the sampler was moderately accurate for identifying wetness of the skin (sensitivity 67%, specificity 86%) and less accurate for discerning glove use (sensitivity 75%, specificity 52%).

Conclusion: Agreement between observed wet work and device-reported wet events in health care settings is not high, and further adaptations and developments may be required.

Exposure to Wet Work in Australian Workplaces

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Background and Purpose/Objectives: The Australian National Hazard Exposure Worker Surveillance (NHEWS) Survey was undertaken to inform the development of exposure prevention initiatives for occupational disease. The objective was to assess the occupational and demographic characteristics of workers reporting exposure to wet work in Australia.

Methodology: Computer-assisted telephone interviewing was used to collect information from participants. There were two separate outcomes for wet work exposure: frequent washing of hands and duration of time spent with hands immersed in liquids.

Results/Impact/Outcomes: $N = 4{,}500$ workers participated in NHEWS. For hand-washing, 9.8% (95% confidence interval [95% CI]: 8.9–10.7%) reported washing their hands more than 20 times per day. For immersion of hands in liquids, 4.5% (95% CI: 3.9–5.1%) reported immersion more than two hours per day. Females were more likely to report exposure to frequent hand-washing (odds ratio [OR] 1.97, 95% CI: 1.49–2.61). Workers in the lowest occupational skill level jobs, compared to the highest, were more likely to report increased exposure to hands immersed in liquids (OR 6.41, 95% CI: 3.78–10.88). Workers reporting skin exposure to chemicals were more likely to report exposure to hand-washing (OR 3.68, 95% CI: 2.91–4.66) and immersion of the hands in liquids (OR 4.09, 95% CI :2.92–5.74).

Conclusions and Discussion: Specific groups of workers were identified who reported high exposure to wet work. Of particular interest was the high correlation between wet work and chemical exposure. Findings from the NHEWS survey present an opportunity for development of targeted policy and practice interventions that will ultimately lead to a reduction in occupational irritant and allergic contact dermatitis.

Investigation of Chemical Uptake at Low Loads on Skin

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Background and Purpose/Objectives: Traditionally, dermal absorption experiments have been conducted at chemical loads of 1 $\mu g/cm^2$ and higher (sometimes much higher), even though many actual exposure scenarios involve delivery of lower loads to skin. Assumption of constant fractional absorption across disparate loads is common, but not well founded. Greater understanding of low-load dermal absorption is required to inform exposure and risk assessment.

Methodology: A glass and Teflon chamber was constructed to permit deposition of aerosols generated by a Collison nebulizer onto skin coupons. Fluorescent tracer and radio-labeled compounds were applied at loads of roughly 1–500 ng/cm^2.

Results/Impact/Outcomes: Experiments in which a fluorescent tracer was employed provide visual evidence that distribution of tracer on human cadaver skin following low-load aerosol deposition differs from that observed following application in solvent by pipette. Subsequent experiments involving nebulization of ethanol-based solutions of ^{14}C-labeled pentachlorophenol and chlorpyrifos demonstrated that low loads could be reproducibly applied to, and quantitatively recovered from, human cadaver skin. Substantially incomplete removal following soap and water washing at 90 minutes was observed and confirmed by counting of solubilized skin.

Conclusions and Discussion: Absorption of two pesticides delivered at low loads revealed rapid penetration to depths at which soap and water washing was ineffective. Net fractional absorption exceeded results reported in the prior literature following higher load, longer duration experiments. Results should contribute to the understanding of low-load absorption and potential for decontamination by washing.

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Simulation of Removal of Chemicals from Skin by Washing

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