Pick an election and a VTD. Let x represent a specific candidate.

Hierachial model

- votes$_x$ = hisp_votes$_x$ + white_votes$_x$ + other_votes$_x$
    - hisp_votes$_x$ = hisp_votes$_{total}$ * hisp_preference$_x$
        - hisp_votes$_{total}$ = hisp_vap * hisp_participation_rate
    - white_votes$_x$ = white_votes$_{total}$ * white_preference$_x$
        - white_votes$_{total}$ = white_vap * white_participation_rate
    - other_votes$_x$ = other_votes$_{total}$ * other_preference$_x$
        - other_votes$_{total}$ = other_vap * other_participation_rate

(vap = voting age population)

Have data for:

- votes$_x$
- hisp_vap
- white_vap
- other_vap

Have equations for:

- hisp_votes$_x$
- hisp_votes$_{total}$
- white_votes$_x$
- white_votes$_{total}$
- other_votes$_x$
- other_votes$_{total}$

Need expressions based on census data for:

- hisp_preference$_x$
- hisp_participation_rate
- white_preference$_x$
- white_participation_rate
- other_preference$_x$
- other_participation_rate