**xtset agecat wave**

**graph matrix logmortrate logsmokerate logwealth, half**



correlate logmortrate logsmokerate logwealth

| logmor~e logsmo~e logwea~h

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logmortrate | 1.0000

logsmokerate | -0.8441 1.0000

logwealth | -0.7318 0.6456 1.0000

xtreg logmortrate logsmokerate logwealth i.wave, re robust

Random-effects GLS regression Number of obs = 32

Group variable: agecat Number of groups = 8

R-sq: within = 0.6165 Obs per group: min = 4

between = 0.9290 avg = 4.0

overall = 0.8766 max = 4

Wald chi2(5) = 540.89

corr(u\_i, X) = 0 (assumed) Prob > chi2 = 0.0000

(Std. Err. adjusted for 8 clusters in agecat)

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| Robust

logmortrate | Coef. Std. Err. z P>|z| [95% Conf. Interval]

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logsmokerate | -1.028012 .3280037 -3.13 0.002 -1.670887 -.3851363

logwealth | -1.452862 .4941683 -2.94 0.003 -2.421414 -.4843099

|

wave |

3 | .9348137 .1622174 5.76 0.000 .6168734 1.252754

4 | .5745353 .2892039 1.99 0.047 .007706 1.141364

5 | .3939028 .2750858 1.43 0.152 -.1452555 .933061

|

\_cons | 9.676055 5.822178 1.66 0.097 -1.735205 21.08731

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sigma\_u | .28192826

sigma\_e | .25948164

rho | .54138842 (fraction of variance due to u\_i)

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bysort agecat: egen y\_mean = mean(logmortrate)

twoway scatter logmortrate agecat || connected y\_mean agecat



bysort wave: egen y\_mean1 = mean(logmortrate)

twoway scatter logmortrate wave || connected y\_mean1 wave

