

The Worksite Surveillance Field Guide

Boothless audiometry, respiratory and heat surveillance, and OSHA-ready records at the factory gate

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Foreword

Occupational health has a logistics problem that undermines even well-intentioned programs: the testing is somewhere else, and the workers are here. Every audiogram, spirometry, or physical that requires pulling people off the floor and sending them across town is a test that competes with production, and tests that compete with production get skipped, delayed, or rushed. The result is a compliance program that looks complete on the org chart and has gaps in the record.

Occupational Mobile Diagnostics exists to close that gap by inverting the logistics: the screening comes to the worker, at the factory gate, on the warehouse floor, at the port between ships. This field guide is written for the safety managers, HR leaders, and operations people responsible for keeping a workforce healthy and a compliance program audit-ready — and for the occupational-health professionals who run the tests. Everything here reflects how we actually approach mobile worksite surveillance as of July 2026.

The regulatory ground is shifting. OSHA's occupational noise standard has anchored hearing conservation for decades, respiratory surveillance obligations continue for exposed workers, and a new federal heat illness prevention standard is arriving for outdoor and high-heat industries. Read this front to back once, then keep it in the program binder. The checklists at the end of each chapter are meant to be photocopied, argued with, and adapted to your operation.

Chapter 1 — The Screening Comes to the Worker

The core idea of mobile occupational diagnostics is simple and consequential: bring the test to the workforce instead of sending the workforce to the test. The difference sounds like mere convenience, but it changes outcomes. When screening happens on-site, participation rises, scheduling stops competing with production, and the compliance record fills in rather than developing the gaps that off-site programs accumulate. A test that is easy to complete gets completed.

This reframing is the whole value proposition, and it shows up most vividly at scale. A mobile unit can move through a shift roster efficiently — testing a large group in the flow of the workday rather than pulling each person out for a half-day errand across town. The illustrative example the field knows well is the port shift screened between container ships: an entire roster tested in a day without delaying the cargo. Whether it is longshoremen, warehouse staff, or a manufacturing line, the principle holds — surveillance that fits inside the workday is surveillance that actually happens.

For the employer, the payoff is twofold. Compliance improves because the record is more complete, and the workforce experiences the program as a benefit rather than an imposition — a reason on-site health services increasingly show up as a permanent workforce offering rather than a once-a-year scramble. For the safety manager, the mobile model turns a recurring logistical headache into a scheduled visit. Everything in the chapters that follow — audiometry, spirometry, heat and heavy-metal screening — inherits this advantage: it is delivered where the work is, so it gets done.

Field Checklist

- Bring screening on-site to raise participation
- Schedule around the workday, not against it
- Treat completeness of the record as the primary goal

Chapter 2 — Hearing Conservation Is the Flagship

Of all worksite surveillance, hearing conservation is the anchor, because noise is one of the most widespread industrial hazards and the standard governing it is well established. Under OSHA's occupational noise exposure standard, 29 CFR 1910.95, employers in general industry must implement a hearing conservation program whenever worker noise exposure equals or exceeds an eight-hour time-weighted average of 85 decibels — the action level. That threshold triggers a set of obligations that mobile audiometry is built to satisfy.

The cadence the standard defines is the backbone of any program. A valid baseline audiogram must be established within six months of an employee's first exposure at or above the action level. After the baseline, audiometric testing must be made available annually, and it must be provided at no cost to the employee. Baseline, then annual, at employer expense — that is the rhythm, and a program that misses any part of it has a gap that an inspector can find and a worker's hearing can pay for.

The purpose underneath the compliance is real: audiometric surveillance is how a program catches a shift in hearing early enough to act, before a temporary threshold change becomes a permanent one. The annual test is not paperwork; it is the trend line that flags a worker whose protection is not working or whose exposure has changed. Hearing loss is gradual and irreversible, which is exactly why the standard emphasizes catching it early through consistent, on-schedule testing. A hearing conservation program that runs its baselines and annuals faithfully is doing the one thing that can actually preserve a workforce's hearing — and doing it on-site is what keeps it faithful.

Field Checklist

- Establish a baseline audiogram within six months of first exposure
- Provide annual audiometric testing at no cost to the worker
- Use the annual trend to catch threshold shifts early

Chapter 3 — Boothless Audiometry in Practice

Traditional audiometry has a bottleneck: the sound booth. A conventional hearing test needs a controlled, quiet acoustic environment, which historically meant either a permanent booth or a trailer hauled to the site — expensive, bulky, and a constraint on where and how fast testing can happen. Boothless audiometry removes that constraint by building the acoustic control into the equipment rather than the room, which is what makes genuinely mobile, on-the-floor hearing testing practical.

The flagship tool here is the portable KUDUWave audiometer, which delivers an ANSI-compliant hearing test without a sound booth by combining insert earphones with circumaural attenuation and continuous monitoring of the ambient noise around the test. That design lets a full, valid audiogram happen on the factory floor rather than in a dedicated acoustic space — the test travels to the worker instead of the worker traveling to the booth. For a program measured on completeness, removing the

booth removes one of the biggest reasons tests get skipped or deferred.

Practice discipline still matters, because a valid audiogram depends on more than the device. The examiner's credentials, the audiogram date, the equipment's calibration status, and the exposure context all belong in the record for each test. Ambient conditions have to be within the range the boothless method requires, and the equipment's monitoring is part of ensuring that. Done properly, boothless audiometry is not a compromise on validity — it is the same standard of test, delivered where the work is, with the documentation that makes it defensible. The convenience is real, but it never comes at the expense of a properly calibrated instrument, a qualified examiner, and a complete record.

Field Checklist

- Use a calibrated, ANSI-compliant boothless audiometer on-site
- Confirm ambient conditions meet the boothless method's requirements
- Record examiner credentials, date, and calibration for each test

Chapter 4 — Respiratory Surveillance and the Exposure Program

Where workers breathe dust, fumes, or other inhalants, respiratory surveillance is the counterpart to hearing conservation — a periodic measurement that catches a decline in lung function before it becomes disabling. Baseline and annual spirometry give an exposed workforce a trend line for their breathing, the same way audiometry does for their hearing, and the mobile model delivers it with the same advantage: on-site testing that people actually complete.

Spirometry, like audiometry, is only as good as the discipline around it. A valid test depends on a properly calibrated instrument, a technician who can coach the maneuver correctly, and consistent technique so this year's result is comparable to last year's. The value of surveillance is in the comparison over time, which means the program has to produce results that are truly comparable — a sloppy or inconsistent test does not just waste an afternoon, it corrupts the trend that is the entire point. On-site delivery helps here too, because a workforce that tests every year in the same conditions produces a cleaner longitudinal record than one that tests sporadically at whatever clinic had an opening.

Respiratory surveillance sits inside a larger exposure-management picture, and the mobile program is often the point of contact where several threads meet. For workforces exposed to heavy metals, blood testing for lead, mercury, or cadmium can be coordinated alongside the respiratory work, with lab draw on-site and results reported back on a defined turnaround. The common thread is that exposure programs generate obligations that recur, and recurring obligations are exactly what get dropped when testing is inconvenient. Bringing the spirometry and the lab draw to the floor keeps the exposure program's record complete, which is what makes it defensible when someone asks to see it.

Field Checklist

- Deliver baseline and annual spirometry on-site for exposed workers
- Ensure calibrated equipment and consistent technique for comparable trends

- Coordinate heavy-metal lab draws alongside respiratory surveillance

Chapter 5 — Heat, Heavy Metals, and the Expanding Mandate

The surveillance mandate is expanding, and heat is the clearest new front. A federal heat illness prevention standard is arriving for outdoor and high-heat industries, effective in 2026, and it brings surveillance and monitoring expectations that many employers have never had to document before. Baseline fitness-for-heat assessment and ongoing monitoring for outdoor and high-heat operations move from best practice toward requirement, and employers in affected industries have to build the documentation to match.

This matters because heat illness is both preventable and, when it goes wrong, catastrophic. A screening program that establishes who is fit for heat work and monitors them through the hot season is doing prevention that a reactive program cannot. And because the standard is new, the record-keeping is where many employers will be unprepared — they may have informal practices but not the documented surveillance an inspector or an incident review will expect. The mobile model is well suited to closing that gap, because heat surveillance, like hearing and respiratory testing, is delivered most reliably on-site and on schedule.

Heavy-metal monitoring rounds out the exposure picture for the workforces that need it. Blood testing for lead, mercury, and cadmium, coordinated with a lab and reported on a defined turnaround, gives exposed workers and their employers the surveillance data that exposure standards require. Across all of these — heat, heavy metals, respiratory, hearing — the pattern is the same: the mandate is a set of recurring obligations, and the failures are documentation failures more than testing failures. A program that treats the expanding mandate as a set of scheduled, on-site, well-documented services turns a growing compliance burden into a routine that quietly keeps the workforce safe and the record complete.

Field Checklist

- Build documented heat surveillance for outdoor and high-heat operations
- Coordinate heavy-metal blood testing with defined result turnaround
- Treat each expanding obligation as a scheduled, recorded service

Chapter 6 — Records That Survive an Audit

Occupational surveillance lives or dies on the record. An inspector, an incident investigation, or a workers' compensation dispute does not primarily ask whether a test was done — it asks to see the documentation, and an undocumented test is, for practical purposes, a test that did not happen. That reality makes the record the deliverable, and it is where the mobile model's completeness advantage pays off most directly.

For each audiometric test, the record should carry the examiner's credentials, the audiogram date, and the calibration and exposure details the standard requires — the elements that make the result defensible rather than merely present. Respiratory, heat, and heavy-metal surveillance each carry their own required elements, and the discipline is the same across all of them: capture what proves the test was valid, performed by a qualified person, with a calibrated instrument, on a documented date. A hearing conservation or exposure program that keeps these elements consistently is

audit-ready by default; one that keeps the results but loses the supporting detail is exposed even when the underlying testing was fine.

The employer's stake in this is concrete. Complete records demonstrate compliance without a scramble, support the program if an exposure is ever questioned, and preserve the longitudinal trend that makes surveillance clinically meaningful. The mobile program's job is not just to run the tests but to hand back documentation the employer can file and retrieve — recordkeeping designed so that when someone asks for a worker's baseline and annuals, or a heat-surveillance history, the answer is a complete file rather than a reconstruction. Build the record as you run the test, and every audit becomes a review of work already documented well.

Field Checklist

- Capture credentials, dates, calibration, and exposure detail per test
- Keep surveillance histories retrievable by worker on demand
- Hand employers a defensible file, not just a result

Chapter 7 — Building a Program the Floor Trusts

A durable worksite surveillance program rests on four things: it comes to the worker, it uses valid and calibrated methods, it keeps complete records, and the floor trusts it. The first three are technical; the fourth is human, and it is what makes participation real. Workers who see the program as fast, respectful, and genuinely for their health show up for it; workers who see it as a bureaucratic imposition find reasons not to. Trust is a compliance variable.

Building that trust starts with reliability and clarity. A program that arrives on schedule, tests efficiently without turning the shift upside down, explains what it is doing and why, and treats results with appropriate confidentiality earns the participation that makes surveillance complete. This is one reason on-site health services increasingly appear as a standing workforce benefit rather than an annual obligation — done well, they read to the workforce as an investment in them, and that perception feeds the participation the compliance program depends on.

The operational foundation underneath the trust is the same four fundamentals in a different guise: coverage (the program reaches every worker who needs testing), competence (valid tests by qualified examiners), method (calibrated, standard-compliant equipment like boothless audiometry and properly run spirometry), and documentation (records that survive an audit). A program strong on all four, delivered with respect for the workday and the worker, becomes something a facility keeps rather than something it endures. Build it deliberately, run it on schedule, and it quietly does the two things that matter most: it protects workers, and it keeps the employer defensible.

Field Checklist

- Deliver reliably, efficiently, and with respect for the worker
- Build coverage, competence, valid methods, and documentation together
- Earn the participation that makes surveillance complete

Conclusion: Surveillance That Actually Happens

The best occupational surveillance programs are the ones that actually happen — completely, on schedule, year after year. That sounds like a low bar, and it is exactly the bar most programs miss, because off-site testing competes with production and loses. Everything in this guide is aimed at one outcome: surveillance that fits inside the workday, so participation is high, the record is complete, and the trend line that protects a worker's hearing, lungs, and safety is unbroken.

The mandate is expanding. Hearing conservation under 29 CFR 1910.95 remains the anchor, respiratory and heavy-metal surveillance continue for exposed workers, and a new federal heat illness standard is arriving for outdoor and high-heat industries in 2026. Each addition is a set of recurring obligations, and each will be judged more on the completeness of the documentation than on the fact of the testing. The employers who prepare now — with scheduled, on-site, well-documented programs — will meet the new requirements as routine rather than emergency.

Bring the screening to the worker. Use valid methods and calibrated instruments. Keep records that survive an audit, and earn the trust that keeps participation high. Do that, and worksite surveillance stops being a box that gets half-checked and becomes what it is meant to be: a quiet, reliable system that keeps a workforce healthy and an employer defensible.



ABOUT THE FOUNDER

Devin Lockett

Devin Lockett is the founder and entrepreneur behind this title and the wider BiomedRx family of companies-spanning healthcare technology, wellness, media, and community initiatives. He builds brands focused on quality, service, and independent ownership.