

Multimedia Appendix 2: Themes, definitions, and examples.

Theme and definition	Frequency n (%)	Example	Photo description and caption
<p>Use-behavior Posts where image solely depicted codeine or lean (a preparation of promethazine or codeine with ice, and soda; occasionally hard candies are added, mostly commonly Jolly Ranchers)</p>	50 (50%)		<p>Image of pizzas on a table with three cups of lean, a bottle of Captain Morgan rum, and Ciroc vodka. Caption reads: THREE 18" PIZZAS IN THIS BITCH TIME TO FEAST UP!!!! #pizza #feast #pizzas #hungry #food #foodporn #foodgasm #italian #lean #sizzurp #syrup #syrup #codeine #ciroc #rum #vodka #cheese #eat</p>
<p>Preparation Still images or videos of lean being made.</p>	18 (18%)		<p>Image of purple syrup being poured into cup with ice. Caption reads: fountains #codeine #Actavis #drank #purpleoil #MustBeNice #codeinecups #poedup #throwedoff #lean #Wockhardt #hydrocodone #Texastea #leanin #Realsippersonly #Leanteam #purplepotion #doublecup #Dirtysprite #sipslow #Expensivetaste #sizzurp</p>
<p>Polysubstance use Posts that displayed the misuse of codeine alongside the use of other substances, such as alcohol and cannabis.</p>	11 (11%)		<p>Soda bottle with layer of purple liquid at the bottom, surrounded by a water pipe and cannabis concentrate. Caption reads: kickin the weekend off right (devil emoji) (ok-hand symbol) (fire symbol) #oilmob #Friday #bitxhimhigh #losangeles #oilmob #lostinthesauce</p>
<p>Sale Images or videos that displayed bulk quantities of codeine and also had indication in the username, hashtags, or free-text that suggested sale</p>	11 (11%)		<p>Image of a bag full of promethazine or codeine cough syrup. Caption reads: available now #Percs #lean #mdma #promethazine #Hitech #xanax #opanas #oxycodone #percs #molly #Ketamine #hydrocodone #dilaudid #morphine #Methadone #Ritalin #Dilaudid #morphine #Methadone #Ritalin #dilaudid #valium #Diazepam #hydrocodone #Suboxone #actavis And many more hard to get pills. Selling marijuana seeds and grass kush contact me if you like to order some. Serious inquiries only. DM or Call/text....###-###-#### (number censored)</p>

<p>Pop culture Posts where codeine misuse is associated with pop-culture symbols, icons, or personas</p>	<p>4 (4%)</p>		<p>Image of pokemon character, Grimer, coming out of a styrofoam cup. Caption reads: #grimer #muc #pokemon #pokemongo #lepurp #101elysees #paris #worldfamous #prowein #violet #purple #violetdrink #doublecup #leanified #bartender #vodka #moonshine #djscrew #dirtysouth #sprite #vaporwave #mixology #seapunk #cocktail #party #lean</p>
<p>Commercialization Posts that displayed the sale of products bearing common symbols or language associated with codeine misuse. In contrast to sale, commercialization identified posts that sought to sell codeine-related products, not codeine itself.</p>	<p>4 (4%)</p>		<p>Image of a bottle koozie with the word "Sizzurp" written on it. Caption reads: when you're in the #Smithsonian #GiftShop and you discover the #Sizzurp #Socks and realize the #Government truly is a #Sham and the #WarOnDrugs is a #MoneyMakingScheme. #STSS #SpeakTheTruthSaturday</p>
<p>Hip-Hop Posts where hip-hop artists were portrayed in the image or video, especially those whose music contain references to codeine misuse (eg, 36 Mafia, Future, and Lil' Wayne).</p>	<p>3 (3%)</p>		<p>Image of hip-hop artist Future floating in purple liquid. Caption reads: hard working ass N****!! @future #purplereign #codeinecrazy #bloodsweatandtears</p>