They do suggest an impact of health policy change on service delivery. In response to emerging evidence for the safety and clinical benefit of early Antiretroviral (ART) initiation in tuberculosis (TB) patients, the National TB Programme (NTP) in Malawi implemented a change in policy for TB patients co-infected with Human Immunodeficiency Virus (HIV). In September 2011, clinicians were advised to start ART as soon as possible to reduce HIV progression and mortality (1-3). Delays in starting ART have been noted in many settings, and the national policy change from delayed to early as possible ART initiation in TB patients has been suboptimal uptake of ART initiation (4-7).

Background
In response to emerging evidence for the safety and clinical benefit of early ART initiation for TB patients co-infected with HIV, the National TB Programme (NTP) in Malawi implemented a change in policy for TB patients co-infected with Human Immunodeficiency Virus (HIV). In September 2011, clinicians were advised to start ART as soon as possible to reduce HIV progression and mortality (1-3). Delays in starting ART have been noted in many settings, and the national policy change from delayed to early as possible ART initiation in TB patients has been suboptimal uptake of ART initiation (4-7).

Methodology
Routine program data from NTP TB registries and ART Clinics were collected and analyzed for all TB patients enrolled at ZCH April 1, 2011 to April 1, 2012. Univariate comparisons of demographic and TB HIV Program outcomes on uptake of HIV testing and counseling and ART in co-infected patients and treatment outcomes were assessed for all TB patients enrolled at ZCH April 1, 2011 to April 1, 2012.

Results
Table 1 shows that new evidence and changing clinical guidelines are translated into practice with a lag time that is difficult to understand. There was a shift in the timing of initiation after the policy change toward earlier initiation of ART among those already on ART, with no significant changes in treatment outcomes. The table shows that no differences were found in overall mortality between those “Pre” and “Post” guideline implementation at ZCH.

Conclusions
The national policy change from delayed to early as possible ART initiation in TB patients in Malawi was reflected in clinical practice in our clinic. More patients who tested HIV positive were started on ART earlier after the policy change occurred as well. These changes did not appear to affect overall mortality. They do suggest an impact of health policy change on service delivery.

Table 1. Similar baseline characteristics of TB/HIV co-infected patients “Pre” and “Post” guideline implementation at ZCH

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre</th>
<th>Post</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>35 (25-47)</td>
<td>36 (26-46)</td>
<td>0.76</td>
</tr>
<tr>
<td>Gender</td>
<td>62% male</td>
<td>59% male</td>
<td>0.39</td>
</tr>
<tr>
<td>Type of TB</td>
<td>52% pulmonary</td>
<td>53% pulmonary</td>
<td>0.78</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3%</td>
<td>2%</td>
<td>0.55</td>
</tr>
<tr>
<td>Chronic lung disease</td>
<td>2%</td>
<td>1%</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Table 2 shows there was a borderline significant difference of more patients already on ART being diagnosed with TB post the change guideline compared to pre (36.4% (n=153) vs. 30.4% (n=129), p=0.068). This finding reemphasizes the need to continue improving uptake of ART among HIV positive TB patients. As expected, HIV positive patients who failed to start ART while on treatment had twice the mortality of HIV negative TB patients. We explored whether policy change might have led to less vigilance with TB screening prior to starting ART.

Table 3. shows that no differences were found in overall mortality between those “Pre” and “Post” guideline change, or amongst subgroups of those already on ART, all those not on ART testing rates of TB-HIV co-infection, suggest there has been suboptimal uptake of ART among those already on ART, with no significant differences found between groups in age, gender, type of TB treatment, ART program setting in Malawi, and the subsequent 6 months.

References
1. Lawn SD et al.  Delays in starting antiretroviral therapy in patients with HIV-associated tuberculosis accessing non-integrated clinical services in a South African township.  BMC Infect Dis 2011; 11:258