

Getting it right

- ◆ Major challenges:
 - The air pollution data
 - Short term studies
 - Cohort studies
 - Other study designs?

Air Pollution Data

- ◆ What we have is what we have – at least for now
 - ◆ i.e. STN/SLAM/IMPROVE @ every 3 or 6 days
- ◆ Significant “adjustment” challenges
 - ◆ Blank correction
 - ◆ Change in EC/OC techniques (what to do about first four years of STN/SLAMS data)
 - ◆ How to communicate with epidemiologists about this and bring consistency to these adjustments?
- ◆ Can we, should we use the metals data? Gases data?
- ◆ How do these issues affect cohort rather than time series?
- ◆ Others?

Short Term

- ◆ How best to live with the data we have for now
 - ◆ Except of course for those lucky people in Atlanta!
- ◆ Issues of:
 - ◆ Spatial and temporal variability (how well can we characterize this?)
 - ◆ Can AQ folks work on this to aid epi and implementation?
 - ◆ Role of different measurement errors across species
 - ◆ Components vs. sources
 - ◆ Is more cities better? Yes but perhaps there is some point of diminishing returns..
 - ◆ Can we, should we impute those other days?
 - ◆ Others?
- ◆ How might better communication between epidemiologists and air people help?
 - ◆ And how can we be sure it will happen?

Cohort studies

- ◆ We did not talk about these enough...
- ◆ These are the studies driving PM risk assessment and benefits analysis
 - ◆ Not the time series studies
- ◆ Some of the time series issues go away when you need annual averages
- ◆ But still significant issues:
 - ◆ Spatial variability and how that affects exposure estimates
 - ◆ Different levels of measurement error
 - ◆ Others?
- ◆ Again, how might better communication between epidemiologists and air people help?
 - ◆ And how can we be sure it will happen?

Other study types

- ◆ Lucas had a much longer list of designs
- ◆ Need to focus in on how this discussion might apply to:
 - ◆ Panel studies
 - ◆ Many other designs
- ◆ Also, always on the lookout for intervention studies....

Other thoughts????

- ◆ How well do current approaches address component interactions in the face of co-variation and other model uncertainties?
- ◆ How well do monitoring data reflect SOA – much of this OC may derive from biogenic sources.
- ◆ What realistically can EPA/states do?
 - Data access?
 - better communicate changes / conversions?
 - Help address spatial / temporal model issue?