



# National quality indicators and surveillance of staffing levels in paediatric diabetes care: A regional UK audit 2010-2018

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## INTRODUCTION

The prevalence of diabetes continues to rise worldwide placing an increasing burden on the national health service. In 2012 a Best Practice Tariff (BPT) was introduced in the UK and a National Peer Review Quality Assurance Programme (DQuINS) was developed to drive improvements in diabetes care for children and young people. The national audit from 2010-2018 aims to explore trends in paediatric diabetic care and assess the impact of national quality initiatives. The Children and Young People's North West Diabetes Network is the largest regional diabetes network in the UK.

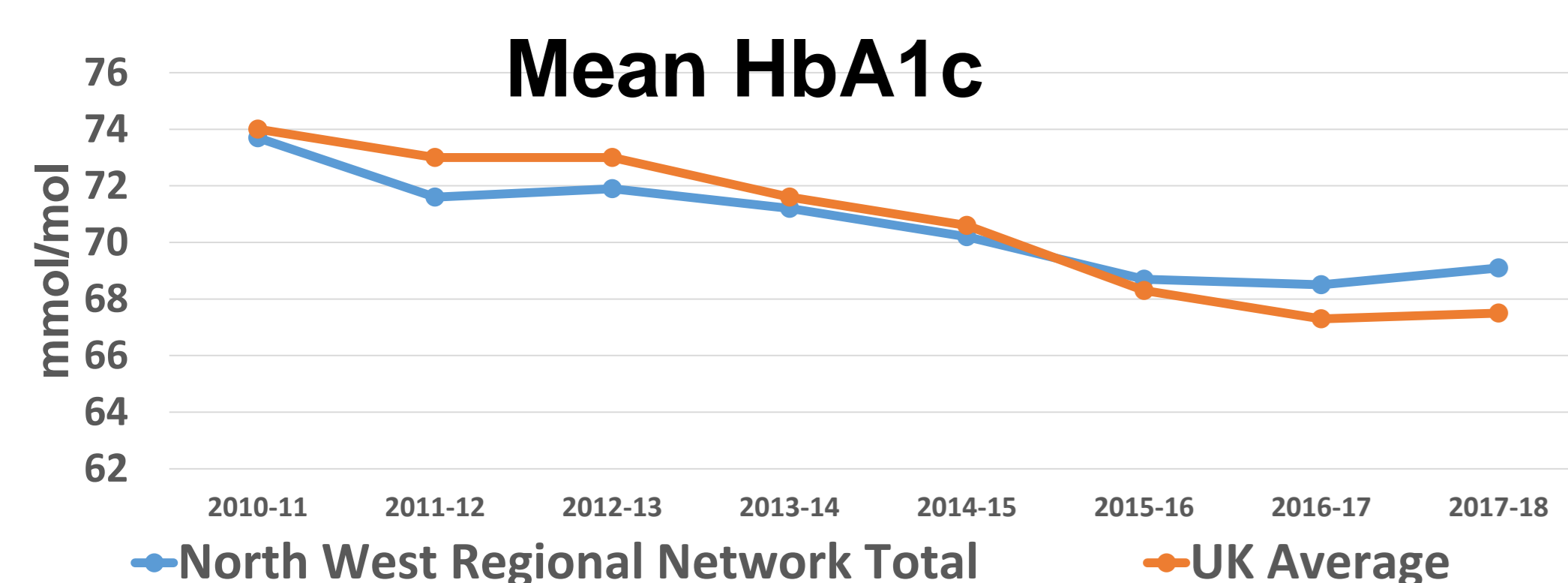
## AIMS

Our aim was to explore trends in paediatric diabetes care in the Children and Young People's Diabetes North West Network in the UK and assess impact of BPT and DQuINS between 2010 to 2018.

## METHODS

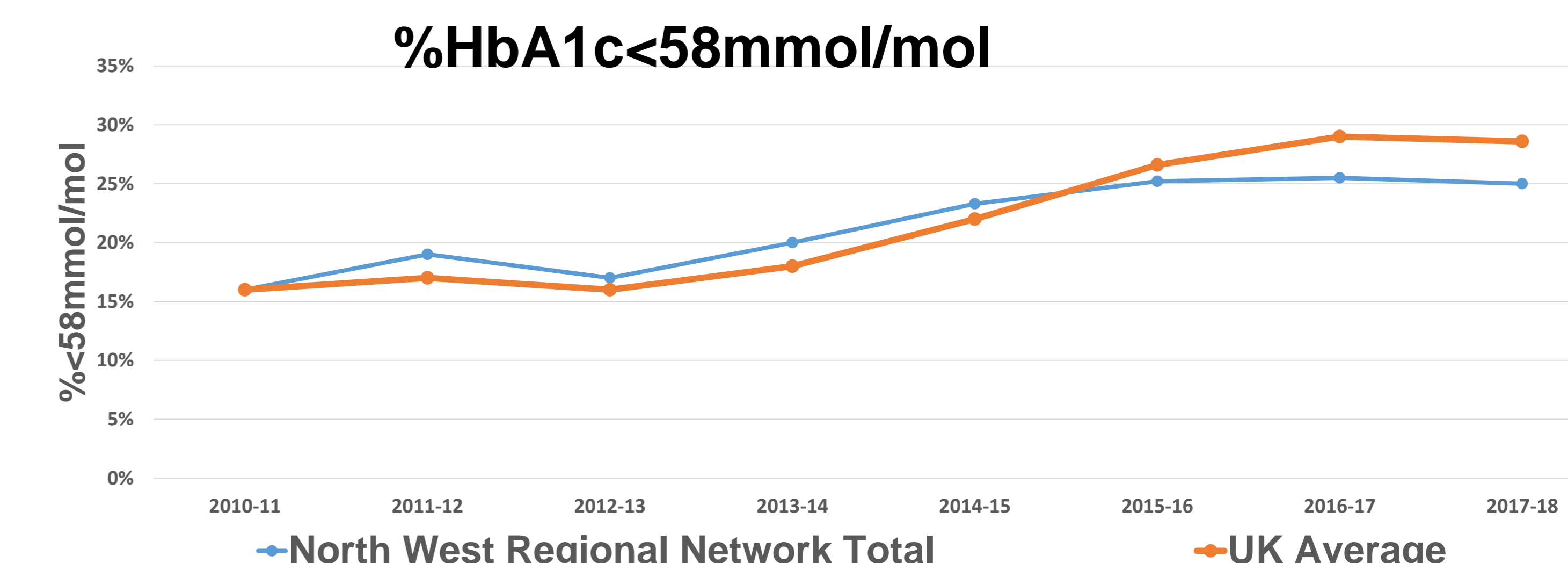
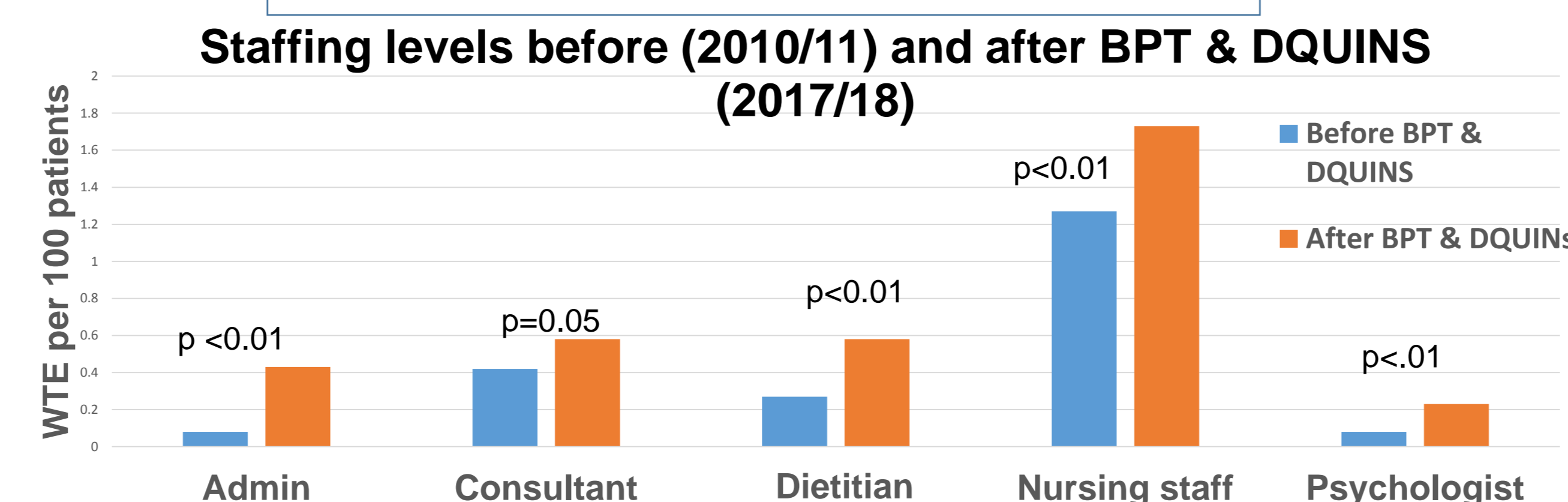
Data was collected from national surveys between 2010 to 2018 from each of the 24 paediatric diabetes units (PDU) in the UK north west region for staffing levels. HbA1c outcomes were extracted from the National Paediatric Diabetic Audit (NDPA) for 2010-2018. We compared staffing levels, mean HbA1c and percentage of patients with HbA1C <58mmol/mol of each PDU between 2010-2018. Data was analysed using SPSS 24.0 statistical package.

## RESULTS



Mean HbA1c	2014/15	2015/16	2016/17	2017/18
P Value (compared with 2010/11)	<0.01	<0.001	<0.01	<0.01
P Value (previous Year)	<0.01	<0.001	0.62	0.58

- 3,284 patients
- 24 Paediatric Diabetes Units
- Exclusions
  - 2 units from staffing data
  - 4 units from HbA1C data



%HbA1c < 58mmol/mol	2014/15	2015/16	2016/17	2017/18
P Value (compared with 2010/11)	<0.01	<0.01	<0.01	<0.01
P Value (previous year)	>0.01	<0.01	0.32	0.28

There was a significant increase in staffing levels for dedicated admin staff ( $p < 0.01$ ), consultants ( $p = 0.05$ ), dietitians ( $p < 0.01$ ), specialist diabetes nursing staff ( $p < 0.01$ ) and psychologists ( $p < 0.01$ ) across the network from 2010 to 2014. However, following BPT and DQuINS initiatives, between 2014 to 2019, there was only a significant increase in staffing for administrative support ( $p = 0.04$ ) and no significant difference in staffing levels in consultants, dietitians, nurses and psychologists. This correlated with the mean HbA1C outcomes and percentage of patients with HbA1C <58mmol/mol which were significantly improved between 2010 to 2014 but not significantly improved from 2014 to 2018.

## CONCLUSION

The significant increase in staffing across the PDUs between 2010-2014 correlated with similar improvements seen in HbA1c outcomes. However, between 2014 and 2018 staffing levels were only significantly increased for administrative support while mean HbA1c and percentage of patients <58mmol/mol were not significantly improved. The audit shows that the driving force to produce better health outcomes does not solely depend on staffing levels of PDUs. In 2018, a UK National Quality Programme (which incorporates quality assurance and a quality improvement collaborative) was developed to support PDUs to transform their service using proven quality improvement methodologies. Tracking of national quality indicators and surveillance of staffing levels are essential in further understanding the role that quality initiatives play in driving better outcomes for diabetes care.

**Disclosure Statement:** No conflicts of interest