control of chronic lower back pain (scoliosis and spondylolisthesis L5-S1). History was positive for human immunodeficiency virus (HIV) (treated with emtricitabine-tenofovir 200 mg/245 mg, atazanavir 300 mg and ritonavir 100 mg, all once daily) and hypertension (treated with losartan 12.5 mg, once daily). He progressively increased the oxycodone dosage to obtain analgesic effect. At his first admission he was taking 80 mg in association with acetaminophen (3 g/day). Despite this dosage, he experienced withdrawal symptoms (sweating, nausea, agitation and diarrhea). At admission, blood oxycodone, oxymorphone, noroxycodone and noroxymorphone concentrations were 70.42, 0.0, 9.4, and 0.67 ng/mL, respectively. Oxycodone concentration decreased progressively once he stopped the drug. During hospitalization the addiction symptoms were successfully controlled with clonidine and benzodiazepines. To obtain pain control, he underwent two peridural injections of methylprednisolone 80 mg and ropivacaine. A surgical treatment of spondylolisthesis was finally suggested. Genotyping for CYP2D6 was performed showing that our patient was a poor metabolizer (PM); CYP3A4 activity was normal.

Conclusion: In our case, CYP polymorphism (CYP2D6 PM) was the cause of the lack of response to the analgesic therapy that led the patient to progressively increase the oxycodone dosage. The oxycodone concentration was higher than usually detected in treated patients, even if subtoxic. Undetectable concentrations of the main analgesic metabolite (oxymorphone) resulted in lack of clinical response in this case. Clinicians should be aware that the lack of response to prescribed therapy can be a subtle cause of drug abuse. Evaluation of potential drug interactions and CYP polymorphism genotyping is advisable to choose the best therapy and the targeted dose for each patient.

39. Non-medical use of prescription stimulants in Europe in the Non-**Medical Use of Prescription Drug** (NMURx) National Surveys

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Objective: Non-medical use (NMU) of prescription stimulants has been described in Europe; however, cross-country comparisons can be difficult. Using a harmonized questionnaire and sampling methodology, we estimated the prevalence of prescription stimulant NMU in five European countries.

Methods: NMURx is a series of cross-sectional online surveys. NMURx collects data from the adult general population on NMU of prescription drugs, as well as demographics and behaviors. NMU was defined as using a medication without a doctor's prescription or for any reason other than what was recommended by one's doctor. NMURx data from France (2Q2017, n = 10,012), Germany (4Q2017, n = 15,051), Italy (2Q2017, n = 10,084), Spain (4Q2017, n = 10,062), and the UK (1Q2017, n = 10,004) were analyzed. Poststratification weights were applied to represent national adult population distributions. National rates of past 12 month NMU were calculated by country. Demographics and other risk factors were calculated among those who reported last year NMU.

Results: Estimated rates of stimulant NMU were highest in Spain (960.2 per 100,000 population, 95%CI 772.3-1148.1), followed by Germany (668.2, 95%CI 522-814.4), Italy (563.2, 95%CI 409.1-717.4), France (585.7, 95%CI 428.6-742.7), and the UK (397.6, 95% CI 209.2-586). In Spain, Italy, Germany, and France, a majority of those who non-medically used stimulants were young and male, and more likely to be current students compared to the general population (Table 1). Illicit drug use, previous treatment for substance abuse, and substantial or severe Drug Abuse Screening Test (DAST-10) scores were also more common among those who non-medically used. These subgroup estimates were not calculated for the UK because too few respondents endorsed stimulant NMU to perform additional analyses.

Conclusion: In four of five European countries, NMURx respondents with prescription stimulant NMU were more likely to be young, male, current students, have used illicit drugs, have

Table 1. Percent of NMURx respondents with stimulant nonmedical use (NMU) in the past 12 months versus percent of all respondents (95% CI).

Respondent parameters	France		Germany		ltaly		Spain	
	Stimulant NMU	General Population						
Aged <25 years	20.6%	10.3%	38.1%	8.9%	18.3%	8.3%	33.9%	11.4%
	(7.3-34.0)	(9.6-11.0)	(26.5-49.8)	(8.4-9.5)	(8.2-28.3)	(7.7-8.8)	(23.2-44.6)	(10.7-12.0)
Aged 25-34 years	58.5%	15.5%	27.7%	15.4% (14.8-	32.3%	13.4%	27.4%	14.4%
	(43.5-73.5)	(14.8-16.3)	(17.4-37.9)	16.0)	(20.9-43.7)	(12.9-14.0)	(18.3-36.5)	(13.8-15.0)
Male	83.8%	47.8%	76.8%	48.8%	52.3%	48.0%	69.3%	48.8%
	(72.4-95.1)	(46.7-48.8)	(68.0-85.5)	(47.9-49.6)	(38.4-66.2)	(46.9-49.1)	(58.8-79.8)	(47.6-49.9)
Current student	40.2%	7.8%	28.5%	8.0%	32.8%	8.6%	44.8%	13.6%
	(25.2-55.3)	(7.3-8.4)	(17.7-39.2)	(7.5-8.5)	(19.8-45.8)	(8.1-9.1)	(34.0-55.7)	(12.8-14.3)
Lifetime illicit drug use	50.8%	18.4%	68.2%	25.5%	53.7%	20.8%	61.5%	24.5%
	(35.6-65.9)	(17.6-19.2)	(58.0-78.5)	(24.8-26.2)	(40.1-67.3)	(19.9-21.6)	(51.2-71.8)	(23.6-25.5)
Previous sub- stance abuse treatment	32.1%	1.9%	28.7%	1.9%	9.4%	0.7%	25.1%	2.3%
	(18.0-46.2)	(1.6-2.1)	(17.9-39.4)	(1.7-2.2)	(2.5-16.4)	(0.5-0.9)	(16.0-34.1)	(2.0-2.6)
DAST-10	11.9%	0.9%	8.6%	0.9%	6.8%	0.6%	12.4%	1.2%
Substantial (6-8)	(1.9-21.9)	(0.7-1.1)	(1.9-15.4)	(0.8-1.1)	(0.8-12.7)	(0.4-0.7)	(5.3-19.5)	(1.0-1.5)
DAST-10	8.0%	0.9%	1.6%	0.4%	1.3%	0.4%	4.6%	0.6%
Severe (9-10)	(0.0-16.8)	(0.7-1.1)	(0.0-3.9)	(0.3-0.5)	(0.0-3.8)	(0.3-0.6)	(0.1-9.2)	(0.4-0.7)



sought substance abuse treatment, and have higher DAST-10 scores than the general population.

40. Recreational ingestion of a compounded topical analgesic presenting with coma and cardiotoxicity

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Objective: Compounded topical analgesics have historically included nonsteroidal anti-inflammatory medications or local anesthetics, however, newer compounded formulas are made with a range of pharmaceuticals, despite scant evidence to support their use and no Food and Drug Administration (FDA) regulation. Few reported cases of overdose exist in the literature. We describe a novel overdose involving a compounded topical analgesic with subsequent development of mixed toxidrome reflecting the constituent ingredients.

Case report: A 45-year-old man presented to the emergency department (ED) after he ingested his compounded topical analgesic. He was found unresponsive with the empty container and large amounts of the medication in his oropharynx. The medicine consumed by the patient contained 6% gabapentin, 2% baclofen, 2% amitriptyline, 1.75% lidocaine, 1.75% prilocaine, and 0.5% meloxicam with 360 g dispensed. Initial Glasgow Coma Score (GCS) was 3 and he required immediate intubation for respiratory failure. Electrocardiogram showed mild, new QRS interval prolongation of 104 ms and urine drug screen was positive for tricyclic antidepressants, which he was not otherwise prescribed. QRS narrowed to 94 ms after sodium bicarbonate, and he was admitted to the intensive care unit on a bicarbonate infusion. He was unresponsive to all stimuli for 24 hours without iatrogenic sedation. His mental status slowly improved and he was extubated on hospital day three. The patient left against medical advice on day four.

Conclusion: This patient's clinical presentation was consistent with a mixed toxidrome reflecting the constituent pharmaceuticals in the compounded product, which contained 21600 mg gabapentin, 7200 mg baclofen, 7200 mg amitriptyline, 6300 mg lidocaine, 6300 mg prilocaine, and 1800 mg meloxicam. The patient was comatose, with respiratory failure requiring mechanical ventilation. Central nervous system depression resulted from a combination of high dose gabapentin and baclofen. The patient additionally manifested signs of sodium channel blockade related to amitriptyline toxicity. This case describes a novel overdose on a compounded topical analgesic composed of gabapentin, baclofen, amitriptyline, lidocaine, prilocaine, and meloxicam. Given the ease of ingestion of multiple drugs with diverse mechanisms of action in concentrations vastly exceeding those of individual oral doses, these compounded agents have potential for high morbidity and mortality.

41. Pyoderma gangrenosum from the cocaine adulterant levamisole

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Objective: To present the case of a patient who developed the unusual cutaneous manifestation of pyoderma gangrenosum, attributed to the cocaine adulterant levamisole.

Case report: A 40-year-old female with history of heroin and cocaine use presented to the emergency department for evaluation of multiple wounds on her right forearm that had developed during the preceding week. She also noted black areas on her fingertips and ear that had been present for 1 week. She denied any fever, chills, numbness, or sensory changes. She denied ongoing injection drug use but reported insufflating cocaine 1 week ago. Vital signs showed temperature 36.6 °C, blood pressure 110/62 mmHg, pulse 64, and respiratory rate 16. Examination revealed an extensive area of increased warmth, erythema and induration on the dorsum of her right forearm that was tender to palpation, with 3 large, discrete, non-healing ulcers covered in fibrinous granulation tissue. There was no expressible purulent drainage. Small necrotic nodules were noted on the fingertips of her bilateral hands. A serum drug of abuse screen (DOA9) was positive for benzodiazepines and cocaine metabolites. Hepatitis C antibody was positive, but viral RNA was not detected. Human immunodeficiency virus (HIV) testing was negative. Serologic testing was notable for positive antinuclear antibodies (ANA), positive perinuclear anti-neutrophil cytoplasmic antibodies (p-ANCA) > 1:640, and chromatin antibody concentration 5.6 IU/mL, which was consistent with levamisole-induced vasculitis. She was evaluated by plastic surgery and dermatology who concurred with the diagnosis of levamisole-induced vasculitis with resultant pyoderma gangrenosum. Her ulcerations improved with supportive care during her hospitalization, but she was lost to follow-up after discharge.

Conclusion: Cocaine abuse has known associated morbidity and mortality. Levamisole has been seen as an adulterant in cocaine since 2003 and has been found in up to 70% of cocaine in the US [1]. Levamisole is as an anthelminthic medication, but its use was discontinued in 1999 because of associated leukopenia, agranulocytosis, and cutaneous vasculitis [2]. Due to widespread adulteration of cocaine with levamisole, it is important to be aware of adverse effects related to its use.

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42. Self-inflicted severe genital friction burns secondary to hypersexual response from synthetic cathinone and cocaine use

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Objective: Synthetic cathinones, known colloquially as "bath salts", are sympathomimetic substances chemically similar to cathinone, a naturally occurring substance found in the khat plant (Catha edulis), which are used recreationally for stimulant and euphoric effects. Hypersexuality is a complex behavioral response that has been described as sequelae of sympathomimetic abuse in other phenylethylamine compounds. We present a unique case of intravenous synthetic cathinone abuse leading to hypersexual reaction causing self-inflicted genital friction burns.