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243 Survey to Assess the Manual Application of Chlorine to Recreational Pools Among Pool Employees

*Tuesday, June 24, 2014: 10:00 AM-10:30 AM
East Exhibit Hall, Nashville Convention Center*

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BACKGROUND: State regulations (N.J.A.C. 8:26 – Public Recreational Bathing) require that pool operators add chemicals through an automated system. However, the manual application of chlorine-based chemicals directly into the pool for routine pool maintenance is sometimes necessary. This manual application may increase the risk of exposure to chlorine and the potential development of work-related asthma (WRA). In New Jersey, 19 cases of WRA due to exposure to chlorine-based products were identified between 1990-2011. Therefore, the objective of this study was to assess the manual application of chlorine to recreational pools during routine maintenance and its impact on the health of aquatic employers.

METHODS: In response to the identified cases of WRA in New Jersey, a Health Alert, "Don't Get Sick When Applying Pool Chemicals", was produced along with a two page questionnaire to collect information on the application of chlorine-based products to swimming pools and to assess the impact of the Health Alert. These materials were distributed to all NJ owners / operators of indoor and outdoor swimming pools and local health departments in NJ. The questionnaires were returned and the responses analyzed.

RESULTS: One hundred twenty-two (16%) of the 782 distributed questionnaires were returned. Over 70% of the participants find it necessary to adjust pH and chlorine levels manually. Maintenance of the pool is usually performed by the aquatic director (30%) or by 'Other' (64%) which includes a Certified Pool Operator or other maintenance employee. Thirty-one percent of pool employees are not required to wear PPE when manually applying chlorine-based products to the pool.

CONCLUSIONS: Results from this study indicate that manual application of chlorine-based products occurs regularly. Expansion of surveillance and education to aquatic employees should be implemented. Outreach activities should include recommendations for safe work practices and when to limit manual application of chemicals.

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