

Opioid-Related Death in Massachusetts

Simulated Demo

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This project made use of publically available death records of individuals who died in Massachusetts, USA between 2000 and 2017 with an opioid-related ICD10 code assigned to them as a cause of death. The data source presented several challenges, not least among them, errors due to manual entry of information. However, the greatest hurdle were changes to data format (including the addition of over 600 variables) in mid-2014. As death information is publically available, variable names are true to the data source.

```
# Variables for data 2000-mid 2014
names(pre2014)
```

```
## [1] "CERT" "OCCTOWNCODE" "FACCODE"
## [4] "RES_CITY_CODE" "DOD" "FED_TAPE_DEMO_FLAG"
## [7] "SOC_SEC_FLAG" "RES_ZIP_4" "AUTOPSY"
## [10] "CERT_TITLE" "SEX" "MARITAL"
## [13] "AGE_AT_DEATH" "NATIVITY" "OUT_OF_STATE_GEOCODE"
## [16] "RES_DISTRICT" "OCC_DISTRICT" "OCCUPATION_CODE"
## [19] "RES_HSA" "OCCPLOOK" "RES_COUNTY_CODE"
## [22] "OCC_HSA" "DCOUNTY" "OOS_DCERT"
## [25] "ALIAS_INDICATOR" "AKA_1_LNAME" "AKA_1_GNAME"
## [28] "AKA_1_MINT" "ME_CR_CONT" "AKA_2_LNAME"
## [31] "AKA_2_GNAME" "AGEOTHER" "DOB_NUMERIC"
## [34] "RES_ADDR_NUM" "RES_ADDR1" "RES_STREET_DESIG"
## [37] "RES_ZIP" "SPOUSE_GNAME" "SPOUSE_LNAME"
## [40] "BPLACE_CITY" "BPLACE_ST" "OCCUP"
## [43] "INDUST" "FATHER_BSTATE" "MOTHER_BSTATE"
## [46] "INFO_NME" "INFO_LST_NME" "INFO_ADDR_NUM"
## [49] "INFO_ADDR1" "INFO_STREET_DESIG" "INFO_CITY"
## [52] "INFO_STATE" "INFO_ZIP" "FDIR_LIC_NUM"
## [55] "DPLACE" "VET_STAT" "DETHNIC_HISPANIC"
## [58] "RACE" "DEDUC" "DISPOSITION"
## [61] "AUTOPSY_F_USED" "MANNER" "INJRY_WORK"
## [64] "INJRY_PLACE" "RN_PRONOUNCE" "DNAME_CITY"
## [67] "DSTATEL" "RES_CITY" "RES_STATE"
## [70] "INFO_RELATION" "TRX_CAUSE_ACME" "TRX_REC_AXIS_CD"
## [73] "DLASTNAME" "DFIRSTNAME" "DMIDDLENAME"
## [76] "DCENSUSTRACT" "DMAIDENNAME"
```

```
# Variables for data late 2014-2017
names(post2014)
```

```
## [1] "VRV_FILED_LOCATION_ID" "VRV_REC_INIT_USER_ID"
## [3] "VRV_SECONDARY_REC_ID" "VRV_ORIGINATING_REC_ID"
## [5] "VRV_REC_REPLACE_NBR" "SFN_NUM"
## [7] "DOB" "DOI"
## [9] "CERT_SIGN_DATE" "DETHNIC1"
## [11] "DETHNIC2" "DETHNIC3"
```

## [13]	"DETHNIC4"	"DETHNIC5"
## [15]	"DETHNIC_NO"	"RACE1"
## [17]	"RACE2"	"RACE3"
## [19]	"RACE16"	"RACE17"
## [21]	"RACE4"	"RACE5"
## [23]	"RACE6"	"RACE7"
## [25]	"RACE8"	"RACE9"
## [27]	"RACE10"	"RACE18"
## [29]	"RACE19"	"RACE11"
## [31]	"RACE12"	"RACE13"
## [33]	"RACE14"	"RACE20"
## [35]	"RACE21"	"RACE15"
## [37]	"RACE22"	"RACE23"
## [39]	"INDUST"	"ME_CR_CONT"
## [41]	"CODIA"	"INTIA"
## [43]	"OCCUP"	"CODIB"
## [45]	"INTIB"	"CODIC"
## [47]	"INTIC"	"CODID"
## [49]	"INTID"	"CONDII"
## [51]	"AUTOPSY"	"AUTOPSY_F_AVAIL"
## [53]	"TOBAC"	"PREG"
## [55]	"MANNER"	"INJRY_PLACEL"
## [57]	"INJRY_WORK"	"INJRY_CITY"
## [59]	"INJRY_STATE"	"INJRY_L"
## [61]	"INJRY_ZIP9"	"CERT_DESIG"
## [63]	"CERT_TITLE"	"CERT_LIC_NUM"
## [65]	"DEDUC"	"FATHER_GNAME"
## [67]	"FATHER_MNAME"	"FATHER_LNAME"
## [69]	"FATHER_SUFF"	"MOTHER_GNAME"
## [71]	"MOTHER_MNAME"	"MOTHER_LNAME"
## [73]	"MOTHER_SUFF"	"INFO_NME"
## [75]	"INFO_RELATION"	"INFO_CITY"
## [77]	"INFO_ZIP"	"INFO_STATE"
## [79]	"INFO_COUNTRY"	"DPLACE"
## [81]	"DPLACE_OTHR"	"DHOSPITALL"
## [83]	"DFACILITYL"	"DNAME_CITY"
## [85]	"DCOUNTY"	"DSTATEL"
## [87]	"DZIP9"	"DISP"
## [89]	"DISPL"	"DISP_NME"
## [91]	"DISP_CTY"	"DISP_ST"
## [93]	"DISP_CNTRY"	"EMB_LIC_NUM"
## [95]	"GNAME"	"MNAME"
## [97]	"LNAME"	"SUFF"
## [99]	"SEX"	"AGE1"
## [101]	"AGE2"	"AGE3"
## [103]	"AGE4"	"AGE5"
## [105]	"AGETYPE"	"BPLACE_CNT"
## [107]	"BPLACE_ST"	"BPLACE_CITY"
## [109]	"RES_CITY"	"RES_LIMITS"
## [111]	"RES_ZIP"	"RES_COUNTRY"
## [113]	"RES_STATE"	"RES_COUNTRY"
## [115]	"ARMED"	"MARITAL"
## [117]	"TOD_IN"	"PRO_DATE"
## [119]	"PRO_TIME_IN"	"SPOUSE_GNAME"

## [121] "SPOUSE_MNAME"	"SPOUSE_LNAME"
## [123] "SPOUSE_SUFFIX"	"FL_VOIDED"
## [125] "FNRL_LIC_NUM"	"FNRL_NME"
## [127] "FNRL_CITY"	"FNRL_ZIPCD"
## [129] "FDIR_FRST_NME"	"FDIR_MIDD_NME"
## [131] "FDIR_LST_NME"	"FDIR_SUFFIX"
## [133] "FDIR_LIC_NUM"	"EMB_FRST_NME"
## [135] "EMB_MIDD_NME"	"EMB_LST_NME"
## [137] "INJRY_COUNTRY"	"NOTES"
## [139] "CERT_GNAME"	"CERT_MNAME"
## [141] "CERT_LNAME"	"CERT_SUFF"
## [143] "CERT_NPI_NUM"	"CERT_CNTRY"
## [145] "CERT_STATE"	"CERT_CITY"
## [147] "CERT_ZIPCD"	"OCCUP_CODE"
## [149] "INDUST_CODE"	"SEX_BYPASS"
## [151] "DEDUC_BYPASS"	"PREG_BYPASS"
## [153] "DETHNIC_UKN"	"RACE_UNK"
## [155] "DATE_RECEIVED"	"RES_STATE_FIPS_CD"
## [157] "RES_STATE_NCHS_CD"	"RES_COUNTY_FIPS_CD"
## [159] "RES_COUNTY_NCHS_CD"	"DSTATEL_FIPS_CD"
## [161] "DSTATEL_NCHS_CD"	"DCOUNTY_FIPS_CD"
## [163] "DCOUNTY_NCHS_CD"	"DNAME_FIPS_CD"
## [165] "BPLACE_CNT_FIPS_CD"	"BPLACE_ST_FIPS_CD"
## [167] "BPLACE_ST_NCHS_CD"	"RES_COUNTRY_FIPS_CD"
## [169] "INFO_MIDD_NME"	"INFO_LST_NME"
## [171] "INFO_SUFFIX"	"VRV_REGISTERED_FLAG"
## [173] "VRV_BASELINE_RECORD_ID"	"EXP_MICAR_SENT_FL"
## [175] "EMB_SUFFIX"	"DATE_QUAL_DOD"
## [177] "DATE_QUAL_ABOUT"	"INFO_RELATION_LIST"
## [179] "FL_AMENDED"	"DATE_OF_AMENDMENT"
## [181] "TOI_IND"	"ANNOTATIONS"
## [183] "IND_RELEASE_2_STATE"	"VRV_RECORD_PROTECTION_ID"
## [185] "PRO_TIME_HRS"	"PRO_TIME_MIN"
## [187] "EXP_NCHS_SENT_FL"	"EXP_SSA_SENT_FL"
## [189] "EXP_ISE_SENT_FL"	"VRV_FUNERAL_HOME_LOC_ID"
## [191] "LINE1"	"LINE2"
## [193] "LINE3"	"LINE4"
## [195] "LINE5"	"LINE6"
## [197] "LINE7"	"LINE8"
## [199] "LINE9"	"LINE10"
## [201] "LINE11"	"LINE12"
## [203] "LINE13"	"LINE14"
## [205] "LINE15"	"LINE16"
## [207] "LINE17"	"LINE18"
## [209] "LINE19"	"LINE20"
## [211] "SEQ1"	"SEQ2"
## [213] "SEQ3"	"SEQ4"
## [215] "SEQ5"	"SEQ6"
## [217] "SEQ7"	"SEQ8"
## [219] "SEQ9"	"NATURE_OF_INJURY_FLAG20"
## [221] "NATURE_OF_INJURY_FLAG17"	"NATURE_OF_INJURY_FLAG18"
## [223] "NATURE_OF_INJURY_FLAG19"	"SEQ10"
## [225] "SEQ11"	"SEQ12"
## [227] "SEQ13"	"SEQ14"

## [229]	"SEQ15"	"SEQ16"
## [231]	"SEQ17"	"SEQ18"
## [233]	"SEQ19"	"SEQ20"
## [235]	"CAUSE_CATEGORY1"	"CAUSE_CATEGORY2"
## [237]	"CAUSE_CATEGORY3"	"CAUSE_CATEGORY4"
## [239]	"CAUSE_CATEGORY5"	"CAUSE_CATEGORY6"
## [241]	"CAUSE_CATEGORY7"	"CAUSE_CATEGORY8"
## [243]	"CAUSE_CATEGORY9"	"CAUSE_CATEGORY10"
## [245]	"CAUSE_CATEGORY11"	"CAUSE_CATEGORY12"
## [247]	"CAUSE_CATEGORY13"	"CAUSE_CATEGORY14"
## [249]	"CAUSE_CATEGORY15"	"CAUSE_CATEGORY16"
## [251]	"CAUSE_CATEGORY17"	"CAUSE_CATEGORY18"
## [253]	"CAUSE_CATEGORY19"	"CAUSE_CATEGORY20"
## [255]	"NATURE_OF_INJURY_FLAG1"	"NATURE_OF_INJURY_FLAG2"
## [257]	"NATURE_OF_INJURY_FLAG3"	"NATURE_OF_INJURY_FLAG4"
## [259]	"NATURE_OF_INJURY_FLAG5"	"NATURE_OF_INJURY_FLAG6"
## [261]	"NATURE_OF_INJURY_FLAG7"	"NATURE_OF_INJURY_FLAG8"
## [263]	"NATURE_OF_INJURY_FLAG9"	"NATURE_OF_INJURY_FLAG10"
## [265]	"NATURE_OF_INJURY_FLAG11"	"NATURE_OF_INJURY_FLAG12"
## [267]	"NATURE_OF_INJURY_FLAG13"	"NATURE_OF_INJURY_FLAG14"
## [269]	"NATURE_OF_INJURY_FLAG15"	"NATURE_OF_INJURY_FLAG16"
## [271]	"DCOUNTRY"	"DOD"
## [273]	"DOD_NUMERIC"	"DADDR1"
## [275]	"DADDR2"	"RES_ADDR1"
## [277]	"RES_ADDR2"	"INFO_ADDR1"
## [279]	"INFO_ADDR2"	"FNRL_ADDR1"
## [281]	"FNRL_ADDR2"	"INJRY_ADDR1"
## [283]	"INJRY_ADDR2"	"CERT_ADDR1"
## [285]	"CERT_ADDR2"	"TRX_INT_REJECT_CD"
## [287]	"TRX_SYS_REJECT_CD"	"TRX_INJRY_PLACE"
## [289]	"TRX_CAUSE_MANUAL"	"TRX_CAUSE_ACME"
## [291]	"TRX_FLG"	"TRX_REC_AXIS_CD"
## [293]	"DATE_RECEIVED_NUMERIC"	"SFN_NUM_OOS"
## [295]	"FL_CURRENT"	"FL_RECOVERED"
## [297]	"DOD_4_FD"	"TOD"
## [299]	"TOI"	"DISP_BURIAL"
## [301]	"DISP_CREMATION"	"DISP_DONATION"
## [303]	"DISP_ENTOMBMENT"	"DISP_REMOVAL"
## [305]	"DISP_OTHER"	"TIME_QUAL_DOD"
## [307]	"TOI_FOUND"	"INJRY_TRANSPRT"
## [309]	"INJRY_TRANSPRT_OTHER"	"AGE1_CALC"
## [311]	"FNRL_CONTACT"	"ME_CASE_NUM"
## [313]	"CERT_OTHER"	"CERT_CONTACT"
## [315]	"LNAME_MAIDEN"	"DOD_4_FD_DISCREPANCY"
## [317]	"RES_ADDR_VALID"	"DISP_APPROVAL"
## [319]	"AUTOPSY_UNK"	"MANNER_L"
## [321]	"ME_GNAME"	"ME_LNAME"
## [323]	"ME_DOB"	"REQUEST_4_INFO_FL"
## [325]	"VRV_MC_LOCATION_ID"	"SPOUSE_NAME_UNK"
## [327]	"INJRY_ADDR_UNK"	"FL_START_CASE"
## [329]	"LNAME_SAME_AS_MAIDEN"	"ME_SEX"
## [331]	"CERT_CONTACT_INFO"	"FL_PH_ME_ASSIGNED"
## [333]	"INFO_RELATION_OTHER"	"FNRL_NME_OOS"
## [335]	"FNRL_CNTRY_OOS"	"FNRL_STATE_OOS"

## [337] "FNRL_CITY_OOS"	"DISP_CNTRY_CREM"
## [339] "DISP_ST_CREM"	"DISP_NME_CREM"
## [341] "DISP_CTY_CREM"	"DETHNIC_NOT_OBT"
## [343] "DETHNIC_REFUSED"	"RACE_NOT_OBT"
## [345] "RACE_REFUSED"	"HISTORY"
## [347] "FL_REGIS_ACCEPTS_DEMO_EXCPTNS"	"FL_REGIS_ACCEPTS_MED_EXCPTNS"
## [349] "FL_UNSIGN_RECORD"	"FL_UNCERTIFY_RECORD"
## [351] "FL_READY_2_CERTIFY_PH"	"FL_READY_2_CERTIFY_ME"
## [353] "FL_DECLINE_2_SIGN"	"FL_DECLINE_2_CERT"
## [355] "FL_REFER_2_ME"	"FL_REFERRAL_DECLINED"
## [357] "DISP_NON_CREMATION_FL"	"IND_DEMOGRAPHIC_EXCEPTIONS"
## [359] "IND_MEDICAL_EXCEPTIONS"	"IND_MED_INFO_STATUS"
## [361] "IND_PERS_INFO_STATUS"	"IND_REGIS_STATUS"
## [363] "FL_PERS_INFO_FINISHED"	"FL_MED_INF_FINISHED"
## [365] "FL_READY_2_SIGN"	"FL_NOTIFY_DR"
## [367] "FL_ASSIGN_CERT_2 OSDH"	"CERT_LIC_NUM_DISCREPANCY"
## [369] "FL_NOTIFY_ME"	"FL_ASSIGN_FH_2 OSDH"
## [371] "FL_NOTIFY_FH"	"TRANSFER_FH_LOC_ID"
## [373] "REVIEW_RECORD_TASK_DESCR"	"FL_REGIS_ACCEPT_PI"
## [375] "FL_REGIS_REJECT_PI"	"FL_REGIS_ACCEPT_MI"
## [377] "FL_REGIS_REJECT_MI"	"AGE_BYPASS_VERIFY"
## [379] "MARITAL_BYPASS_VERIFY"	"DEDUC_BYPASS_VERIFY"
## [381] "PREG_BYPASS_VERIFY"	"FL_ABANDONED"
## [383] "ME_CASE_NUM_READONLY"	"FL_AGE_DOB_DOD_DISCREP"
## [385] "FL_AGE_DOB_DOD_DISCREP2"	"FL_AGE_DOB_DOD_DISCREP3"
## [387] "FL_AGE_DOB_DOD_DISCREP4"	"FL_AGE_SHOULD_B_KNOWN"
## [389] "DOD_DISCREPANCY"	"CERT_SIGN_NAME"
## [391] "REGISTRAR_SIGN_NAME"	"IND_GEOCODE_RES_STATUS"
## [393] "IND_FILED_MODE"	"DETHNICE"
## [395] "DETHNIC5C"	"TRX_INJRY_L"
## [397] "VRV_MRE_CODED_FL"	"DEDUC_VERIFY_NEEDED"
## [399] "FL_PH_RELINQUISHES"	"FNRL_SERVICE_OOS"
## [401] "RES_CITY_FIPS_CD"	"DETHNIC_NCHS_CD"
## [403] "RACE_NCHS_CD"	"FNRL_LIC_NUM_DISCREPANCY"
## [405] "CERT_CASE_ACCESS"	"BPLACE_CITY_CD"
## [407] "DNAME_CITY_CD"	"DATE_REGISTERED"
## [409] "DATE_REGISTERED_NUMERIC"	"TRANSFER_DR_LOC_ID"
## [411] "IND_GEOCODE_RETURN_CODE"	"FNRL_LIC_NUM_READONLY"
## [413] "CERT_LIC_NUM_READONLY"	"SFN_YEAR"
## [415] "FL_LEGACY_RECORD"	"VRV_REC_INDEXED_USER_ID"
## [417] "FNRL_CNTRY"	"FNRL_STATE"
## [419] "FNRL_CASE_ACCESS"	"FL_ACCEPT_RES_ADDRESS"
## [421] "FL_DELAYED"	"AMENDMENT_REASON"
## [423] "PRINT_REVISION_NUMBER"	"VRV_REC_DATE_CREATED"
## [425] "APPLICANT_SIGNATURE"	"DISP_APPROVED_USER_ID"
## [427] "FL_PERMIT_PRINTED"	"NEW_PERMIT_REQUEST"
## [429] "WITNESS_SIGNATURE"	"DISP_APPROVAL_SIGN_USER_ID"
## [431] "DISP_APPROVAL_SIGN_DATE"	"DISP_APPROVAL_SIGN_NAME"
## [433] "FDIR_SIGN_NAME"	"FDIR_SIGN_DATE"
## [435] "FDIR_SIGN_USER_ID"	"CERT_SIGN_USER_ID"
## [437] "DISP_RECEIPT_NUMBER"	"DISP_PERMIT_NUMBER"
## [439] "DISP_COUNTY"	"EMB_SAME_AS_FD"
## [441] "FL_COD_INJURY"	"APPLICANT_ADDRESS"
## [443] "APPLICANT_RELATIONSHIP"	"DO_NOT_ISSUE_COMMENT"

## [445]	"FL_DO_NOT_ISSUE"	"FL_COD_PENDING"
## [447]	"GEOCODE_REASON"	"BOOK_NO"
## [449]	"PAGE_NO"	"DOB_NUMERIC"
## [451]	"FL_UPDATE_PENDING"	"FL_PRINT_LANDSCAPE"
## [453]	"START_RECORD_LOC_ID"	"INF_SAME_RES"
## [455]	"OCCUR_CITY_LOC_ID"	"RES_CITY_LOC_ID"
## [457]	"DETHNIC_AFRICAN_CB"	"DETHNIC_AFRICAN"
## [459]	"DETHNIC_AFRICAN_AM"	"DETHNIC_AMERICAN"
## [461]	"DETHNIC_BRAZIL"	"DETHNIC_CAMBODIA"
## [463]	"DETHNIC_CAPE_VER"	"DETHNIC_CARIBBEAN_CB"
## [465]	"DETHNIC_CARIBBEAN"	"DETHNIC_COLUMBIAN"
## [467]	"DETHNIC_DOMINICAN"	"DETHNIC_EUROPEAN"
## [469]	"DETHNIC_EUROPEAN_TB"	"DETHNIC_GUATEMALAN"
## [471]	"DETHNIC_HAITIAN"	"DETHNIC_HONDORAN"
## [473]	"DETHNIC_LAOTIAN"	"METHNIC_MID_EAST"
## [475]	"DETHNIC_MID_EAST_SPEC"	"DETHNIC_MID_EAST"
## [477]	"TRIBE_LIST1"	"TRIBE_LIST2"
## [479]	"DETHNIC_PORTUGAL"	"DETHNIC_RUSSIAN"
## [481]	"DETHNIC_SALVADOR"	"DETHNIC_CENTRAL_AM"
## [483]	"DETHNIC_CENTRAL_AM_SPEC"	"DETHNIC_OTHER_PAC_IS"
## [485]	"DETHNIC_OTHER_PORTUGAL"	"METHNIC_PORTUGAL_SPEC"
## [487]	"DETHNIC_PORTUGAL_SPEC"	"DETHNIC_OTHER_SOUTH_AM"
## [489]	"DETHNIC_SOUTH_AM_SPEC"	"DETHNIC_OTHER"
## [491]	"DETHNIC_OTHER_SPEC"	"RACE_AM_NATIVE"
## [493]	"RACE_ASIAN"	"RACE_BLACK"
## [495]	"RACE_HISP_LAT_BLACK"	"RACE_HISP_LAT_WHITE"
## [497]	"RACE_OTHER_SPEC1"	"RES_ADDR_NUM"
## [499]	"RES_STREET_PREFIX"	"RES_STREET_DESIG"
## [501]	"RES_STREET_SUFFIX"	"MNAME_NONE"
## [503]	"AKA_FL"	"AKAS_NUM"
## [505]	"AKA1_FNAME"	"AKA1_MNAME"
## [507]	"AKA1_LNAME"	"AKA1_SUFFIX"
## [509]	"AKA2_FNAME"	"AKA2_MNAME"
## [511]	"AKA2_LNAME"	"AKA2_SUFFIX"
## [513]	"AKA3_FNAME"	"AKA3_MNAME"
## [515]	"AKA3_LNAME"	"AKA3_SUFFIX"
## [517]	"SPOUSE_MNAME_NONE"	"FATHER_MNAME_NONE"
## [519]	"MOTHER_MNAME_NONE"	"FATHER_BCOUNTRY"
## [521]	"FATHER_BSTATE"	"MOTHER_BCOUNTRY"
## [523]	"MOTHER_BSTATE"	"INFO_ADDR_NUM"
## [525]	"INFO_STREET_PREFIX"	"INFO_STREET_DESIG"
## [527]	"INFO_STREET_SUFFIX"	"INFO_PO_BOX"
## [529]	"DADDR_NUM"	"DSTREET_PREFIX"
## [531]	"DSTREET_DESIG"	"DSTREET_SUFFIX"
## [533]	"DCITY_LOC_ID"	"CERT_ADDR_NUM"
## [535]	"CERT_STREET_PREFIX"	"CERT_STREET_DESIG"
## [537]	"CERT_STREET_SUFFIX"	"FNRL_ADDR_NUM"
## [539]	"FNRL_STREET_PREFIX"	"FNRL_STREET_DESIG"
## [541]	"FNRL__STREET_SUFFIX"	"FNRL_STREET_SUFFIX"
## [543]	"INJRY_ADDR_NUM"	"INJRY_STREET_PREFIX"
## [545]	"INJRY_STREET_DESIG"	"INJRY_STREET_SUFFIX"
## [547]	"OCCUR_REGIS_NAME"	"OCCUR_REGIS_NAME1"
## [549]	"OCCUR_REGIS_NUM"	"OCCUR_REGIS_DATE"
## [551]	"OCCUR_REGIS_VOLUME"	"OCCUR_REGIS_PAGE"

## [553]	"OCCUR_DEPOSITION_NUM"	"OCCUR_AMENDMENT_DATE"
## [555]	"ARCHIVAL_COPY_PRINTED_DATE"	"FL_OCCUR_ARCHIVED"
## [557]	"ST_REGIS_NAME"	"ST_REGIS_DATE"
## [559]	"ST_REGIS_NUM"	"ST_VOL_PAGE_ENTRY_TYPE"
## [561]	"ST_VOLUME_TYPE"	"ST_VOLUME"
## [563]	"ST_PAGE"	"ST_DEPOSITION_NUM"
## [565]	"ST_AMENDMENT_DATE"	"FL_RVRS_ARCHIVED"
## [567]	"ST_ARCHVL_COPY_PRINTED_DATE"	"AMEND_IN_PROCESS"
## [569]	"RECORD_REGIS_DATE"	"RECORD_REGISTRAR"
## [571]	"RECORD_REGIS_NUM"	"IND_RECORD_OWNER"
## [573]	"OCCUR_REGISTERED_FL"	"RESIDE_REGISTERED_FL"
## [575]	"STATE_REGISTERED_FL"	"RECORD_REGISTRAR_ID"
## [577]	"IND_MOD_STARTED_BY"	"FL_SEARCHABLE"
## [579]	"FL_SEARCHABLE_RVRS"	"FL_SEARCHABLE_RESIDE"
## [581]	"VRV_DATE_CHANGED"	"VRV_REC_CHANGED_USER_ID"
## [583]	"PRO_TIME"	"PRO_GNAME"
## [585]	"PRO_MNAME"	"PRO_LNAME"
## [587]	"PRO_SUFFIX"	"PRO_TITLE"
## [589]	"RESIDE_REGIS_NAME"	"RESIDE_REGIS_NAME1"
## [591]	"RESIDE_REGIS_NUM"	"RESIDE_REGIS_DATE"
## [593]	"RESIDE_REGIS_VOLUME"	"RESIDE_REGIS_PAGE"
## [595]	"RESIDE_DEPOSITION_NUM"	"RESIDE_AMEND_ACKNOWLEDGE_FL"
## [597]	"FL_RES_ARCHIVED"	"ARCHIVL_COPY_PRINT_RESIDE_DATE"
## [599]	"TOWN_OF_RECORD_LOC_ID"	"TOWN_OF_RECORD_LIST"
## [601]	"TOWN_OF_RECORD_RES_LIST"	"AKA4_FNAME"
## [603]	"AKA4_MNAME"	"AKA4_LNAME"
## [605]	"AKA4_SUFFIX"	"VET1_DATE_ENTERED"
## [607]	"VET1_DATE_DISCHARGED"	"VET2_DATE_ENTERED"
## [609]	"VET2_DATE_DISCHARGED"	"VET3_DATE_ENTERED"
## [611]	"VET3_DATE_DISCHARGED"	"BURIAL_PERMIT_ISSUE_DATE"
## [613]	"BURIAL_PERMIT_NONE"	"BURIAL_AGENT_GNAME"
## [615]	"BURIAL_AGENT_MNAME"	"BURIAL_AGENT_LNAME"
## [617]	"BURIAL_AGENT_SUFFIX"	"FL_FUNERAL_HOME_UNLISTED"
## [619]	"FL_FD_UNLISTED"	"MC_NOTIFIED_GNAME"
## [621]	"MC_NOTIFIED_MNAME"	"MC_NOTIFIED_LNAME"
## [623]	"MC_NOTIFIED_SUFFIX"	"PRO_EMP_ADDR_NUM"
## [625]	"PRO_EMP_ADDR1"	"PRO_EMP_STREET_DESIG"
## [627]	"PRO_EMP_STREET_SUFFIX"	"PRO_EMP_STREET_PREFIX"
## [629]	"PRO_EMP_ADDR2"	"PRO_EMP_COUNTRY"
## [631]	"PRO_EMP_STATE"	"PRO_EMP_CITY"
## [633]	"PRO_EMP_ZIP"	"SPOUSE_LNAME_PRIOR"
## [635]	"FATHER_LNAME_PRIOR"	"MOTHER_LNAME_PRIOR"
## [637]	"VET_ENTRIES"	"INFO_MNAME_NONE"
## [639]	"FDIR_OTHER_DESIG"	"DFACILITY_UNLISTED"
## [641]	"RES_SAME_PLACE"	"MC_NOTIFIED_MNAME_NONE"
## [643]	"MC_NOTIFIED_PHONE"	"MC_NOTIFIED_ADDR_NUM"
## [645]	"MC_NOTIFIED_STREET_PREFIX"	"MC_NOTIFIED_STREET_NAME"
## [647]	"MC_NOTIFIED_STREET_DESIG"	"MC_NOTIFIED_STREET_SUFFIX"
## [649]	"MC_NOTIFIED_ADDR2"	"MC_NOTIFIED_COUNTRY"
## [651]	"MC_NOTIFIED_STATE"	"MC_NOTIFIED_CITY"
## [653]	"MC_NOTIFIED_ZIP"	"FL_CERT_UNLISTED"
## [655]	"FL_SIGNED_BEHALF_CERT"	"FL_CERT_ATTEND_PHYSICIAN"
## [657]	"ATTEND_PHYSICIAN_UNLISTED"	"ATTEND_PHYSICIAN_GNAME"
## [659]	"ATTEND_PHYSICIAN_MNAME"	"ATTEND_PHYSICIAN_LNAME"

## [661] "ATTEND_PHYSICIAN_SUFFIX"	"ATTEND_PHYSICIAN_MNAME_NONE"
## [663] "PRO_DATE_ME"	"PRO_TIME_ME"
## [665] "PRO_TIME_IND_M"	"ME_MNAME"
## [667] "TOD_ME"	"TOD_IN_ME"
## [669] "SIGN_DATE_ME"	"VET1_WAR"
## [671] "VET1_WAR_OTHER"	"VET1_BRANCH"
## [673] "VET1_ORG"	"VET2_WAR"
## [675] "VET2_WAR_OTHER"	"VET2_BRANCH"
## [677] "VET2_ORG"	"VETR2_SERVICE_NUM"
## [679] "VETR1_SERVICE_NUM"	"VET3_WAR"
## [681] "VET3_WAR_OTHER"	"VET3_BRANCH"
## [683] "VET3_ORG"	"VETR3_SERVICE_NUM"
## [685] "CERT_RACE_SPECIFY"	"DISP_DATE"
## [687] "UNITA"	"ME_MNAME_NONE"
## [689] "ME_SUFF"	"MED_REC_NUM"
## [691] "PRO_MNAME_NONE"	"MC_NOTIFIED_TITLE"
## [693] "MC_NOTIFIED_UNLISTED"	"DISP_ADDR_NUM"
## [695] "DISP_STREET_PREFIX"	"DISP_ADDR1"
## [697] "DISP_STREET_DESIG"	"DISP_STREET_SUFFIX"
## [699] "DISP_ADDR2"	"DISP_ZIP"
## [701] "ATTEND_PHYSICIAN_TITLE"	"CREM_CEM_UNLISTED"
## [703] "BURIAL_AGENT_TITLE"	"FAX_SERIAL_NUMBER"
## [705] "FAX_RETURN_CODE"	"FAX_RETURN_MESSAGE"
## [707] "FAX_SENT_DATE"	"FAX_OBJECT_ID"
## [709] "BURIAL_PERMIT_NONE_REASON"	"RELEASE_BTN"
## [711] "CERTIFY_BTN"	"SIGN_BTN"
## [713] "BURIAL_PERMIT_NUMBER"	"PRO_EMPLOYER"
## [715] "FL_RECORD_RELEASED"	"RELEASE_TO_CLERK_DATE"
## [717] "IND_ATTESTATION_STATUS"	"DECLINE_CERT_BTN"
## [719] "FAX_SIGNED_FL"	"FAX_DECLINED_FL"
## [721] "FL_CERTIFIED"	"FL_SIGNED"
## [723] "DECLINE_RECORD_BTN"	"IND_PB_STATUS"
## [725] "FL_MI_ALMOST_COMPLETE"	"FL_PI_ALMOST_COMPLETE"
## [727] "UNITB"	"UNITC"
## [729] "UNITD"	"FL_DP_APPRVED_COMPLETE"
## [731] "PRO_LIC_NUM"	"OCME_LOCATION_ID"
## [733] "FL_OCME_CLLAIMS"	"FL_RELEASED_TO_RVRS"
## [735] "RELEASE_TO_RVRS_DATE"	"REGISTERER_ID"
## [737] "REGISTERER_ID_RE"	"REGISTERER_ID_ST"
## [739] "FL_VIP_CERTIFIED"	"ST_PREVIOUS_VOL_PAGE"
## [741] "PREV_VOL_PG_HIDDEN"	"CERT_SIGNED_BEHALF_NAME_TITLE"
## [743] "VRV_HOSPITAL_OWNER_ID"	"FL_OOC_RECORD"
## [745] "FL_PI_AMEND"	"FL_PI_MI_AMEND"
## [747] "FL_ME_CERTIFIED"	"FL_ADJUSTED"
## [749] "DEATH_DOCS_REC_ID"	"IND_ACCESS_STATUS"
## [751] "FL PRESUMPTIVE"	"ATTEND_PHYSICIAN_NONE"
## [753] "ME_CASE_YEAR"	"DFAC_LOC_ID"
## [755] "NP_ASSOCIATED_PHYSICIAN"	"NP_ASSOCIATED_PHYSICIAN_LOC_ID"
## [757] "NP_PHYSICIAN_ASSOCIATION"	"AUTOSPY4EXPORT"
## [759] "FH_DESIGNATED"	"BURIAL_PERMIT_COMMENTS"
## [761] "BURIAL_PERMIT_ISSUE_DATE_RV"	"CREM_CLEAR_ME"
## [763] "CREM_RELEASE_ME"	"CREM_RELEASE_DATE_ME"
## [765] "CREM_CLEAR_COMMENTS"	"PREV_PH_LOC_ID"
## [767] "ID_NUM_4_OCME"	"TRADE_FH_UNLISTED"

## [769] "FH_RESPONSIBLE_NAME"	"FL_RECORD_RETURNED"
## [771] "RETURN_TO_FH_COMMENTS"	"RUTURN_TO_FH"
## [773] "ME_APPROVED"	"ME_APPROVED_INFO"
## [775] "CERT_VERIFY_DATE"	"BURIAL_PERMIT_NUMBER_RV"
## [777] "VERIFY_FORM_DATE"	"VERIFY_FORM_NONE"
## [779] "CERT_DESIG_CODE"	"EXP_ISE_ROSTER_SENT_FL"
## [781] "BA_USER_TOWN_LOCATION_ID"	"FL_CERT_INFO_COMPLETE"
## [783] "FL_CERT_INFO_COMPLETE_ME"	"FAX_WAITING_NEW"
## [785] "AUTOPSY_F_AVAIL4EXPORT"	"CERT_DESIG4EXPORT"
## [787] "ME_SELECTED"	"FL_UPDATE_CERT_INFO"
## [789] "INJRY_TRANSPRT_EXPORT"	"DETHNIC_OTHER_20"
## [791] "DETHNIC_CENTRAL_AM_20"	"DETHNIC_SOUTH_AM_20"
## [793] "RACE22_23_4_EXPORTS"	"DETHNIC_AMERICAN_L"
## [795] "DETHNIC_BRAZIL_L"	"DETHNIC_CAMBODIA_L"
## [797] "DETHNIC_CAPE_VER_L"	"DETHNIC_COLUMBIAN_L"
## [799] "DETHNIC3_L"	"DETHNIC_DOMINICAN_L"
## [801] "DETHNIC_GUATEMALAN_L"	"DETHNIC_HAITIAN_L"
## [803] "DETHNIC_HONDORAN_L"	"DETHNIC_PORTUGAL_L"
## [805] "DETHNIC2_L"	"DETHNIC_RUSSIAN_L"
## [807] "DETHNIC_SALVADOR_L"	"FL_OCCUR_IS_RESIDE"
## [809] "TOD_IN_4_EXPORTS"	"TOD_4_EXPORTS"
## [811] "RACE22_20"	"IS_HISPANIC"
## [813] "IS_SPECIFIC_HISPANIC"	"IS_OTHER_HISPANIC"
## [815] "COD_CODE_LINE1"	"COD_CODE_LINE2"
## [817] "COD_CODE_LINE3"	"COD_CODE_LINE4"
## [819] "COD_CODE_LINE5"	"COD_CODE_LINE6"
## [821] "COD_CODE_LINE7"	"COD_CODE_SEQ1"
## [823] "COD_CODE_SEQ2"	"COD_CODE_SEQ3"
## [825] "COD_CODE_SEQ4"	"COD_CODE_SEQ5"
## [827] "COD_CODE_SEQ6"	"COD_CODE_SEQ7"
## [829] "PA_DOB"	"STEVE_SENT_DATE"
## [831] "EXP_EVVE_SENT_FL"	"PLACE_SAME_AS_RES_COPY"
## [833] "STEVE_FIRST_SENT_DATE"	"FL_DOR_REGISTERED_FOR_UPDATES"
## [835] "FL_SENT_TO_DOR"	"DATE_DATA_SENT_TO_DOR"
## [837] "FL_DOR_IMAGE_REQUEST_PENDING"	"DATE_IMAGE_SENT_TO_DOR"
## [839] "FL_NEW_RECORD_SENT_TO_DOR"	"IDENTIFICATIONID"
## [841] "DOCUMENTNAME"	"AII"
## [843] "AIJ"	

In order to fit any sort of temporal model, we needed a unified data set. Additionally, while we were interested in several individual-level covariates, much of these data were irrelevant to us. I developed the following functions as a mechanism to extract specific information from the raw vitals, recode it, and populate a data frame much more suited to the project's needs.