Introduction

- Research approaches that employ mixed methods are increasingly common in public health [1,2].
- Little is known about the consistency of information provided during quantitative and qualitative portions of studies.
- Life course theory [3] focuses on the time and timing, trajectories and transitions, critical periods, and accumulated risk at which important events occur within a person’s life.
- Forward telescoping refers to reporting that an event occurred more recently than it did in actuality [4].
- Past research suggests that age of onset for drug use exhibits consistent ordering (e.g. alcohol use occurs prior to marijuana use) but inconsistent reporting of age in repeated measures studies [5].

Objective

- To illustrate the use of the intraclass correlation coefficient (ICC) to assess the consistency of age of onset of drug use/injection provided during a mixed methods study of injection drug users (IDUs).

Methods

- Age of onset of heroin use and injection, methamphetamine use and injection, marijuana use, powder cocaine use and injection, and crack cocaine use was collected during an interview administered computer-assisted personal interview followed by an in-depth qualitative interview.
- Qualitative and quantitative data combined by entering all interview followed by an injection, and crack cocaine use was collected during an annual interview of age of heroin use and injection, methamphetamine injection, and heroin injection.
- ICCs for age of onset of drug use were lower than ICCs for onset of drug injection.

Results

- Participants reported being significantly younger at age of onset when assessed using qualitative methods for heroin use, injection of any drug, methamphetamine injection, and heroin injection.
- ICCs for onset of drug use were lower than ICCs for onset of drug injection.

Discussion

- Data suggest that qualitative and quantitative techniques result in data adequately consistent with one another to assess age of onset.
- While the ICC quantifies the level of consistency between qualitative and quantitative measurements, there is no formal scale for assessing ICC values.
- Forward telescoping may have occurred during the quantitative portion of the study.
- Question interpretation may have affected the results for those IDUs who had stopped their drug use and began again.

Participants

- 104 IDUs residing in Los Angeles, California (n=50) and San Francisco, California (n=54) who had injected within 30 days of interview and were 30+ years of age
- Participants were 63% male, 89% aged 40+, 71% HS educated, 89% US born, 57% currently homeless, 32% black, 32% white, and 22% Latino.

Analytic Plan

- Data analyzed separately by drug use/injection event.
- Events not included in analysis if data was missing for either the quantitative or qualitative measure.
- ICCs were calculated using the ICC(A,1) formula [6].
- Repeated measures t-tests were used to test for significant differences between qualitative and quantitative and qualitative measures.
- Staata/IC 12.1 used for all analyses.

Descriptive statistics and ICC for age of onset of drug use and injection

<table>
<thead>
<tr>
<th>Event</th>
<th>Qualitative</th>
<th>Quantitative</th>
<th>Difference (Qual – Quant)</th>
<th>% Concordant</th>
<th>ICC (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana use</td>
<td>73</td>
<td>13.0 (3.56)</td>
<td>2-18.5</td>
<td>13.6 (3.59)</td>
<td>3-25</td>
</tr>
<tr>
<td>Cocaine use</td>
<td>65</td>
<td>21.1 (7.18)</td>
<td>12-43</td>
<td>21.6 (7.80)</td>
<td>14-45</td>
</tr>
<tr>
<td>Methamphetamine use</td>
<td>64</td>
<td>27.0 (10.02)</td>
<td>12-52</td>
<td>28.7 (11.70)</td>
<td>12-52</td>
</tr>
<tr>
<td>Heroin use</td>
<td>69</td>
<td>26.8 (9.72)</td>
<td>12-47</td>
<td>30.1 (10.40)</td>
<td>12-58</td>
</tr>
<tr>
<td>Crack cocaine use</td>
<td>33</td>
<td>26.9 (10.53)</td>
<td>14-43</td>
<td>25.5 (8.58)</td>
<td>14-41</td>
</tr>
<tr>
<td>Injection (any drug)</td>
<td>100</td>
<td>30.3 (10.61)</td>
<td>12-52</td>
<td>31.8 (10.50)</td>
<td>12-58</td>
</tr>
<tr>
<td>Powder cocaine injection</td>
<td>22</td>
<td>27.8 (10.25)</td>
<td>16-46</td>
<td>27.7 (10.81)</td>
<td>14-44</td>
</tr>
<tr>
<td>Methamphetamine injection</td>
<td>35</td>
<td>33.2 (12.33)</td>
<td>13-54</td>
<td>36.0 (12.67)</td>
<td>15-56</td>
</tr>
<tr>
<td>Heroin injection</td>
<td>72</td>
<td>30.5 (9.90)</td>
<td>12-47</td>
<td>32.0 (10.36)</td>
<td>12-58</td>
</tr>
</tbody>
</table>

Analytic plan: the use of intraclass correlation coefficient (ICC) to assess the consistency of age of onset of drug use/injection provided during a mixed methods study of injection drug users (IDUs).