



<b>Title:</b>	Intentional and Unintentional Prescription Opioid Exposures in Italy, Germany and the United States
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#### **Abstract:**

**Background:** Prescription opioid abuse in the US has been deemed epidemic. However, abuse in other countries is not well studied. This study provides abuse rate data for three common opioids over a 5 year period in Italy, US, and Northwest Germany.

**Methods:** Human exposures to oxycodone, buprenorphine, and methadone reported from 2007-2011 were obtained from Milan and Göttingen Poison Centers (PCs). US data were obtained from PCs participating in the RADARS® System. PCs in all 3 countries manage calls from healthcare providers and the public. Milan PC handles 65-70% of all calls in Italy. Rates are expressed as number of exposures/100,000 population separately for intentional (IE) and unintentional (UE) exposures. IEs are those with a reason of suicide, abuse, misuse, and unknown intentional. UEs include unintentional general, unsupervised ingestions or therapeutic errors.

**Results:** From 2007 to 2011, Italy PC rates of IE to oxycodone increased dramatically while methadone remained stable and buprenorphine decreased. UE rates increased for all 3 drugs. In Northwest Germany IE and UE rates for all 3 drugs increased with the exception of UE to buprenorphine. In the US, methadone is the only drug that had decreased exposure rates.

**Conclusion:** Rising rates of opioid exposures are not unique to US. Perhaps the most concerning is the dramatic rise in unintentional exposures since these are most often accidental unsupervised ingestions in children which are life-threatening. Transatlantic data collection is possible with comparably few resources.

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Country	Exposure Type	<u>Exposures/100,000 population</u>					% Change 2007-2011
		2007	2008	2009	2010	2011	
<b>Oxycodone</b>							
Germany	Intentional	0.152	0.205	0.212	0.288	0.288	90.0
Italy		0.003	0.003	0.029	0.033	0.025	614.7
United States		3.238	3.634	4.122	4.496	4.344	34.2
Germany	Unintentional	0.030	0.114	0.045	0.061	0.174	475.0
Italy		0.005	0.003	0.010	0.010	0.018	249.4
United States		1.507	1.696	1.947	1.997	1.758	13.8
<b>Buprenorphine</b>							
Germany	Intentional	0.098	0.098	0.121	0.106	0.129	30.8
Italy		0.033	0.045	0.021	0.014	0.011	-64.9
United States		0.290	0.438	0.535	0.610	0.589	103.4
Germany	Unintentional	0.061	0.023	0.030	0.008	0.061	0.0
Italy		0.005	0.009	0.012	0.010	0.008	58.8
United States		0.225	0.397	0.593	0.659	0.483	114.5
<b>Methadone</b>							
Germany	Intentional	0.295	0.250	0.295	0.326	0.417	41.0
Italy		0.076	0.072	0.069	0.084	0.074	-2.5
United States		1.277	1.170	1.270	1.286	1.191	-6.7
Germany	Unintentional	0.076	0.083	0.098	0.121	0.106	40.0
Italy		0.021	0.028	0.022	0.029	0.023	11.2
United States		0.354	0.322	0.373	0.337	0.280	21.1