure. Seventy percent of the HAV cohort with HS in place reported carrying out annual assessments, which is in line with the current guidance^[3]. While 10% reported having more frequent HS at 6 monthly intervals, 5% with 2 yearly frequency and 15% suggesting that the frequency was variable.

For the noise HS group, only 12% noted that HS was carried out annually for the first two years of employment and 7% stated it was usually performed every 3 years. These frequencies of HS are those recommended in current HSE guidance Controlling Noise at Work^[4], unless abnormality in hearing has been found or risk of hearing damage is high. A substantial majority replied that their noise HS was carried out annually (69%); while 21% replied that it was more frequent than annually and dependent on results. These responses may suggest that;

- many firms who had workers with hearing loss, or high risk thereof, had considered requiring more frequent assessment than current guidance or,
- that HS is generally carried out at a greater frequency than suggested in guidance or,
- that ‘new workers’ annual frequency of HS has tended to be carried on and become the norm for subsequent years.

The noise questionnaire did not ask about any pre-exposure health surveillance.

4.4.4 Feedback from health surveillance and any subsequent actions

Eighty percent of the HAV respondents stated that they had received some form of feedback on individual workers after health surveillance, with 10% stating that they did not and 10% were unsure. Of those that did receive feedback; 27% were only fitness for work with vibration information, 3% received only the worker’s grade of HAVS and 70% reported getting both HAV grading and fitness to work information. Fifty nine percent reported receiving recommendations on the possible restriction of use of vibrating tools; 56% stated that the feedback included any need for a specialist medical referral. Two replies added that they received feedback on the general fitness to work and any other physical conditions.

For noise 81% of respondents stated they received feedback on individual workers; 14% stated they did not and 5% were unsure. Of those receiving feedback, 26% reported receiving information on fitness for work with noise, 35% received information on individual workers’ audiometric category and 50% received both fitness to work and audiometry grading. Forty-one percent stated that they received other feedback about the need for further medical referral or other health issues.

Of those respondents in either the HAV or noise cohorts who stated that they did not receive any feedback on individual workers (around 20%) all were within micro or small firms. The size related trend in failing to receive this feedback was statistically significant (HAV trend $p=0.0014$ and $p=0.013$, noise). This lack of feedback is concerning as HS is unlikely to be of any value if the firm is not given information upon which it can act. This may suggest a lack of understanding of the role in risk management of HS as opposed to simply putting this in place as a regulatory imposition.

Only 43% of HAV respondents stated that they received feedback on groups of workers following health surveillance, while 37% stated they did not and 20% were unsure. Again similar percentages were found within the noise group undertaking health surveillance; being 38%, 36% and 26% respectively for receiving group feedback, not receiving feedback and unsure.

Interestingly, 8% and 10% of HAV and noise respondents respectively stated that they received neither feedback on individuals nor grouped data. For both hazards this situation was apparent in predominantly micro-firms, together with a few small firms. It is difficult to think of what value HS is to a firm without any feedback, and seems to suggest a lack of understanding of the rationale for HS as opposed to simply putting it in place as a regulatory imposition.

While there may have been some uncertainty in responses, it appears that generally firms are more likely to receive feedback, including the severity of HAV or noise impairment, on individual workers rather than on a grouped basis. Whilst individual consent is not necessary for the disclosure of ‘fitness for work’ decisions, it is necessary for the reporting of individual

information related to the severity of HAV or noise impairment. The questionnaire did not ask whether consent was obtained from individual workers for disclosure of their HS to their employer. In small and micro firms grouped anonymised feedback may not be possible as the number of individuals involved may be so small that anonymity of results is impossible. While Williams^[5] had identified ethical issues about medical-in-confidence with HAV HS and poor feedback to employers on fitness to work, this study suggests that fitness to work feedback is better, but did not address the ethical concerns about whether workers had consented to their HS data being supplied to their employer.

Sixty-three percent of HAV respondents and 58% of noise respondents stated that they had reviewed their risk assessment towards further control or reduction of noise/vibration exposure, with a similar percentage stating that they had reduced vibration exposure for an individual worker and a lower percentage of 39% reducing noise exposure for an individual worker. While 52% reported having to remove a worker from further vibration exposure, 22% claimed to have removed an individual from any further noise exposure. The latter figure is surprising as HSE considers it only to be necessary in extreme circumstances. It was significantly more prevalent in small and micro firms rather than large organisations. Only twenty percent reported not having to take any action on feedback from HAV or noise health surveillance.

Significant associations were apparent between the actions of reviewing the appropriate risk assessment and reducing HAV or noise exposure to an individual or individuals for both hazards (Chi square for HAVS = 104.4, $p < 0.0001$; Chi-square for noise = 14.9, $p < 0.001$). These associations seem consistent with HS prompting, where necessary, a review of control measures that may lead to a reduction in exposure for an individual, or more generally.

While it is not possible from this survey data to investigate whether the actions taken in response to HS outcomes were appropriate, these data suggest that HS for noise and HAV was associated with actions to protect the individual worker and influence control of exposure in 63% and 58% of cases (HAV and noise respectively). However, clearly in an appreciable proportion (37% and 42% for HAV and noise respectively) no action was reported to have been taken. Unfortunately, from this survey it is not possible to say whether the action was appropriate in light of the results from HS.

4.4.5 Record keeping, information and training for employees

While 85% of HAV respondents stated that they kept health records containing the outcomes of health surveillance, 13% stated that they did not and 2% did not know. Similar percentages were obtained for the noise respondents (90%, 7% and 3% respectively). These data suggest that only a small minority may still not be complying with the requirement to keep health records. While there is the possibility of misunderstanding of the meaning of 'health record', it was reiterated to the interviewee that the question was about 'keeping records for each employee on the outcome of their health surveillance'. It is interesting that in both cohorts definitive 'no' responses were greater than 'don't know'. While all the apparent non-compliances for noise were within small and micro-enterprises, for HAV a large minority of non-compliances concerning health record keeping was found in the largest sized firms.

Only 13% of HAV respondents stated that their HS programme had been influenced by a visit from an HSE inspector; 82% replied negatively and 5% did not know. Almost identical percentages were found in the noise HS group. While at first appearances the percentage influenced by an HSE inspectorial visit appears small, it does show that in a random sample of firms within these sectors there has been some influence on health surveillance, which

historically may not have been a central consideration of such inspectorial visits. Unfortunately we do not have information on how many firms had recently had a visit from an HSE inspector.

Eighty-eight percent of HAV respondents stated that their company supplies workers with information, instruction and training about issues related to vibration and 10% stated that they did not carry out such activities. The corresponding percentages for the noise cohort were 93% supplied information and training and 5% did not. Sources for information and training material appear wide (Table 7); the use of websites is significant for both noise and HAV in comparison with written HSE material. Direct contact with HSE (included within HSE (not defined)) for initial help was also noted, particularly for noise.

Table 7 A breakdown of reported sources of training information

Source of training information	HAV	Noise
HSE (not defined)	10%	27%
HSE leaflets	8%	4%
HSE guidance	3%	4%
Websites (including HSE)	28%	23%
In-house H&S, Personal experience	13%	31%
Outside companies, consultants	18%	27%
Toolbox talks	13%	0%
Seminars, courses	10%	4%
Trade bodies	3%	8%
Tool manufacturers/ hirers	13%	0%

Key points on quality of health surveillance:

- More than 80% of respondents reported having formal procedures in place for managing exposed workers.
- Frequency of health surveillance for HAVS was generally in-line with current HSE guidance. For noise many companies performed more frequent health surveillance than is required by HSE guidance.
- Only about 50% for HAVS employers and 12% for noise employers were proactive in checking whether the Occupational Health Professional involved in their health surveillance was suitably qualified.
- The majority of employers reported receiving feedback from health surveillance.
- Around 10% of firms for both hazards stated they did not keep health records or undertake training or supply information about the risks to their workers

5 REFERENCES

1. Honey, S., et al., *Health surveillance in Great Britain. CRR 12. HSE Books. 1996.*
2. Mitchell, R., K. Garner, and S. Vaghela, *Implications of the Physical Agents (Vibration) Directive for SMEs. RR 267. HSE Books. 2004.*
3. Health and Safety Executive, *Guidance on regulations: Hand -arm vibration. The control of vibration at work regulations. L140. HSE Books. 2005.*
4. Health and Safety Executive, *Guidance on regulations: Controlling noise at work: The control of noise at work regulations. Second edition ed. L108. HSE Books. 2005.*
5. Williams, N. and M. Taylor, *How a sample of businesses in the West Midlands (UK) are currently managing vibration exposure. Occupational Medicine. 51(1): p. 36-8. 2001.*
6. *Hand-arm vibration. HS(G)88. HSE Books. 1994.*
7. Kinoulty, M., *Delivery of health surveillance for hand-arm vibration in the West Midlands. Occupational Medicine. 56(1): p. 61-2. 2006.*

APPENDICES

Please see attached files for two appendices.

N° : _____

Noise Questionnaire

Initial contact

"I'm phoning on behalf of the Health and Safety Laboratory, can I speak to the person with day-to-day responsibility for health and safety in your company"

Once the appropriate person is on the phone

Are you the person responsible for the day-to-day compliance with health and safety legislation for your organisation/site?

Yes No

If YES, continue below. If NO, try to find out the contact details of the person with this responsibility.

"I'm calling to see if you can help us with a telephone survey that the Health and Safety Laboratory are running for the Health and Safety Executive. The HSE is trying to get a national picture on both the uptake and the quality of health surveillance for noise. The questionnaire will take no longer than 15 minutes of your time. Largely the questions either involve yes/no/don't know answer choices from a list of alternatives that will be read out to you."

"All of the information is anonymous and there will be no repercussions for your company. We just want accurate information."

Would you be happy to answer the following questions?

Yes No

If YES, continue with the questions in Section 1.

If NO, thank them for their time and end the call.

Noise Questionnaire

SECTION 1

1. What is the main business of your company?

2. Roughly how many people does your company employ?

Less than 10 less than 50 less than 250 more than 250

3. Is your company involved in any of the following activities?

3(a). Manufacture of articles of concrete, plaster and cement?

Yes* No

If yes, what?

3(b). Cutting, shaping and finishing of ornamental and building stone?

Yes* No

If yes, what?

3(c). Manufacture of wood and wood products?

Yes* No

3(d). Manufacture of furniture?

Yes* No

3(e). Manufacture of plastic products?

Yes* No

3(f). Site preparation in construction?

Yes* No

If the respondent answers 'NO TO ALL' of the options in question 3 then DO NOT PROCEED with the questionnaire. Thank the respondent for their time and tell them that they do not fit into the categories of interest for the project.

* If they answer 'YES' to ANY of the options in question 3 then PROCEED to Section 2.

Noise Questionnaire

SECTION 2

4. Has your company conducted a risk assessment for noise exposure?

- Yes No Don't know

"The following four questions are about the noise levels that your employees are exposed to."

5. Do any employees spend more than 1-2 hours a day using noisy tools or machines?

- Yes No Don't know

6. Do any employees spend time regularly in compulsory hearing protection zones?

- Yes No Don't know

7. Do any employees work for 45 minutes in an environment where they have to shout to have a conversation when 1 meter apart, or 2 hours where they have to shout to have a conversation when 2 metres apart?

- Yes No Don't know

8. Do you have any employees working where they are exposed to noise above a daily exposure of 85dB?

- Yes No Don't know

Please use the following description to describe health surveillance to the respondent:

Health surveillance for noise involves hearing tests for employees to detect the early signs of noise-induced hearing loss.

9. Do any employees have health surveillance because of exposure to noise?

- Yes (continue with next section)
 No (Thank and close)
 Don't know (Thank and close)

Noise Questionnaire

SECTION 3

"This survey is only concerned with health surveillance for noise. The following questions relate to the health surveillance for noise conducted in your company and the occupational health provider who provides this for you. (The occupational health provider may be in-house company doctors and nurses, not just those externally contracted.)"

10. Do you use HSE guidance to help you in running your current health surveillance for noise?

Yes
 No
 Don't know

If yes, what guidance do you use?

11. Does your company have procedures for managing workers exposed to noise?

Yes
 No
 Don't know

"For the next question I am going to read through a series of possible options, please answer YES or NO to each choice, you can answer YES to more than one option."

12(a). Which of the following people in this list are, or maybe, involved in carrying out your health surveillance for you? You may answer YES to more than one option.

Occupational Health Doctor?*
 GP?
 Occupational Health Nurse?*
 Occupational Health Technician* (not a doctor or nurse)?
 Audiologist/Audiometrician?*
 Don't know?
 Other

If other, please specify

If respondent gives any of the * answers above then continue with questions 12(b), (c) and (d). If not GO To question 13.

12(b). Have these people been provided with a copy of your noise risk assessment?

Yes
 No
 Not applicable

12(c). Have these people been provided with a copy of your procedures for managing workers exposed to noise?

Yes
 No
 Not applicable

12 (d). Have these people visited your company to see what your employees do and what their exposure to noise is?

Yes
 No
 Don't know

'ASK ALL'

13. Did you check that hearing tests (audiometry) are being done by someone with appropriate training?

Yes
 No
 Don't know
 Not applicable

If yes, how?

Noise Questionnaire

14. How often is the routine health surveillance for workers exposed to noise carried out? You may choose more than one option from the following list.

- Annually for the first two years of employment
- 3 yearly
- annually
- more frequently than annually and dependent on results
- other

If other, please specify

15. Do you receive feedback on individual workers following completion of health surveillance?

- Yes No Don't know

If yes, what information is included from the following options? You may answer YES to more than one option

- Fitness for work with noise information only
- Audiometric category only
- Both fitness for work information and audiometric category
- Any other information, including the need for medical referral

16. Do you receive feedback for groups of workers following the completion of health surveillance?

- Yes No Don't know

17. What actions have you taken, having had feedback from health surveillance? You may answer YES to more than one option.

- To review your noise risk assessment to further control or reduce exposure?
- To reduce exposure to noise for an individual worker?
- To remove individual from exposure (if necessary in extreme cases)?
- None?
- Other?

If other, please specify

18. Do you know if employees receive advice about the effects of noise on their hearing and the correct use of hearing protection from the person undertaking the health surveillance for you?

- Yes No Don't know

19. Do you keep records for each employee which contain the outcome of their health surveillance? (Prompt they may know these as health records)

- Yes No Don't know

20. Has your health surveillance programme been influenced by a visit from a HSE inspector?

- Yes No Don't know

21. Does your company give workers information, instruction and training about the issues surrounding work with exposure to noise?

- Yes No Don't know

If yes, where did you get the training information from?

"Thank you very much for sparing the time to help us with this work"

Noise Questionnaire

INTERVIEWER DECLARATION: This questionnaire has been completed in accordance with the MRS Code of Conduct and with the instructions supplied.

Name:

Signature:

Date of Interview:

Time:

N° : _____

Hand-arm vibration questionnaire

Initial contact

"I'm phoning on behalf of the Health and Safety Laboratory, can I speak to the person with day-to-day responsibility for health and safety in your company"

Once the appropriate person is on the phone

Are you the person responsible for the day-to-day compliance with health and safety legislation for your organisation/site?

Yes No

If YES, continue below. If NO, try to find out the contact details of the person with this responsibility.

"I'm calling to see if you can help us with a telephone survey that the Health and Safety Laboratory are running for the Health and Safety Executive. The HSE is trying to get a national picture on both the uptake and the quality of health surveillance for industries using vibrating tools. The questionnaire will take no longer than 15 minutes of your time. Largely the questions either involve yes/no/don't know answer choices from a list of alternatives that will be read out to you."

"All of the information is anonymous and there will be no repercussions for your company. We just want accurate information."

Would you be happy to answer the following questions?

Yes No

If YES, continue with the questions in Section 1.

If NO, thank them for their time and end the call.

Hand-arm vibration questionnaire

SECTION 1

1. What is the main business of your company?

2. Roughly how many people does your company employ?

- Less than 10
 less than 50
 less than 250
 more than 250

3. Does your company do any of the following?

3(a). Manufacture of fabricated metal products?

- Yes*
 No

If yes, what sort of products?

3(b). Manufacture of machinery and equipment?

- Yes*
 No

If yes, what sort of things?

3(c). Building and repairing of ships and boats?

- Yes*
 No

3(d). Manufacture of rolling stock or locomotives for railways or trams?

- Yes*
 No

3(e). Manufacture of aircraft, spacecraft or parts for them?

- Yes*
 No

3(f). Manufacture of other transport equipment?

- Yes*
 No

If yes, what?

3(g). Building of complete constructions (building of domestic or commercial buildings, the erection of roof covering and frames, roads or other civil engineering constructions? water projects)

- Yes*
 No

If the respondent answers 'NO TO ALL' of the options in question 3 then **DO NOT PROCEED** with the questionnaire. Thank the respondent for their time and tell them that they do not fit into the categories of interest for the project.

* If they answer 'YES TO ANY' of the options in question 3 then **PROCEED** to Section 2.

Hand-arm vibration questionnaire

SECTION 2

4. Has your company conducted a risk assessment for hand arm vibration(HAV) exposure?

Yes No Don't know

"The following three questions are about the power tools that your employees may use"

5. Do any employees use hand-held hammer action tools or equipment (e.g. hammer drills, power hammers and chisels, road breakers) for more than 15 minutes a day in total?

Yes No Don't know

6. Do any employees use hand-held rotary tools or equipment (e.g. hand-held grinders, jigsaws, polishers, stone saws) for more than 1 hour/day in total?

Yes No Don't know

7. Do any employees use hand-guided tools (e.g. rollers, vibratory compaction plates) or hand-fed tools (e.g. pedestal grinders, planers) for more than 1 hour/day in total?

Yes No Don't know

Please use the following description to describe health surveillance to the repondent:

Health surveillance means that you have a nurse and/or doctor involved in helping you to ensure that employees do not have any symptoms from using vibrating tools, or that those with vibration-associated problems are not getting worse.

8. Do any employees have health surveillance because of exposure to vibration?

Yes (continue to next section)

No (Thank and close)

Don't know (Thank and close)

Hand-arm vibration questionnaire

16. How often does your occupational health provider carry out routine screening or assessments for your workers exposed to hand-arm vibration?

- 6 monthly
 annually
 2 yearly
 yearly
 other

17. Do you receive feedback on individual workers following completion of health surveillance from your occupational health provider?

- Yes No Don't know

If yes, what information is included from the following options? You may answer YES to more than one option

- Fitness for work with vibration information only
 Hand-arm vibration syndrome grading only
 Both fitness for work information and hand-arm vibration syndrome grading
 Recommendations on possible restrictions on use of vibrating tools
 Recommendation for the need for specialist medical referral
 Other information

If other information provided, then what?

18. Do you receive feedback for groups of workers following the completion of health surveillance?

- Yes No Don't know

19. What actions have you taken, having had feedback from health surveillance? You may answer YES to more than one option.

- To review your vibration risk assessment to further control or reduce exposure?
 To reduce vibration exposure for an individual?
 To remove individual from exposure to vibration, if necessary?
 None?
 Other?

If other, please specify

20. Do you keep records for each employee which contain the outcome of their health surveillance? (Prompt they may know these as health records)

- Yes No Don't know

21. Has your health surveillance programme been influenced by a visit from a HSE inspector?

- Yes No Don't know

22. Does your company give workers information, instruction and training about the issues surrounding work with hand-arm vibration?

- Yes No Don't know

If yes, where did you get the training information from?

"Thank you very much for sparing the time to help us with this work"

N° : _____

Hand-arm vibration questionnaire

INTERVIEWER DECLARATION: This questionnaire has been completed in accordance with the MRS Code of Conduct and with the instructions supplied.

Name:

Signature:

Date of Interview:

Time:

Uptake and quality of health surveillance for hand-arm vibration and noise exposure

A telephone based survey among dutyholders

Health surveillance (HS) is the systematic supervision of workers looking for early signs of work-related ill health in employees exposed to certain hazards. Health surveillance for hand-arm vibration (HAV) is largely based on the collecting of appropriate symptoms in individual workers, while quantitative pure-tone audiometry is a large element of HS activity for noise.

This report details a telephone-based questionnaire study on the uptake and quality of HS for the hazards of noise and HAV. The study was undertaken during 2009-2010 and was centred on an agreed number of industry sectors, where the risks from such hazards are generally considered to be high. A total of 632 companies were involved.

The levels of uptake of HS presented in this report appear better than data collected in 1995 and similar to that from 2004 for HAV. The size of the firm, rather than industry sector, is important in defining the uptake of HS, with smaller firms having a lower uptake. The results clearly demonstrate and provide further evidence of the specific needs of SMEs in relation to HS for noise and HAV.

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