Overall PVP was 78% with yearly PVP ranging from 55% The DII Yearly sensitivity could only be calculated for 2011 Pool operators need to be notified a DII event happened and aware of the reporting requirement in order for a The majority of the questions on the DIIRF are open Add a “State Use Only” section on the DIIRF for tracking of DIIRF receipt and follow Evaluate the system’s There For those DIIRF received after the next business day requirement, the Develop a secure online form that will allow for automatic database population and data quality assurance. DIIRFs submitted during 2008 A DII event was defined as a single DIIRF for non Wisconsin’s EMS 2014 Timeliness measures for other steps in the DII reporting system, i.e Assess the ability to evaluate risk factors associated with reported DII events and revise Prior to evaluation, DIIRF data was not entered into a database, preventing analysis. Based on current DIIRF data fields, it cannot be regularly determine if reported events meet the case definition. Poor geographical representativeness and acceptance. No single database currently tracks the annual number of pool licenses for each county in Wisconsin, therefore the annual DII rates per county could not be calculated. For this evaluation, only pool licenses per county for the year 2015 were available. Only 10% (5% of the estimated 2,410 licensed public pool and water attraction facilities in the state submitted a DIIRF during the evaluation period. Facilities in less than half of Wisconsin counties submitted a DIIRF during the evaluation period even though all but one county has multiple licensed public pools, based on the number of 2015 licenses (Figures 5 and 6). Under-reporting and poor data quality are the main weaknesses with the system. Suggested improvements include: Develop a secure online form that will allow for automatic database population and data quality assurance. Develop guidance documents for pool operators on how and when to complete the DIIRF. Revise DIIRF questions to allow for risk analysis of contributing factors and revise state statutes based on results. Add a “State Use Only” section on the DIIRF for tracking of DIIRF receipt and follow-up. Link DIIRF system’s EMS database and target pool operator education to improve underreporting.

**RESULTS**

Poor sensitivity based on EMS database reports
- 1,295 DII events were identified in the EMS database that were not reported through the DI system. Yearly sensitivity could only be calculated for 2011-2014, because the EMS database became widely adopted by EMS operators in 2011 (Figure 1) Pool operators need to be notified a DII event happened and aware of the reporting requirement in order for a report to be submitted (Figure 4).

Poor data collection form and method impedes meaningful analysis.
- Information regarding contributing factors to DII events needed to evaluate risk are not systematically collected. The majority of the questions on the DIIRF are open-ended and do not allow for quantitative analysis.
- Prior to evaluation, DIIRF data was not entered into a database, preventing analysis. Based on current DIIRF data fields, it cannot be regularly determine if reported events meet the case definition.

**OBJECTIVES**

- Assess DPH’s ability to detect DII incidents at licensed public pools and water attractions based on OHS 172.32(J) reporting requirements.
- Evaluate the system’s data collection form and data field types.
- Assess the ability to evaluate risk factors associated with reported DIIRF events and revise statutes to reduce risk.
- Provide recommendations for improving the DIIR reporting system.

**METHODS**

- DIIRFs submitted during 2008-2014 were collected and entered into an electronic database. The DIIR Recreational Waters Program Manager was interviewed and asked to describe program goals, performance, and challenges. Wisconsin’s EMS database was queried for unreported DII events to calculate sensitivity. Using the CDC Updated Guidelines for Evaluating Public Health Surveillance Systems, system simplicity, flexibility, acceptability, timeliness, sensitivity, data quality, stability, Predictive Value Positive (PVP), representativeness, and usefulness were evaluated. A DII event was defined as a single DIIRF for non-chemical incidents, or multiple DIIR related to a single chemical release. Sensitivity, PVP, and timeliness were assessed using the total number of DIIR events reported. The total number of active pool licenses in 2015 was obtained and a total number of licensed facilities with unique addresses was determined (some possessing multiple licenses). The number of facilities to be estimated for three local health departments that do not use the statewide license system.

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**REFERENCES**