

INTRODUCTION

- In 2019, an estimated 10.1 million US citizens aged 12 and older misused opioids:
 - 9.7 million misused prescription pain relievers.
- Factors that contribute to the opioid epidemic include:
 - Illicitly manufactured fentanyl.
 - Involvement of the pharmaceutical industry in promoting opioids.
 - Pain management misuse.
 - Some healthcare professionals improperly prescribing opioids.
- The growing epidemic contributes to increased healthcare cost burden on society, and ineffective use of limited resources.
- To deter the epidemic and drug diversion in New Jersey, the Prescription Monitoring Program (NJPMP) was enacted on November 1, 2015.
 - The NJPMP received 8.5 million queries in 2020 alone.
 - Involved 51,104 prescriptions (98% of eligible prescribers) and 7,781 pharmacists.
 - However, the long-term benefits of such programs are still unknown, and opioid deaths are still increasing.
 - Illicit fentanyl, not being surveilled by the NJPMP, is contributing to the crisis.
- It is imperative to determine if the NJPMP is reducing the opioid misuse cost burden to society.
- It is believed that the NJPMP positively impacts the cost burden to society of opioid overdoses, thereby justifying its operating costs.

OBJECTIVE

The purpose of this study is to determine if the NJPMP serves a financial benefit to the payers of the program.

METHODS

- New Jersey specific opioid and cost data from 2012-2019 was obtained from a variety of sources including, but not limited to, the following:

NJ Office of the Attorney General	NJ Department of Health
NJ Division of Consumer Affairs	CDC.gov
Federal Emergency Management Agency	Prescription Drug Monitoring Program Training & Technical Assistance Center
The Bureau of Justice Assistance	Variety of research articles

- The data extracted included cost and benefit variables.
- Cost variables included the following:

Personnel cost	Software Renewal Fees
Fees incurred	Training costs
Value of the grants for the NJPMP	Prescription Query costs

- Benefit variables included the following:

Value of lives saved from fatal overdoses	Value of medical costs saved from non-fatal overdoses
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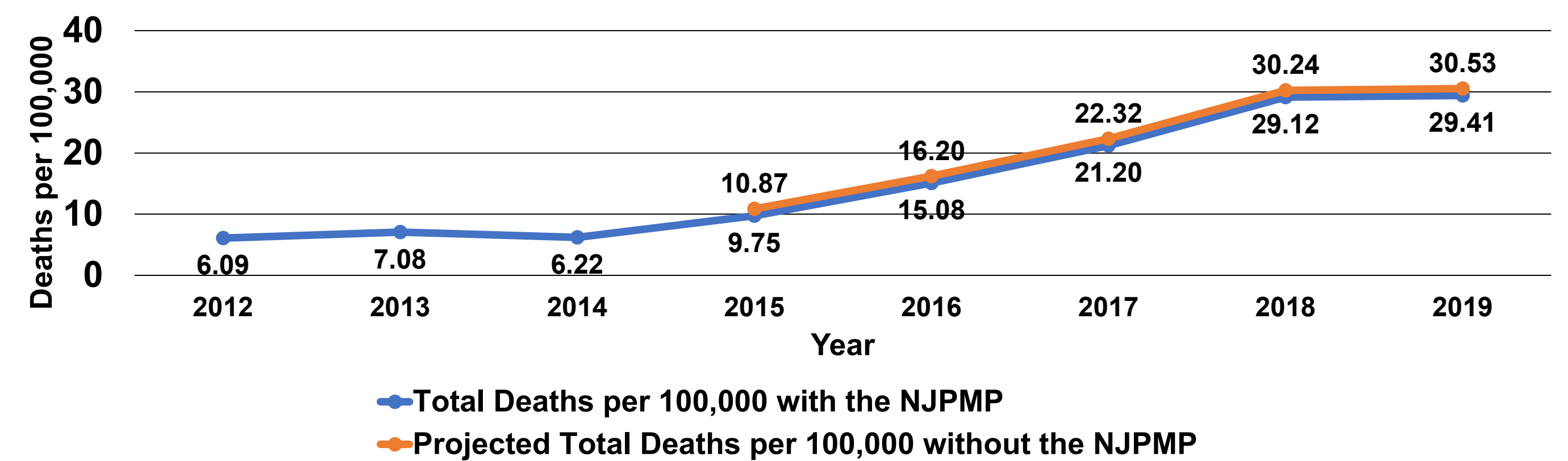
- Variables such as the value of human life, deaths per 100,000, total deaths without NJPMP, number of lives saved, years of lives saved, and value of lives saved was calculated utilizing of the data collected.
- For each year reviewed, value of lives saved for fatal opioid related overdoses plus the value of medical costs saved was divided by the average annual cost of the NJPMP to give the benefits versus cost ratio.
- Based on the ratio, a benefits versus cost analysis was performed for data including and not including illicitly distributed fentanyl overdoses and deaths.

RESULTS

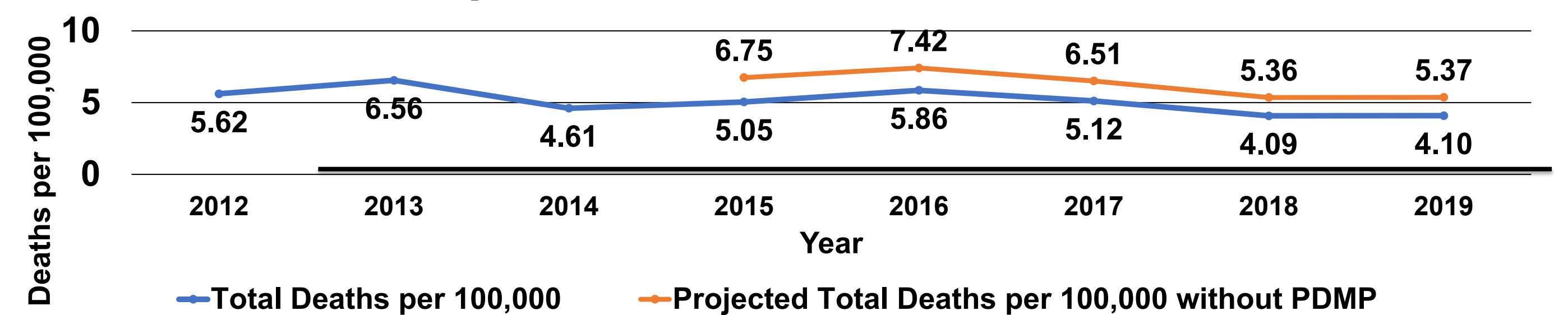
NJPMP Benefits versus Cost Analysis

Year	Value of Lives Saved for Fatal Opioid (Including Fentanyl) Related Overdoses	Value of Medical Costs Saved	Cost of NJPMP	Benefits vs Cost Ratio
2016	\$363,921,202	\$595,767,802	\$168,064,188	5.710
2017	\$364,524,180	\$615,909,839	\$168,064,188	5.834
2018	\$364,544,693	\$641,465,527	\$168,064,188	5.714
2019	\$364,387,364	\$646,092,552	\$168,064,188	6.013
Year	Value of Lives Saved for Fatal Opioid (Without Fentanyl) Related Overdoses	Value of Medical Costs Saved	Cost of NJPMP	Benefits vs Cost Ratio
2016	\$505,384,980	\$595,767,802	\$168,064,188	6.552
2017	\$452,572,036	\$615,909,839	\$168,064,188	6.358
2018	\$415,684,431	\$641,465,527	\$168,064,188	6.290
2019	\$415,162,326	\$646,092,552	\$168,064,188	6.314

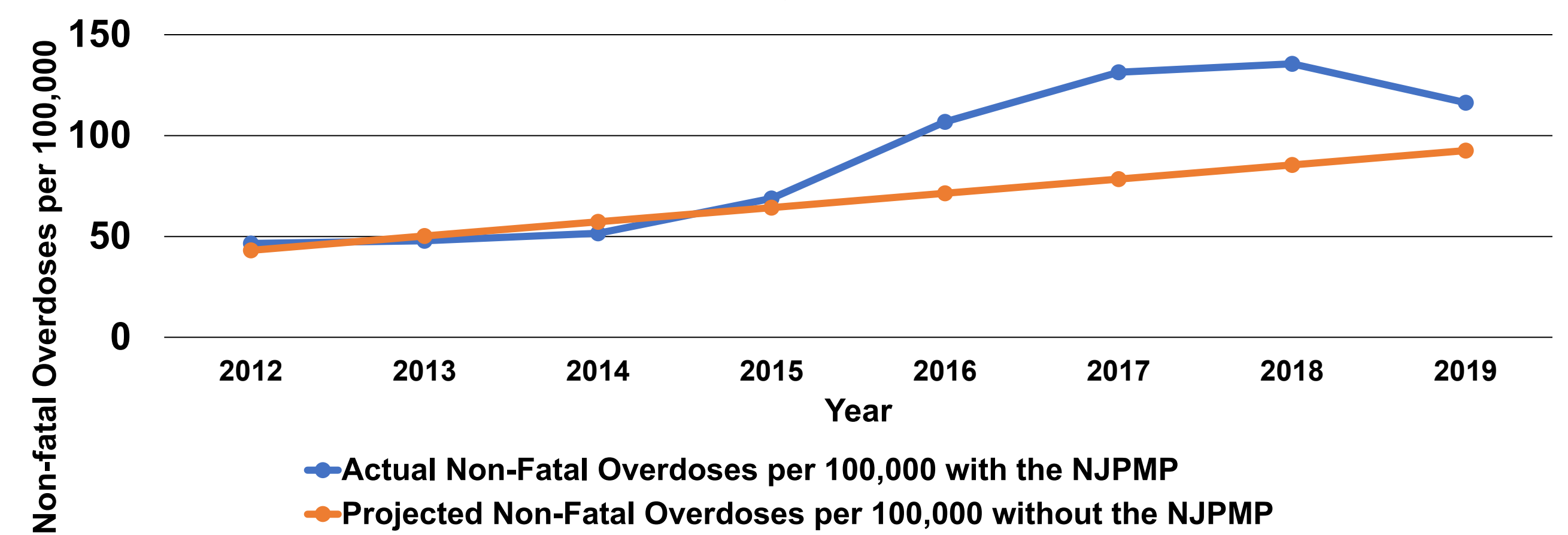
Total Opioid Misuse Related Deaths (With Fentanyl) per 100,000 With and Without the Implementation of the NJPMP



Total Opioid Misuse Related Deaths (Without Fentanyl) per 100,000 With and Without the Implementation of the NJPMP



Actual vs Predicted Non-Fatal Overdoses per 100,000



DISCUSSION

- The research shows valuable insights on the benefits of the NJPMP compared to its costs. However, there are a variety of assumptions that need to be considered including:
 - The cost for the program itself is mainly due to the time taken by healthcare professionals utilizing the NJPMP.
 - The years of lives saved used in the calculation is based on a productive individual within society.
 - Generally, productivity after opioid misuse decreases and requires long-term healthcare intervention with increased costs.
- Limitations include:
 - Majority of fentanyl related overdoses occurred due to illicit fentanyl products not overseen by the NJPMP questioning the programs effectiveness.
 - Hydrocodone and oxycodone data was not included due to the lack of information for every year studied.
 - Personnel costs are only from an administrative perspective.
 - Training and software costs were amortized to give more accurate results.

CONCLUSIONS

The NJPMP serves a financial benefit to the payers of the program. The financial benefits are greater than the costs utilized to run the program. For every \$1 invested in the NJPMP, \$5 to \$7 are saved. However, it is important to consider that the success of the program is only limited to prescription medications.

DISCLOSURE

Authors of this research have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this research.

For more detailed data please
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