



POSTER PRESENTATION

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# 15-year incidence of new-onset diabetic ketoacidosis in children with type 1 diabetes from a regional paediatric setting (Auckland, New Zealand)

Craig Jefferies<sup>1\*</sup>, Samuel Cutfield<sup>2</sup>, José GB Derraik<sup>2</sup>, Jignal Bhagvandas<sup>1</sup>, Benjamin B Albert<sup>2</sup>, Paul L Hofman<sup>2,4</sup>, Alistair J Gunn<sup>3</sup>, Wayne S Cutfield<sup>2,4</sup>

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## Aims

This study aimed to assess the incidence of new-onset diabetic ketoacidosis (DKA) incidence over a 15-year period in children with type 1 diabetes (T1DM) from our regional paediatric diabetes centre in Auckland, New Zealand.

## Methods

We performed a retrospective review of all patients <15 years of age diagnosed with T1DM from our unselected complete regional cohort for the years 1999 to 2013. Children were included if they had type 1 diabetes as defined by clinical presentation and/or DKA and/or presence of pre-type 1 diabetes autoantibodies. DKA was classified into Mild (pH <7.3 bicarbonate <15), Mod (pH <7.2 bicarbonate <10), and severe (pH <7.1 bicarbonate <5), according to the ISPAD guidelines.

## Results

For the 15-year period, there were 731 children <15 years with new-onset T1DM, 343 (47%) males, there were 195 (26.7%) cases of new-onset DKA: 51 (26%) severe, 52 (27%) moderate, and 92 (47%) with mild DKA. Average age at diagnosis was 8.6 years. The annual incidence of DKA was variable, ranging from 18% to 37%. The overall incidence of new-onset DKA did not differ over the study interval (p=0.78). The likelihood of being in DKA at onset of T1DM was unaffected by age, sex, ethnicity, or socio-economic status. Amongst those in DKA, New Zealand

European ethnicity (p=0.038) and female gender (p=0.056) were each associated with increasing DKA severity at presentation.

## Conclusions

There has been a stable but persistent level of New-onset DKA over the 15-year period studied in our regional paediatric population. Action must be taken to improve awareness of T1DM and in doing so, reduce the incidence of new-onset DKA.

## Authors' details

<sup>1</sup>Starship Children's Hospital, Auckland, New Zealand. <sup>2</sup>Liggins Institute, University of Auckland, Auckland, New Zealand. <sup>3</sup>Department of Physiology, University of Auckland, Auckland, New Zealand. <sup>4</sup>Gravida National centre for growth and development, Auckland, New Zealand.

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<sup>1</sup>Starship Children's Hospital, Auckland, New Zealand  
Full list of author information is available at the end of the article