NLP Algorithm:

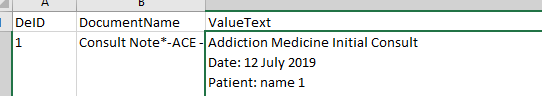
1. Dictionaries:

|  |  |
| --- | --- |
| Dictionary | Key words |
| Opioid terms | buprenorphine, codeine, dihydrocodeine, dilaudid, fentanyl, heroin, hydrocodone, hydromorphone, levorphanol, lortab, meperidine, methadone, morphine, naloxone, naltrexone, narcotic, opanum, opiate, opioid, opium, oxycodone, oxymorphone, percocet, pentazocine, suboxone, subutex, tapentadol, tramadol, vicodin, vivitrol, oxy, sub |
| Use disorder terms | Abuse, addict, dependence, misuse, overdoes, over use, use disorder, injection, IVDA, IVDU, IV drug use, IV drug abuse |
| Negation terms | absence of, deny, do not, exclude, lack of, negative, never, no, no evidence, no history, no sign, not observed, not present, without, without evidence, suspect |
| Specialized terms | First Bridge Clinic, The Bridge, IVDA/intranasal: Denies, Illicits: Denies |

1. Parsing rules:

|  |  |  |
| --- | --- | --- |
| Parsing rules | Rule contracture | Example |
| Rule 1 | Opioid term + <= 3 tokens + use disorder term | Opioid use disorder  Opiate dependence |
| Rule 2 | Problem use term + <= 3 valid tokens + opioid terms | Addicted to suboxone |
| Rule 3 | Negation term + <=3 valid tokens + opioid terms + use disorder term | Denies opioid addiction |
| Rule 4 | Opioid term + use disorder term + “is” + negation term | Opioid dependence is denied |
| Rule 5 | Specialized terms | First Bridge Clinic  IVDA/intranasal: Denies  Illicits: Denies |

1. File examples: testingcases



1. Export file example

|  |  |  |  |
| --- | --- | --- | --- |
| **DeID** | **DocumentName** | **Keyterms** | **modifier** |
| 1 | Consult Note\*-ACE - Addiction Consult Education Team | opioid use disorder | Positive |
| 1 | Consult Note\*-ACE - Addiction Consult Education Team | history of opioid use | Positive |
| 2 | Discharge Summary Final | denies any opioids dependency | negative |
| 2 | Discharge Summary Final | opioids dependency | positive |