

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

A. AYUB^{1,2}, S. IJAZ², S. M. QUDRAT², T. RANI², A. RAZIQ¹, M. ALI³, T. A. BUTT⁴

1. Department of Paediatric Medicine, Pakistan Institute of Medical Sciences, Islamabad.(current 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.

RESULTS

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

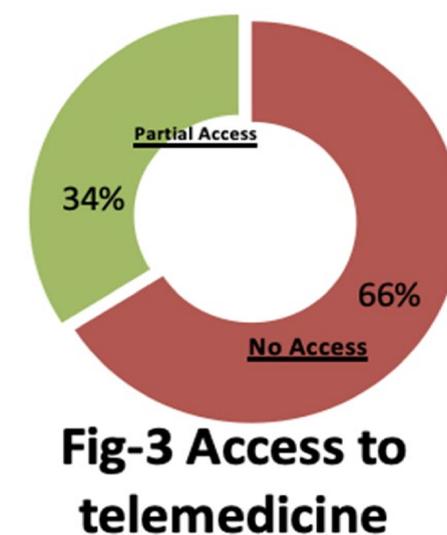


Fig 3. 55/83 had no access to telemedicine services. Only 28/83 parents had partial access to telemedicine services .

Insulin Compliance

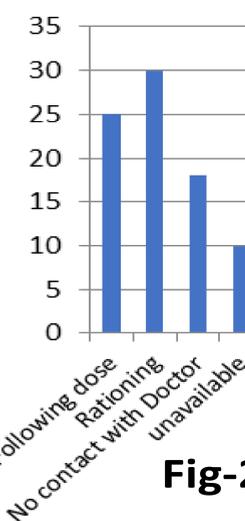
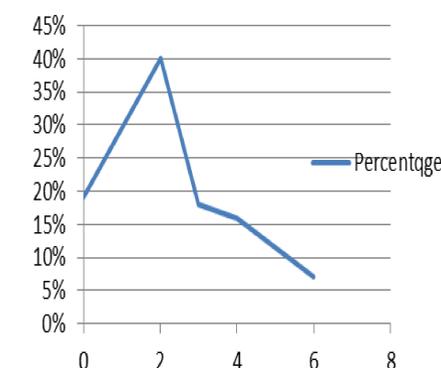


Fig 2. 25/83 were following prescribed insulin dose. 30/83 were saving insulin during lockdown and 18/83 had no access to telemedicine for correction of dosage.

Daily Monitoring Frequency

Fig-1



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.

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.

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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: **aqeela.ayub1@gmail.com**