\*unclear if the random coefficient of time is treated as continuous or categorical?

\*some suggest that if random coefficient is a categorical variable, then dummy coding is needed. Tried this, does not work in Stata.

\*the fixed effect results are similar.

. mixed CMEP\_ Tx##i.time age\_yr\_0 sex\_0 || ID: , nolog cov(un)

Note: single-variable random-effects specification in ID equation; covariance structure set to identity

Mixed-effects ML regression Number of obs = 608

Group variable: ID Number of groups = 175

Obs per group:

min = 1

avg = 3.5

max = 4

Wald chi2(9) = 158.87

Log likelihood = -1660.4101 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

CMEP\_ | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

Tx |

TranSC | -.3679353 .6720142 -0.55 0.584 -1.685059 .9491883

|

timepoint |

Post | 1.857663 .4621093 4.02 0.000 .9519458 2.763381

6mFU | 2.33117 .4798113 4.86 0.000 1.390757 3.271583

12mFU | 2.181175 .4846658 4.50 0.000 1.231248 3.131103

|

Tx#timepoint |

TranSC#Post | 1.956769 .6529805 3.00 0.003 .676951 3.236587

TranSC#6mFU | 1.775517 .6736525 2.64 0.008 .4551826 3.095852

TranSC#12mFU | 2.206026 .68168 3.24 0.001 .8699582 3.542095

|

age\_yr\_0 | -.2655972 .1552031 -1.71 0.087 -.5697896 .0385952

sex\_0 | .4873249 .5739462 0.85 0.396 -.6375891 1.612239

\_cons | 25.15956 2.403684 10.47 0.000 20.44843 29.87069

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

ID: Identity |

var(\_cons) | 11.13241 1.473076 8.589259 14.42856

-----------------------------+------------------------------------------------

var(Residual) | 8.499775 .5753825 7.443657 9.705738

------------------------------------------------------------------------------

LR test vs. linear model: chibar2(01) = 220.46 Prob >= chibar2 = 0.0000

. mixed CMEP\_ Tx##i.time age\_yr\_0 sex\_0 || ID: time , nolog cov(un)

Mixed-effects ML regression Number of obs = 608

Group variable: ID Number of groups = 175

Obs per group:

min = 1

avg = 3.5

max = 4

Wald chi2(9) = 138.60

Log likelihood = -1644.2338 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

CMEP\_ | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

Tx |

TranSC | -.3910253 .5902844 -0.66 0.508 -1.547961 .7659108

|

timepoint |

Post | 1.843708 .4305542 4.28 0.000 .9998373 2.687579

6mFU | 2.320735 .4900955 4.74 0.000 1.360165 3.281304

12mFU | 2.226205 .561593 3.96 0.000 1.125503 3.326907

|

Tx#timepoint |

TranSC#Post | 1.973588 .6081208 3.25 0.001 .7816936 3.165483

TranSC#6mFU | 1.745942 .6887455 2.53 0.011 .3960252 3.095858

TranSC#12mFU | 2.192981 .7909354 2.77 0.006 .6427758 3.743186

|

age\_yr\_0 | -.3325735 .1465804 -2.27 0.023 -.6198658 -.0452812

sex\_0 | .1676675 .5450851 0.31 0.758 -.9006797 1.236015

\_cons | 26.35082 2.265654 11.63 0.000 21.91022 30.79143

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

ID: Unstructured |

var(timepo~t) | 1.017074 .3197704 .5492026 1.883529

var(\_cons) | 8.269019 1.483263 5.817935 11.75274

cov(timepo~t,\_cons) | .5989021 .5098037 -.4002949 1.598099

-----------------------------+------------------------------------------------

var(Residual) | 6.859423 .5826183 5.807499 8.101884

------------------------------------------------------------------------------

LR test vs. linear model: chi2(3) = 252.82 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.