



**Title:** Management and Performance Hub – Drug Dashboard

**Category:** Open Government and Data, Information and Knowledge Management

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**Project Dates:** September 2015 – December 2015

## Executive Summary

Opioid abuse has proved a vexing problem for the entire nation, but Indiana has been hit especially hard by this epidemic, showing the 17th highest drug overdose mortality rate in the United States, according to a 2013 report by the Trust for America's Health, a non-profit and non-partisan organization.

In Indiana, 14.4 per 100,000 people die from drug overdose, the organization found. Nationally, drug overdose deaths exceed motor vehicle-related deaths in 29 states and Washington, D.C. Even leaving aside opioids accounting for a significant portion of the problem, such as heroin, just the misuse and abuse of prescription drugs alone costs the country an estimated \$53.4 billion a year in lost productivity, medical costs and criminal justice costs, the report noted. While prescription drug abuse has grabbed many of the headlines in recent years, many abusers have turned to heroin from prescription drugs because it is often cheaper. Police in many Indiana jurisdictions report that heroin is now a bigger problem than prescription drugs.

Indiana's Management Performance Hub (MPH) recently began applying data analytics to the important task of stemming the epidemic of opioid abuse. It is utilizing cutting-edge business intelligence and analytics software to analyze data and coordinate disparate data sources to create a comprehensive analytical view statewide to help focus the work of the [Governor's Task Force on Drug Enforcement, Treatment, and Prevention](#) and other state agencies.

In creating the task force on Sept. 1, 2015, Governor Mike Pence called for a holistic and collaborative approach to addressing substance abuse. He charged the task force with identifying gaps that hindered the objectives of preventing drug abuse, treating drug abuse, and effectively enforcing drug laws. Via the Drug Abuse Initiative, MPH has collected data from state agencies and local government aimed at deepening professionals' understanding of trends and patterns involving opioid addiction.

By coordinating disparate sources of data, MPH analysts have now created a more comprehensive macro-view statewide of Indiana's opioid challenges. The data is used for developing strategic dashboards to assist the Governor's Task Force and various state agencies.

MPH's objective was to create a tool for end users -- law enforcement, public health professionals or policymakers -- so they can be better informed when making decisions about where to put resources.

## Concept:

MPH was created in 2014 by Gov. Mike Pence to take bring a new level of analytical rigor to state government. Utilizing existing resources, MPH staff, noticing an uptick in media coverage on drug deaths, began accumulating data in September 2015. MPH leverages data sets from state agencies and local government, breaking down numerous silos to get a holistic view of the drug problem in Indiana.

One constant to understanding the depth of the addiction problem has been that much of the pertinent data has been held by separate entities operating within their own silos without any strategic system for sharing information. For example, the number of opioid-related submissions to law enforcement laboratories over the last decade has increased five-fold. This project has aimed to funnel the totality of data from disparate agencies into a single venue, or “dashboard,” for data analytics.

The following data sets from state, federal and local sources are being analyzed for the MPH’s holistic review of drug-related data:

- Indiana State Police Laboratories
  - Laboratory Information Management System (LIMS)
- Marion County Forensic Laboratory
  - Laboratory Information Management System (LIMS)
- Indiana State Department of Health
  - Vital Records
- Substance Abuse and Mental Health Services Administration
  - Substance Abuse Treatment Facility Locator
- Division of Mental Health & Addiction
  - Indiana Opioid Treatment Program Locations
- Indiana Professional Licensing Agency
  - Indiana Board of Pharmacy Prescription Monitoring Program (INSPECT) (Reporting loss of controlled substances)

The project uses predictive analytics and a data-discovery-and-visualization tool. The data storage and extract-transform-and-load (ETL) are being done with the SAP HANA system (an in-memory, column-oriented, relational database management system developed and marketed by SAP SE).

**Significance:**

Ready access to a relevant spectrum of data helps policymakers and professionals in the field – such as police and treatment specialists – make the data-driven decisions and deploy their limited resources into areas likely to return maximum impact.

MPH produces interactive visualizations for agencies, enabling them to better consume their already collected data intermixed with other agency data. Vital records and other data are directly fed into the database on a daily basis, creating the opportunity for rapid response.

Quick response has been necessary because of the rise of the epidemic. One indicator is the number of incidents reported by emergency medical services providers in which naloxone, the generic version of Narcan, was administered.

<b>Dates</b>	<b>Doses</b>	<b>% Increase over previous year</b>
10/1/13 - 9/30/14	3,321	
10/2/14 - 9/30/15	5,049	52%
10/1/15 - 4/30/16	3,273	11%*

\*extrapolated for remainder of 2016

These do not account for every single incident because some go unreported to the state.

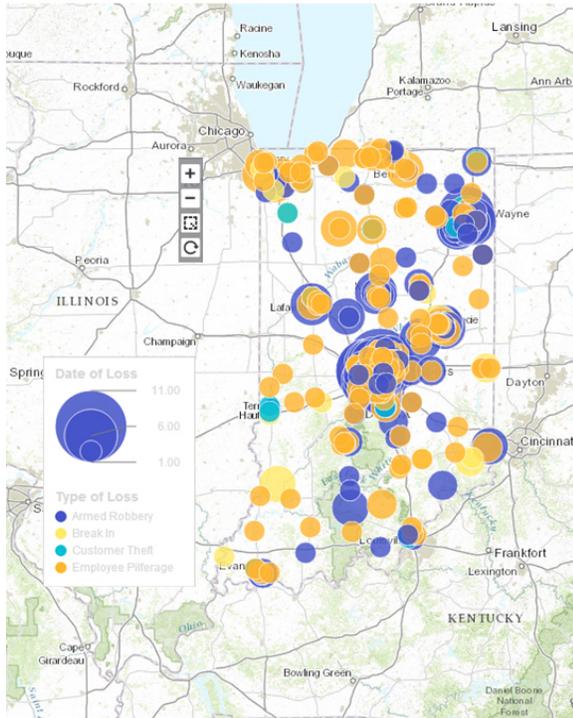
Beneficiaries of this project include the following: Governor’s Task Force on Drug Enforcement, Treatment & Prevention; Indiana State Police; Indiana State Department of Health; Marion County Forensics; Indiana Family and Social Services Administration (FSSA); Department of Child Services (DCS); and multiple officials within any law enforcement agency or the drug-treatment-and-policy realm.

MPH was created via an Executive Order from Gov. Pence, and the drug dashboard continues his stated goal of embracing data-driven decision-making.

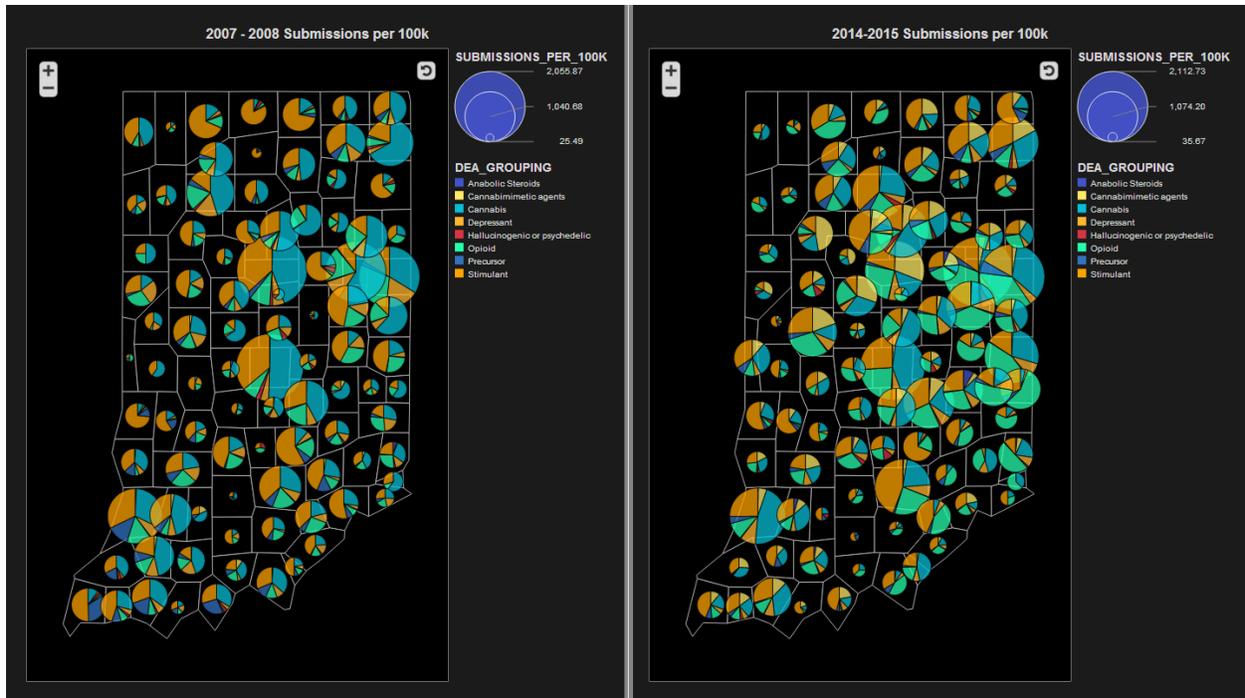
**Impact:**

The process of consuming data has improved significantly. Prior to the project, all of the data resided in different locations and format. For example, the 5,233 rows of pharmacy loss data appeared in four Excel sheets, each of which had a different format. This project compiled, cleansed and enhanced that data to unlock value and improve data consumption.

**Pharmacy Loss 2010-2015**



Based on data gathered through this project, the Indiana State Police developed a plan to distribute over 400 doses of naloxone to officers in the field. The plan was created based upon the 'hot spots' of drug activity identified through the mapping.



There is a significant life-saving effect from this initiative as it has identified the most effective areas to distribute naloxone to state police officers in the field. Additionally, the mapping data has been used to help determine the location of additional drug treatment facilities. There are currently 13 state-recognized opioid treatment facilities across Indiana; officials now plan to open five more locations.

The laboratory submission data was previously used mainly to compile static annual reports. Now the nearly 400,000 rows of data are readily available, and this result helps end-users achieve significantly more in-depth analysis.

By contributing ultimately to better decision-making, better policies, better treatment, better enforcement and better prevention, this project further can be correctly said to bring benefits to the entire public – i.e., to the citizens of Indiana.

More data can be viewed at: <http://at.in.gov/10AarBm>