University of Pittsburgh
Sleep Medicine Institute

DATA BASES AND RESOURCES FOR
COLLABORATION PANEL DISCUSSION
CTSA SLEEP RESEARCH NETWORK ANNUAL
MEETING
BETHESDA, MD
OCTOBER 5-6, 2011
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History
- Initiated in 1973 when D. Kupfer formed sleep research laboratory
- Supported by NIMH Center Grants, GCRC (satellite GCRC and core laboratory), then CTSA
- Tradition of combined funding from individual research grants and infrastructure grants
- Nucleus of major research data base for Department of Psychiatry (Clinical Research Center [CRC])
  - Sleep
  - Mood disorders
  - Late life mood disorders
  - Child and adolescent mood disorders
  - Schizophrenia

Description
- SQL database
- ACCESS front end
- Tables for data types, assessments shared among many different research groups
- Data for over 200 different assessment types
- Majority of studies NIH-funded
  - R01, P01, K awards
  - Assessment, mechanistic, intervention studies
  - Cohort studies (SWAN, SleepSCORE)

Available Data

<table>
<thead>
<tr>
<th>Type of data</th>
<th># Unique subjects</th>
<th>Age range</th>
<th># of studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSG nights</td>
<td>6300</td>
<td>7 to 98</td>
<td>41,200</td>
</tr>
<tr>
<td>Actigraphy</td>
<td>719</td>
<td>18 to 90</td>
<td>25,300</td>
</tr>
<tr>
<td>Sleep diary</td>
<td>3300</td>
<td>12 to 98</td>
<td>139,300</td>
</tr>
<tr>
<td>PSQI</td>
<td>6940</td>
<td>12 to 96</td>
<td>17,840</td>
</tr>
<tr>
<td>All four</td>
<td>347</td>
<td>20 to 90</td>
<td>65,000</td>
</tr>
</tbody>
</table>

- EEG power spectral analysis, period-amplitude analysis
- Heart period variability
- Circadian data (e.g., core body temperature)
- FDG PET sleep-imaging data
- Separate database of >5000 OSA patients with PSG and questionnaire data, >40,000 with PSG data (Strollo)

Logistics and Limitations
- Data managers, statisticians supported by CTSA and individual investigators (quasi-service center)
- Standard data request/statistical analysis request form
- No specific resources for archival analyses ($)
- Potential for collaborative analyses at other institutions if funding can be identified (e.g., R03, foundation support)

Sample Publications From Shared Data
- Truelove W: Insomnia and objectively measured sleep disturbances predict treatment outcome in depressed patients treated with psychotherapy or psychotherapy-pharmacotherapy combinations. *Journal of Clinical Psychiatry* (in press)