



FINANCIAL IMPACT OF USING THE DETERRA® DRUG DEACTIVATION SYSTEM IN THE US

Disclaimer: Any projections extrapolated from this model are based on current pricing of Deterra® Drug Deactivation System. All such pricing is subject to change. Additionally, projections are based on underlying assumptions that may not be applicable based on user-provided input. All projections are forward-looking and remain subject to change

COUNTY COMMISSIONER: ORANGE COUNTY, NC

Notes Distribution Model and Population/Households

Results**Annual Societal Costs**

	Year 0	Year 1	Year 2	Year 3	Year 4
Deterra acquisition cost	\$0	\$187,341	\$187,341	\$187,341	\$187,341
Healthcare utilization cost	\$21,271,341	\$20,665,108	\$20,665,108	\$20,665,108	\$20,665,108
Productivity loss	\$14,500,195	\$14,086,939	\$14,086,939	\$14,086,939	\$14,086,939
Criminal justice costs	\$5,428,932	\$5,274,207	\$5,274,207	\$5,274,207	\$5,274,207
Other costs	\$0	\$0	\$0	\$0	\$0
Total costs	\$41,200,468	\$40,213,596	\$40,213,596	\$40,213,596	\$40,213,596

Difference in Annual Societal Costs Compared with No Deterra Use

	Year 0	Year 1	Year 2	Year 3	Year 4
Deterra acquisition cost	\$0	\$187,341	\$187,341	\$187,341	\$187,341
Healthcare utilization cost	\$0	-\$606,233	-\$606,233	-\$606,233	-\$606,233
Productivity loss	\$0	-\$413,256	-\$413,256	-\$413,256	-\$413,256
Criminal justice costs	\$0	-\$154,725	-\$154,725	-\$154,725	-\$154,725
Other costs	\$0	\$0	\$0	\$0	\$0
Total difference	\$0	-\$986,872	-\$986,872	-\$986,872	-\$986,872

Difference in Cumulative Societal Costs Compared with No Deterra Use

	Year 0	Year 1	Year 2	Year 3	Year 4
Deterra acquisition cost	\$0	\$187,341	\$374,683	\$562,024	\$749,366
Healthcare utilization cost	\$0	-\$606,233	-\$1,212,466	-\$1,818,700	-\$2,424,933
Productivity loss	\$0	-\$413,256	-\$826,511	-\$1,239,767	-\$1,653,022
Criminal justice costs	\$0	-\$154,725	-\$309,449	-\$464,174	-\$618,898
Other costs	\$0	\$0	\$0	\$0	\$0
Total difference	\$0	-\$986,872	-\$1,973,744	-\$2,960,616	-\$3,947,488

Results

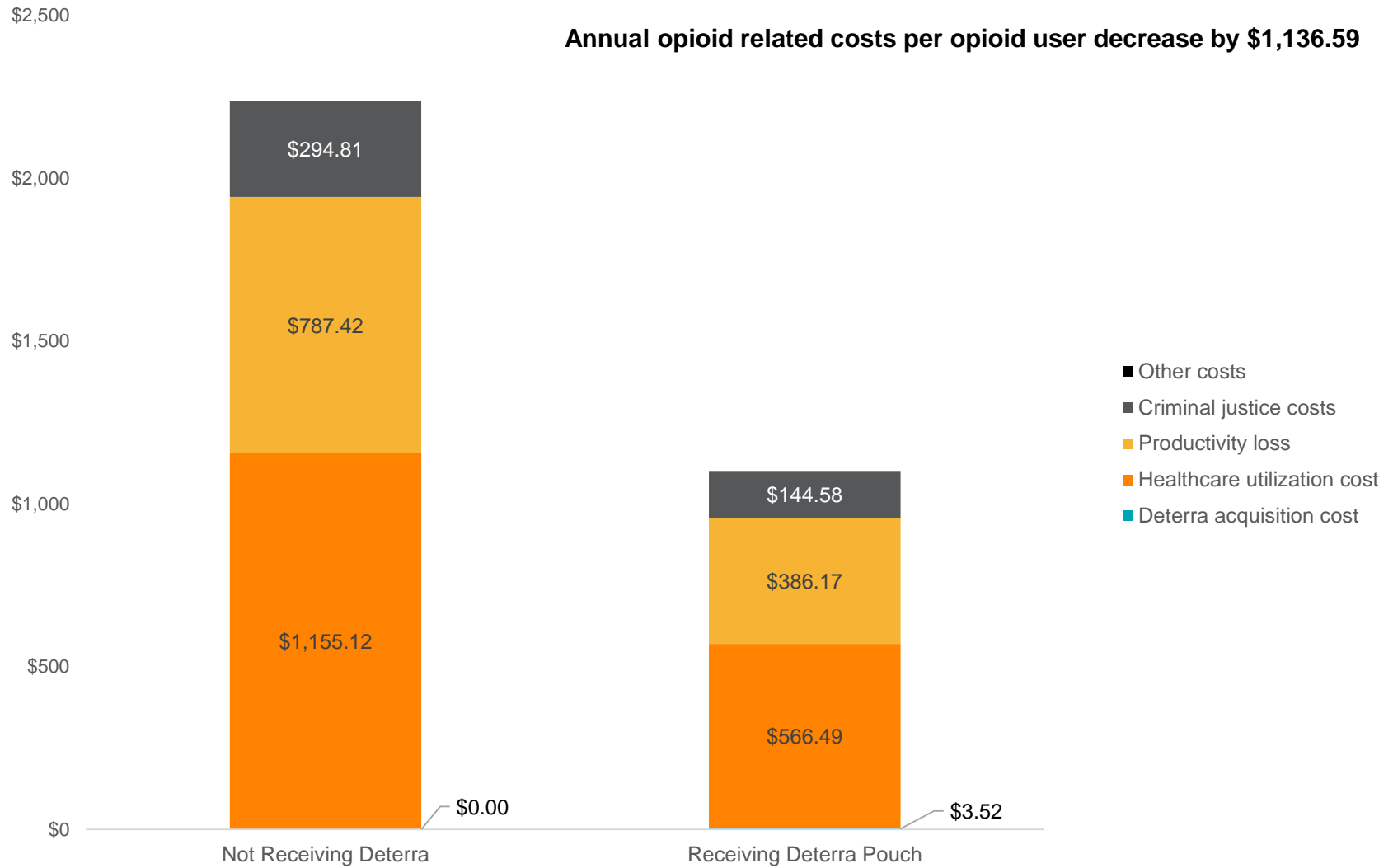
Cumulative reduction in costs by Year 1 is \$986,872



Results**Annual Societal Costs per Opioid User/ Household with Leftover Opioid with and without Deterra Pouch**

	Not Receiving Deterra	Receiving Deterra Pouch
Deterra acquisition cost	\$0.00	\$3.52
Healthcare utilization cost	\$1,155.12	\$566.49
Productivity loss	\$787.42	\$386.17
Criminal justice costs	\$294.81	\$144.58
Other costs	\$0.00	\$0.00
Total costs	\$2,237.35	\$1,100.76

Results



Results

Clinical Impact

	Year 0	Year 1	Year 2	Year 3	Year 4
ODU Cases	1,272	1,235	1,235	1,235	1,235
ODU Related Death	62	60	60	60	60

Deaths are calculated based on mortality rate of 48.6 per 1,000 person-years reported by Hser et al, 2017 (Table 2).

Inputs

Population Details

Parameter	Value
Number of households/POUCH	53,222
Households with unused opic	34.6%

Perspective

Include Indirect Costs	Yes
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Distribution

Distribution Model	Community
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Clinical Outcomes: Status Quo

Parameter	Value
Rate of OUD	
Individual prescribed opioid	1.9%
Family member	1.0%
Non-family member	0.7%
Individuals impacted	
Average Family Size	2.6

The Deterra® Drug Deactivation System Improves Proper Drug Disposal Behaviors

As reported by a study published in *JAMA Surgery* and conducted by the University of Michigan Opioid Prescribing Engagement Network and partially funded by the National Institute on Drug Abuse (NIDA)

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Patients had leftover opioids

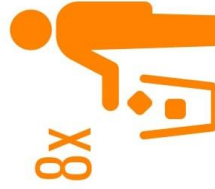
82%

who had leftover opioids either disposed of them improperly or did not dispose of them at all

When given a Deterra Drug Deactivation Pouch, that percentage dropped to:

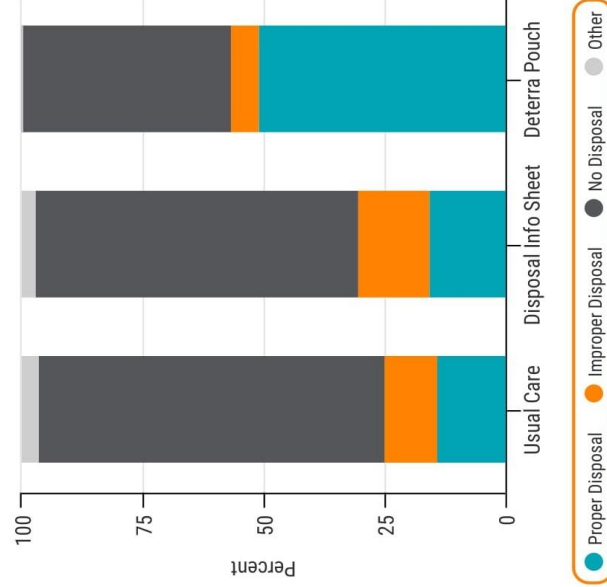
48%

Significantly reducing the amount of drugs flushed down the sink or toilet and thrown in the trash without proper deactivation - reducing both the risk for environmental contamination and diversion



More likely to PROPERLY dispose of opioids when given the Deterra® pouch

Disposal Behavior by Intervention



Disposal Definition for this Infographic

Proper = Drug deactivation using pouch prior to disposal in trash, Drug Take Back Event, Law Enforcement, Authorized Pharmacy

Improper = Toilet, Sink, Trash as is, Trash mixed with unpalatable substance

"Our findings suggest that simple, low-cost interventions such as in-home deactivation methods, could reduce the number unused opioids available for diversion. Although this study represents data from outpatient surgical procedures at a single academic center, it highlights the importance of providing accessible disposal methods to reduce the flow of excess opioids into communities."

- Study Authors

Deterra recipients:

- Flushed less medication
- Less likely to improperly dispose in trash
- Contributed to 40% fewer households with leftover opioids

www.deterrasystems.com

Source: Brummett CM et al. Effect of an Activated Charcoal Bag on Disposal of Unused Opioids After an Outpatient Surgical Procedure: A Randomized Clinical Trial. *JAMA Surg.* March 2019