

## I. 주요 모형들의 기본 명령어 (Stata 15 manual)

### *Linear mixed-effects models*

Linear model of *y* on *x* with random intercepts by *id*

```
mixed y x || id:
```

Three-level linear model of *y* on *x* with random intercepts by *doctor* and *patient*

```
mixed y x || doctor: || patient:
```

Linear model of *y* on *x* with random intercepts and coefficients on *x* by *id*

```
mixed y x || id: x
```

Same model with covariance between the random slope and intercept

```
mixed y x || id: x, covariance(unstructured)
```

Linear model of *y* on *x* with crossed random effects for *id* and *week*

```
mixed y x || _all: R.id || _all: R.week
```

Same model specified to be more computationally efficient

```
mixed y x || _all: R.id || week:
```

Full factorial repeated-measures ANOVA of *y* on *a* and *b* with random effects by *field*

```
mixed y a##b || field:
```

### *Generalized linear mixed-effects models*

Logistic model of *y* on *x* with random intercepts by *id*, reporting odds ratios

```
melogit y x || id: , or
```

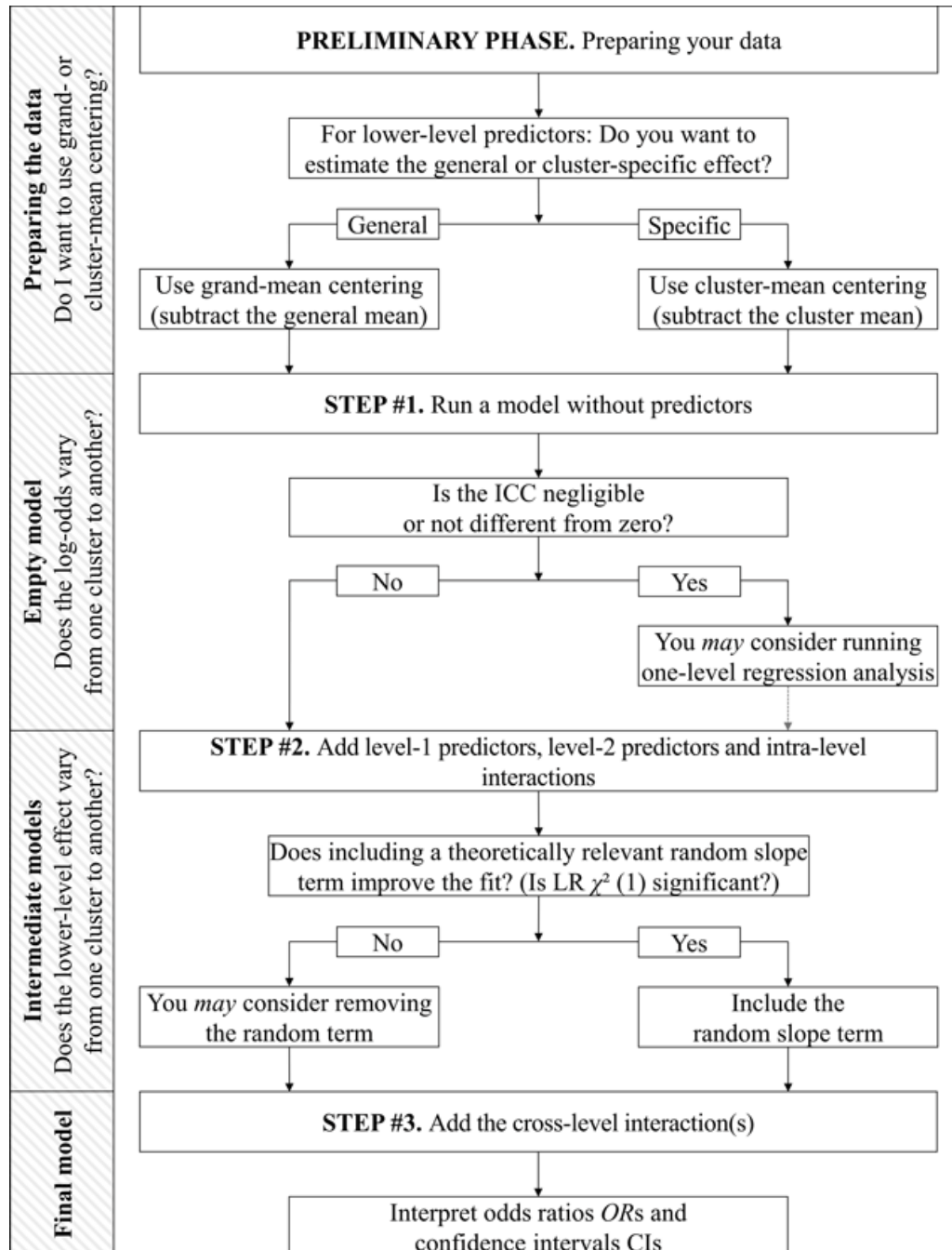
Same model specified as a GLM

```
meglm y x || id:, family(bernoulli) link(logit)
```

Three-level ordered probit model of *y* on *x* with random intercepts by *doctor* and *patient*

```
meoprobit y x || doctor: || patient:
```

## II. Summary of the three-step simplified procedure for multilevel logistic regression



Source: Sommet and Morselli (2017) <http://doi.org/10.5334/irsp.90>