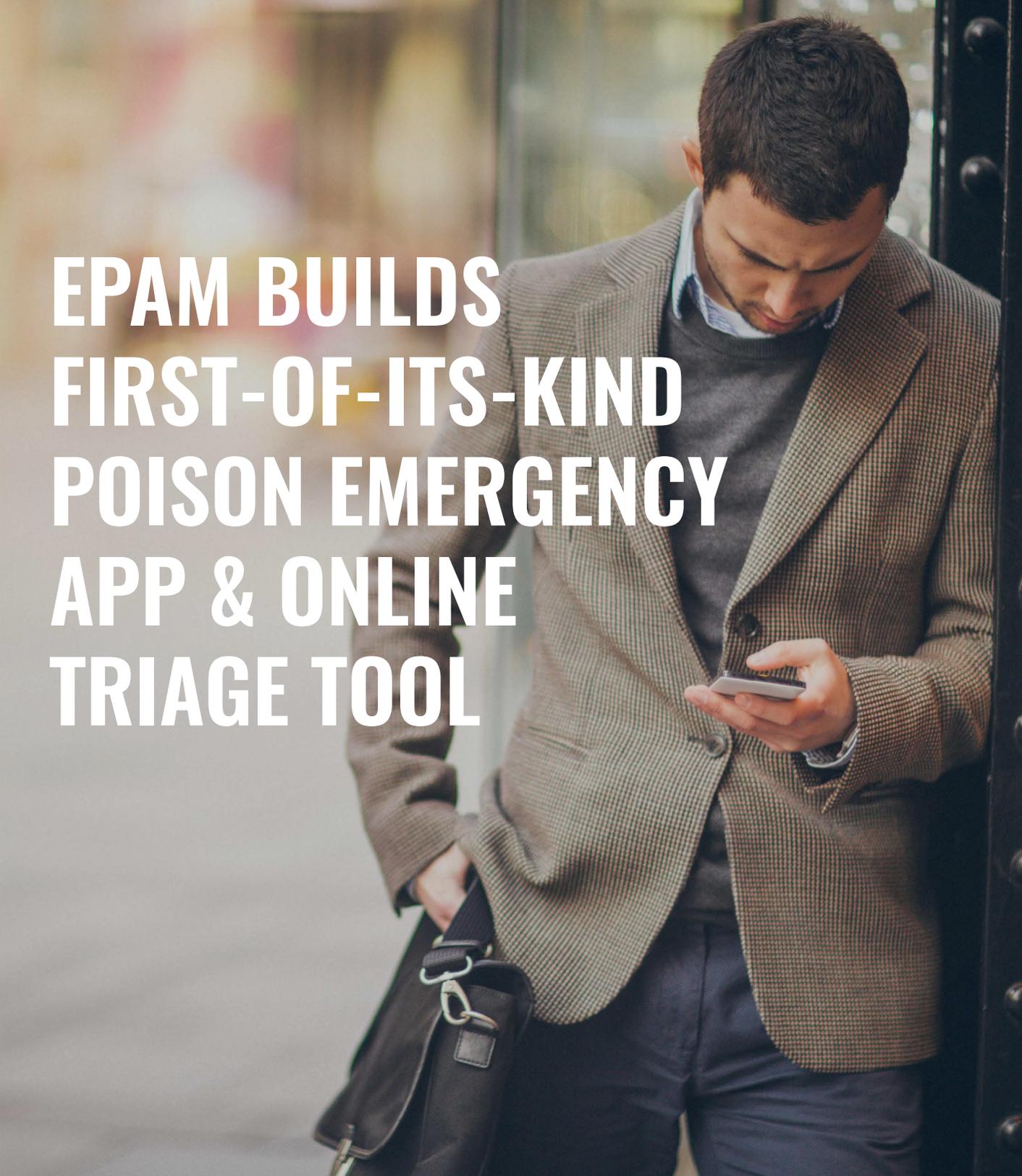


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CASE  
STUDY

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A man in a brown blazer and dark sweater is looking down at his smartphone. He is holding a black bag. The background is blurred, suggesting an outdoor setting.

**EPAM BUILDS  
FIRST-OF-ITS-KIND  
POISON EMERGENCY  
APP & ONLINE  
TRIAGE TOOL**

<epam>

## THE BACKGROUND: EFFECTIVE POISONING RESPONSE COULD DECREASE HEALTHCARE COSTS

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When it comes to a poison emergency, getting immediate expert guidance is critical. In 2015, 85% of poison exposures reported to U.S. poison centers were nontoxic, minimally toxic or had at most a minor effect. Numerous studies have demonstrated that minimally toxic poison exposures drive up healthcare costs due to unnecessary emergency room visits.

### CASE STUDY:

## EPAM BUILDS FIRST-OF-ITS-KIND POISON EMERGENCY APP & ONLINE TRIAGE TOOL

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The National Capital Poison Center (NCPC), an independent not-for-profit organization dedicated to preventing poisonings, saving lives and limiting related injuries, noticed a disturbing trend over recent years. The number of poisoning deaths had been increasing, while calls to poison centers across the nation were decreasing. Poisoning victims and their caregivers were more often choosing the internet over the phone in poison emergencies, but there was no trusted online resource. The information obtained online was often incorrect and even potentially fatal.

### THE CHALLENGE: REMOVE THE GUESSWORK IN CRITICAL SITUATIONS

NCPC asked EPAM to design and build a first-of-its-kind online website and application for use in poison emergencies. Rising to the challenge, EPAM developed web**POISONCONTROL**<sup>®</sup>, a free, easy-to-use online resource for the public to get reliable poison information and an innovative interactive tool to help triage poison exposures. We designed and built the website, web**POISONCONTROL**.org, along with companion Android and iOS mobile applications, to guide the user through a poison exposure situation just as poison control call centers do.



CASE STUDY:

## EPAM BUILDS FIRST-OF-ITS-KIND POISON EMERGENCY APP & ONLINE TRIAGE TOOL

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### THE SOLUTION: AN EASY-TO-USE APP THAT PUTS EXPERT KNOWLEDGE IN OUR POCKETS

We converted the expertise of poison control center toxicologists into a simple, user-friendly interface. The underlying application logic required the accurate collection, adaptation and normalization of user data, matching against multiple databases with varying formats and quality, and implementing intricate algorithms to calculate toxicity. The final, complete solution delivers accurate and safe recommendations and features the following specifications:

- A growing substance database of more than 52,000 pharmaceuticals, supplements, household products and plants and 207,000 barcodes
- Android and iOS mobile applications (including geolocation and barcode/UPC scanning)
- A pill identifier application to identify pills based on color, shape and imprint code
- An innovative recommendation engine built on 3,300 complex algorithms that accurately analyzes age, weight, thresholds and ingredients
- Three fully responsive web applications

The system provides a unified, integrated solution for a complex architecture including multiple application systems, external integrations and a number of user and administration interfaces. The system also integrates two main components: a website with poison prevention content as well as the triage application. web**POISONCONTROL**® is extremely flexible to allow for future integrations with additional databases, using Microsoft Azure to offer a scalable and reliable infrastructure platform.

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**QUESTIONS?**  
CONTACT US AT  
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 For more information,  
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CASE STUDY:

## EPAM BUILDS FIRST-OF-ITS-KIND POISON EMERGENCY APP & ONLINE TRIAGE TOOL

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### THE RESULT: INNOVATION THAT SAVES LIVES

In September 2015, EPAM and NCPC launched web**POISONCONTROL**® after a successful pilot phase, making the app available to anyone with a computer, tablet or smartphone. Based on age, weight, substance and amount swallowed, this expert tool tells the user exactly what to do in each case: stay at home, because toxicity is minimal; go immediately to the ER; or call Poison Control for further guidance. If the recommendation is to stay at home, the app provides information on specific symptoms that are likely to occur and are not of concern, as well as symptoms that should trigger a call to Poison Control or an ER visit. In 2017, EPAM helped NCPC upgrade the tool to allow for various routes of exposure whether swallowed, splashed on the eye or skin, or inhaled for individuals aged six months to 79 years.

The solution is accessible via [webPOISONCONTROL.org](http://webPOISONCONTROL.org) and available for download from the [App Store](#) and [Google play](#).

