



Industrial Hygiene Program Management Guide

Ever wish your IH program had a more cohesive, process-based structure? Looking for an easier, more efficient way to coordinate and manage all of the complex data, sampling, reporting and other tasks necessary to maintain compliance and protect worker health? Whether you're a seasoned CIH or new to the field of IH, this guide will walk you through the **IH Program Cycle** to introduce strategies for how to strengthen your program while applying continuous improvement principles to drive long-term IH program performance.



The IH Program Management Cycle



STEP 1: Identify Similar Exposure Groups (SEGs)

SEGs are the foundation for any successful IH program. Monitoring and assessing each worker's individual exposure risk to potentially multiple workplace stressors (noise, chemicals, etc.) is simply not practical. If nothing else, it would consume an extraordinary amount of your time and resources.

SEGs allow you to group workers with similar exposure risks based on job tasks, roles, locations and other exposure risk variables. For example, all workers who perform the same job function at the same location under essentially identical conditions can be expected to have similar exposure risks, and can therefore be grouped into a SEG. If we assess the exposure levels of a few of them, we can be statistically confident that other workers under the same conditions have the same exposure risk.

SEGs help consolidate your sampling activities and minimize the total number of samples you ultimately need to collect. SEGs also help us standardize our subsequent IH program activities including qualitative exposure assessments (QEAs), sampling plans, medical surveillance and exposure controls.



STEP 2: Qualitative Exposure Assessments (QEAs)

Once you've identified your SEGs, you can then begin your qualitative exposure assessments (QEAs). QEAs are essentially an estimate of a SEG's exposure risk based on observations of working conditions and your best professional judgment. For some SEGs, you may have historic exposure data available to help estimate and even quantify exposure risks, while others will have no data available and require you to assess their risk via other methods.

A risk matrix should be a familiar concept to many EHS professionals as it is already applied in many other areas of EHS management. This familiar format helps clearly and easily communicate exposure risks to management and non-technical audiences, and promotes a broad understanding of exposure risks across the organization.



STEP 3: Sampling Plan

Your sample plan is the playbook for how, when, where and what you will sample. Rightly so, it should be kept up-to-date to ensure you're meeting your sampling requirements and addressing the changing exposure risks in your workplace. Simply relying on past sampling plans to determine future sampling activity may leave you out of compliance and, worse yet, put workers' health at risk.

If your qualitative exposure assessments were performed properly, the jobs, tasks and stressors that require sampling should be apparent. However, a common stumbling block is determining how frequently to sample. Sampling is expensive and time consuming to begin with, and collecting unnecessary samples puts a strain on your already limited resources.

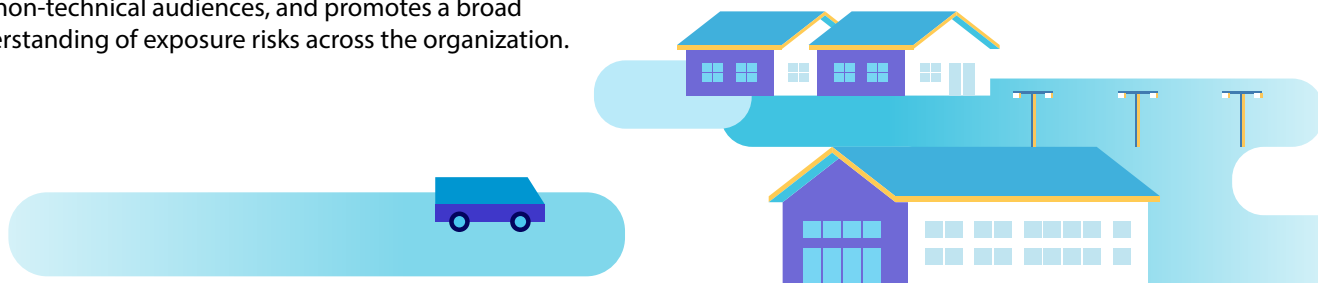
Not only that, but having a clear plan that is easy to explain to management will help better communicate the value of IH to management and other stakeholders, and gain their support in terms of budgeting and engagement for your IH program.



STEP 4: Sampling & Working with your Laboratories

Your IH analytical lab is a valuable resource that you want to make sure you're taking full advantage of. It's important to communicate with your lab and get organized before beginning any of your IH surveys. This will help reduce your effort and improve your sample collection, resulting in better data with less effort and time.

Improved communication with your IH lab can also help streamline analysis and decrease sample turnaround times. It can also simplify access to your lab's sample analysis guides (SAGs) to ensure proper sampling protocols, helping to reduce data errors and maximize your sample collection efforts. It's even possible to integrate your IH database with your lab's LIMS to allow for direct upload of analytical results, unlocking new levels of sampling efficiency and accuracy.





STEP 5: Data Analysis & Effective Communication

IH data analysis can be intimidating for some, but protecting workers and improving IH program performance absolutely depends on your ability to evaluate and interpret complex IH data. Improved visibility and communication of your IH data and analytics gives you the ability to more quickly and accurately address exposure risks, and implement more effective exposure controls.

The purists out there will say that IH data analysis requires highly specialized tools, or a deep understanding of statistics. It can also simplify access to your lab's sample analysis guides (SAGs) to help ensure use of proper sampling protocols, reduce data errors and maximize your sample collection efforts. There's a variety of methods to analyze IH sample data that are quick and easy to implement that can help you cut through the 'noise' and deliver more valuable insights that drive greater IH program performance.



STEP 6: Medical Surveillance

One of the most important decisions IH professionals need to make is determining who needs to be enrolled in medical surveillance programs. Not only to maintain compliance with workplace exposure standards, but more importantly, to safeguard the health of your workers. Workplace exposure regulations differ significantly around the world, but fortunately, their medical surveillance provisions are largely similar.

It's important to establish your medical surveillance programs in a way that minimizes your testing requirements by ensuring only workers who require medical surveillance are enrolled. This will ultimately help reduce program costs and simplify compliance. One strategy to achieve this is to manage medical surveillance requirements at the SEG-level, rather than focusing on individual worker enrollments. When your sampling data indicates a change in exposure level and relevant medical surveillance requirements, you'll be able to more quickly respond by enrolling or de-enrolling every worker in the SEG.

You also want to make sure your surveillance programs remain flexible enough so you can readily identify new or changing workplace stressors and corresponding medical surveillance requirements, and quickly update your enrollments and medical screenings based on changing exposure levels and applicable OELs.



STEP 7: Evaluating & Communicating Performance

The final step in the IH Program Management Cycle is perhaps the most important. Applying continuous improvement principles to your IH program is key to achieving greater efficiency and performance. Leverage your IH data and analysis to adjust your SEGs, qualitative exposure assessments and sampling plans with the goal of improving their precision and efficiency. For example, reviewing your SEGs, QEAs and sampling plan can help you minimize the number of samples you need to collect over time. Failing to learn from and act on your IH data not only inhibits IH program efficiencies, but limits your program's ability to adapt to changing workplace stressors and exposure risks.

Communication is also vital to the continuous improvement of your IH program. Being able to justify the value of your IH program investment to management, secure budget for exposure controls and other program improvements, and gaining broad support for your program among stakeholders all depend on clearly communicating program performance.

Putting it All Together

From SEGs, QEAs and sampling activities to data analysis, medical surveillance and reporting – an IH program has a lot of moving parts. Unfortunately, coordinating each of these individual elements into a cohesive, process-based IH program is a goal that continues to elude even the most experienced IH professionals. That's because many are still relying on an outdated patchwork of software apps and paper-based systems that don't work easily together, and were never designed to manage IH to begin with.

[VelocityEHS IH Capabilities](#) offer CIHs and non-IH professionals alike, a purpose-built IH software platform to manage and coordinate every aspect of your IH program. Designed by our in-house team of Certified Industrial Hygienists (CIHs), VelocityEHS IH Solutions help you easily assess and control workplace stressors, automate time-consuming IH tasks and maintain a world-class IH program, no matter what your level of IH expertise. You'll be able to dramatically reduce the time and effort required to maintain compliance, implement a more integrated approach to IH management, and drive continuous improvement of your IH program performance.

