The Impact of COVID 19 Pandemic on Type 1 DM: An Experience of a Tertiary Care Hospital in a Resource Limited country.

A. AYUB1,2, S. IJAZ2, S. M. QUDRAT2, T. RANI2, A. RAZIQ3, M. ALI3, T. A. BUTT4

1. Department of Paediatric Medicine, Pakistan Institute of Medical Sciences, Islamabad(Joint affiliation- Benazir Bhutto Hospital/ Rawalpindi Medical University)  
2. Department of Paediatric Medicine, Benazir Bhutto Hospital, Rawalpindi.  
3. Department of Paediatric Endocrinology & Diabetes, Mayo Hospital, Lahore.  
4. Department of Paediatric Endocrinology & Diabetes, The Children’s Hospital & The Institute of Child Health, Lahore.

INTRODUCTION
Managing T1DM during pandemic lockdown is challenging in resource limited country like Pakistan. To lessen burden on health care system developed countries switched to telemedicine during lockdown which proved effective to control pandemic, but management of T1DM requires close monitoring by parents and doctors, however economic conditions deprived Pakistan of this substitute.

 AIM
• To determine the effects of covid-19 related lockdown on management of T1DM.
• To see the effects of lockdown on glycemic control of T1DM in developing countries with limited resources and non uniform access to telemedicine and healthcare supplies.

METHOD
• Study Design -- Cross sectional analytical.  
• Sampling Technique ---Continuous convenient.  
• Study Population --Previously diagnosed T1DM patients in diabetic outpatient clinic and coming for follow up after lifting of lockdown.  
• Exclusion criteria: Newly diagnosed cases with no record.  
• Method --Changes in diabetic management were recorded during lockdown and compared.

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Pre-lockdown period (n=83)</th>
<th>Lock-down period (n=83)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperglycemia (&gt;200 mg/dl)</td>
<td>35 (42.1%)</td>
<td>72 (88.0%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Hypoglycemia (3-4 episodes)</td>
<td>0 (0.0%)</td>
<td>15 (18.0%)</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Hospital admission (fever/ketoacidosis)</td>
<td>0 (0.0%)</td>
<td>12 (14.4%)</td>
<td>0.003*</td>
</tr>
<tr>
<td>Glucose monitoring (3-4 times/day)</td>
<td>60 (72.2%)</td>
<td>13 (15.6%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Exercise/walk (5-6 times/week)</td>
<td>68 (82.0%)</td>
<td>35 (42.1%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>HbA1c level (&gt; 10)</td>
<td>50 (60.0%)</td>
<td>76 (92.0%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-compliance of insulin dose</td>
<td>0 (0.0%)</td>
<td>58 (69.0%)</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>No access to physician/telemedicine</td>
<td>0 (0.0%)</td>
<td>55 (66.0%)</td>
<td>&lt;0.001*</td>
</tr>
</tbody>
</table>

CONCLUSIONS
• Covid-19 pandemic and lockdown had great impact on management of patients with T1DM because of fear of infection, access to hospital and telemedicine.  
• High quality medical care is a challenge within constrained medical care system for low income strata and rural population.  
• Management can be improved through telemedicine access, provision of insulin and monitoring devices even during lockdown.  
• Raising awareness of parents regarding disease and its complications like diabetic ketoacidosis is a necessity.

REFERENCES

ACKNOWLEDGEMENTS
Special thanks and gratitude to dr Summaya Aftab and dr Khadija Humanyun for their able guidance and support in completing my project. Thanks to my Family for their encouragement and support.

CONTACT INFORMATION
Dr Aqeela Ayub.  Assistant Professor. Paeds Medicine, Pakistan Institute of Medical Sciences (PIMS), Children Hospital, Islamabad  
Mob: 00923018450101  
ePoster code: P2-164  
Email: aqele.ayub1@gmail.com