

National Diabetes Insulin Pump Audit, 2015-2016

England and Wales

11 May 2017



National Diabetes Audit

<https://digital.nhs.uk/nda>



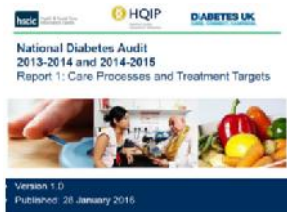
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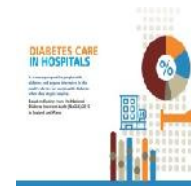
<https://digital.nhs.uk/npid>



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<https://digital.nhs.uk/diabetesinpatientaudit>



National Diabetes Insulin Pump Audit, 2015-16

1. Participation and Data Quality

Participation

Participation in the NDA pump audit, England and Wales 2013-2016

	Number of units participating			
	2013-2014	2014-2015	2015-2016	
	England	England	England	Wales ¹
Insulin Pump and NDA	29	64	69	N/A
Insulin pump only	2	2	0	14
NDA only	46	30	29	N/A

1. Wales specialist services were allowed to submit just their pump patients due to 100% GP practice participation in Wales. The records were matched to the primary care submissions from Wales, the rest of this report will report by Local Health Board (LHB) for Wales instead of by specialist organisation.

Data Quality

Completeness of the pump data submitted, 2014-2016

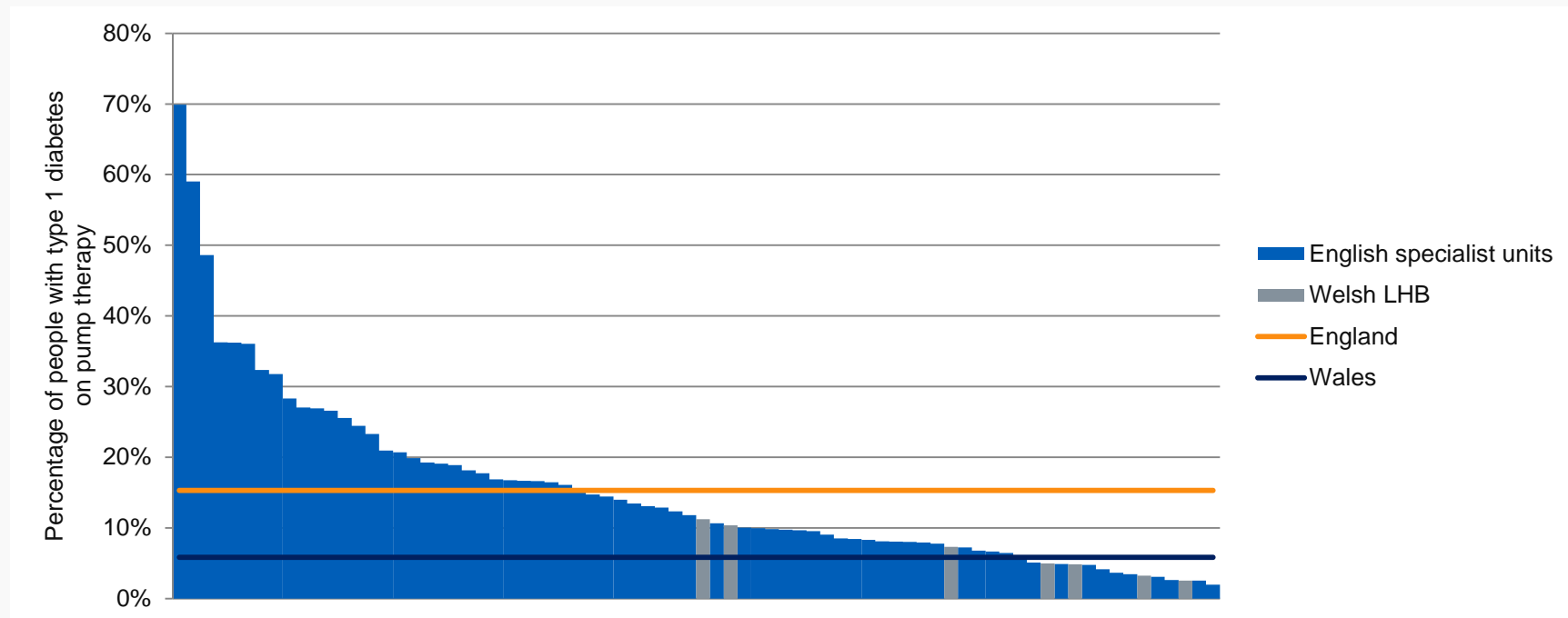
	England				Wales	
	2014-2015		2015-2016		2015-2016	
	Response	Percentage Completed	Response	Percentage Completed	Response	Percentage Completed
Reason for starting Pump						
Hypoglycaemia Reduction	1,813	26.9	5,615	61.1	904	100.0
Glucose Control	1,809	26.8	5,668	61.7	903	99.9
Other	400	5.9	5,211	56.7	904	100.0
Treatment Goals¹						
Hypoglycaemia Reduction	3,062	45.4	4,636	50.5	55	6.1
Glucose Control	3,331	49.4	4,636	50.5	55	6.1
Year started Using Pump	5,685	84.3	8,575	93.4	872	96.5

¹The treatment goal field within the insulin pump collection is optional

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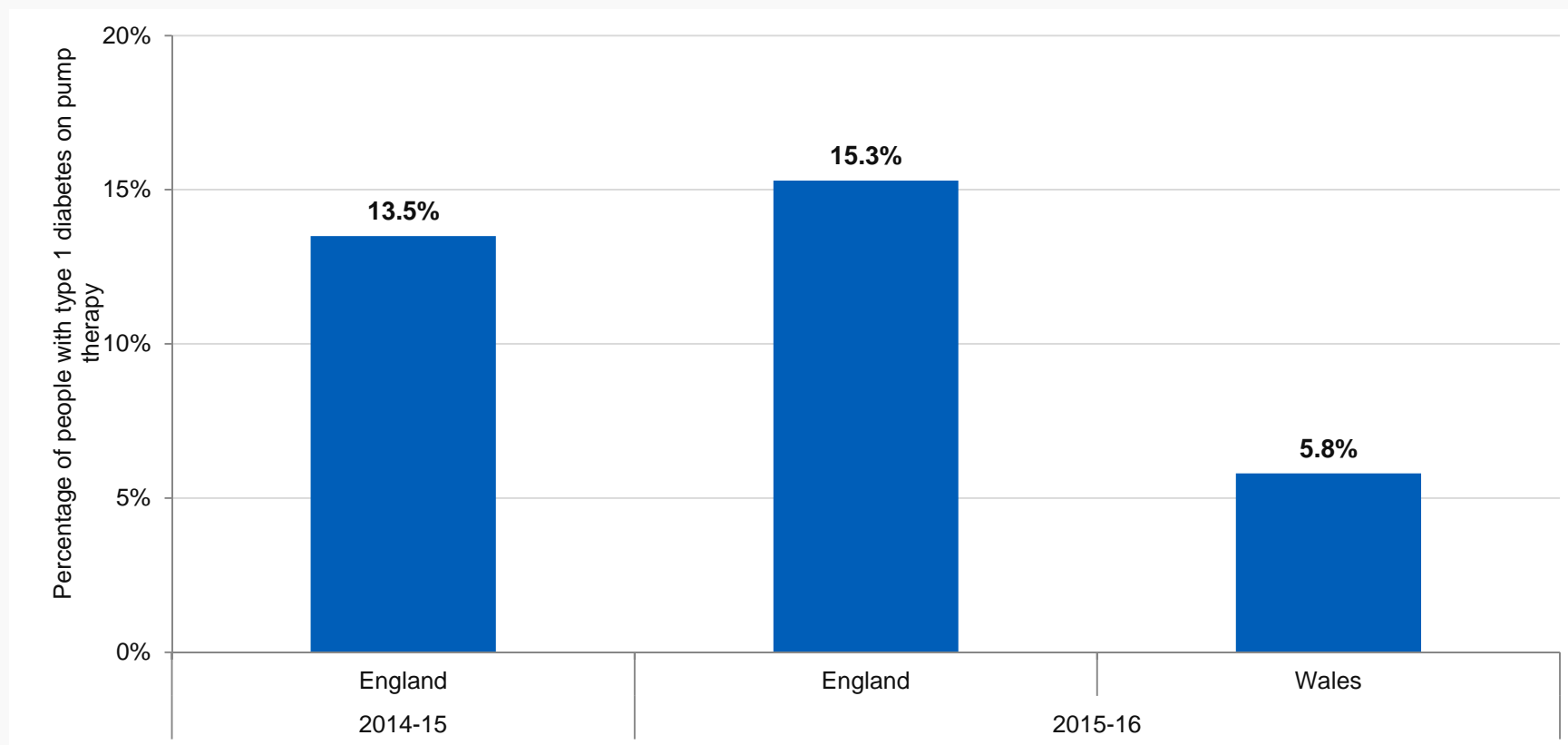
2. Prevalence of Insulin Pump use for people with Type 1 diabetes

Proportion of people with T1DM on an Insulin pump by participating service



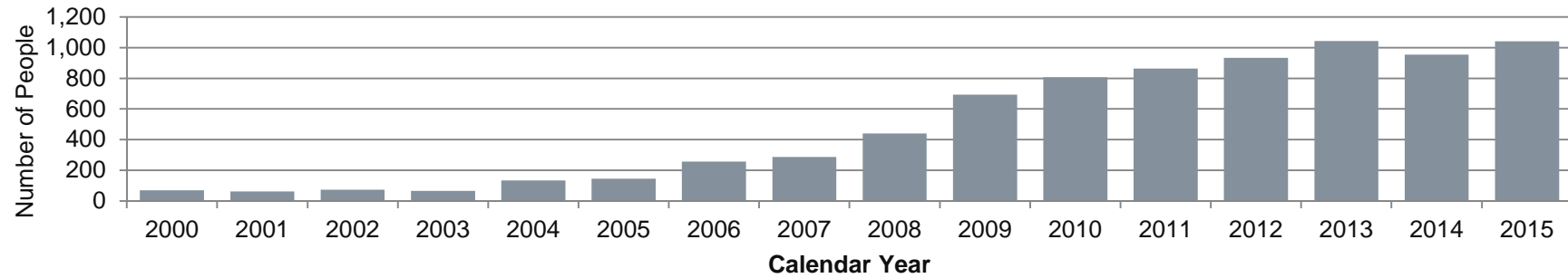
*1 See Data Quality Statement

Calculated proportion of people with Type 1 Diabetes on an Insulin pump

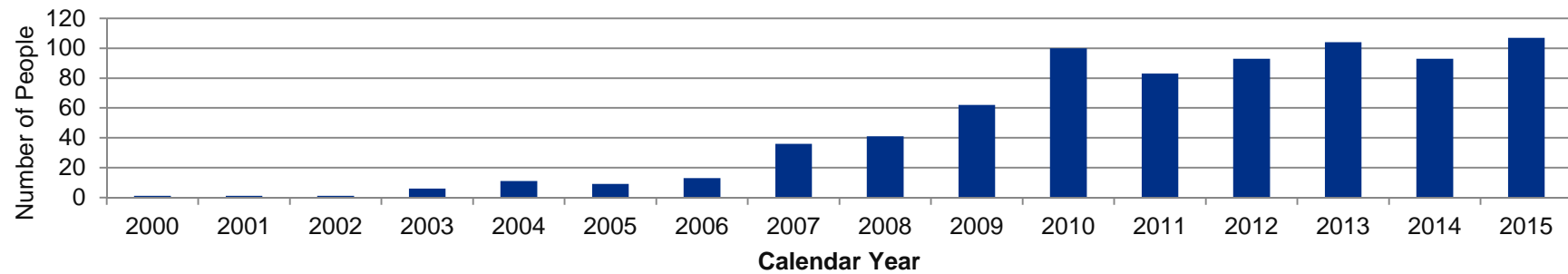


Year Started on Pump

England



Wales

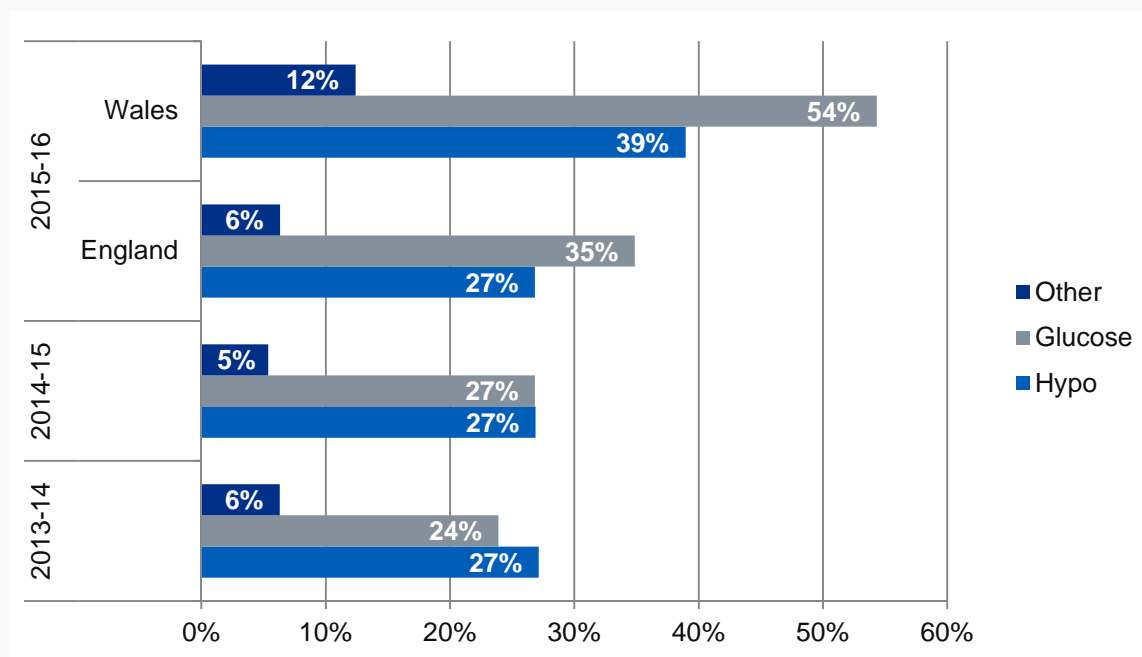


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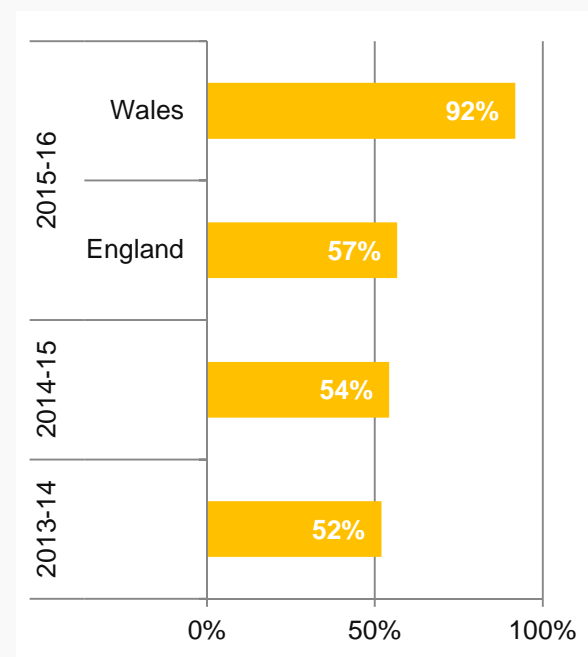
3. Recorded reason for starting on Insulin Pump Therapy

Reason for starting Insulin Pump therapy

The reason¹ for starting pump, all diabetes types, by audit year



Percentage with at least one known reason



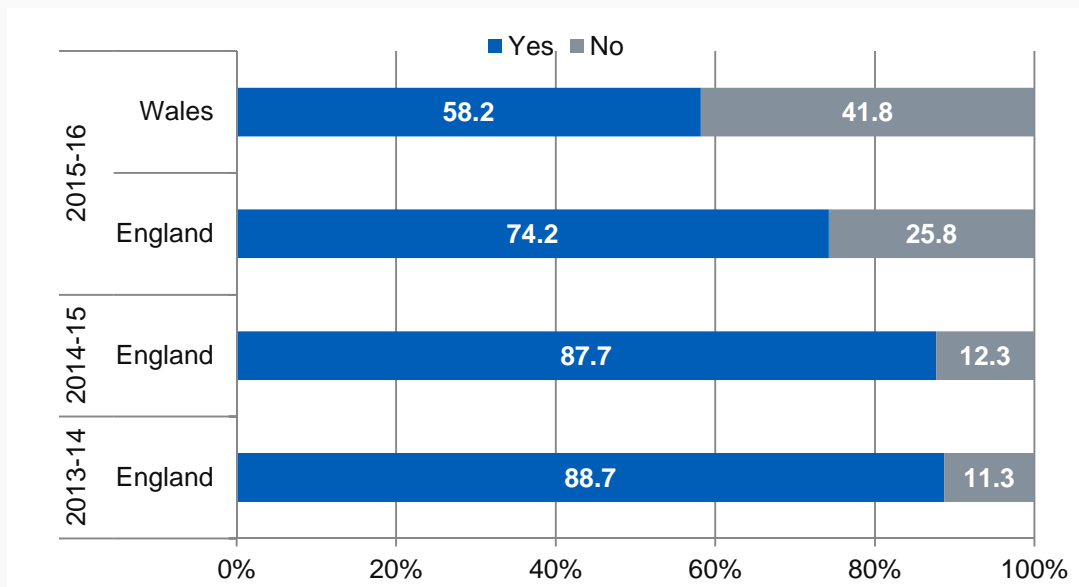
1. A person may have more than one reason for starting insulin pump therapy.

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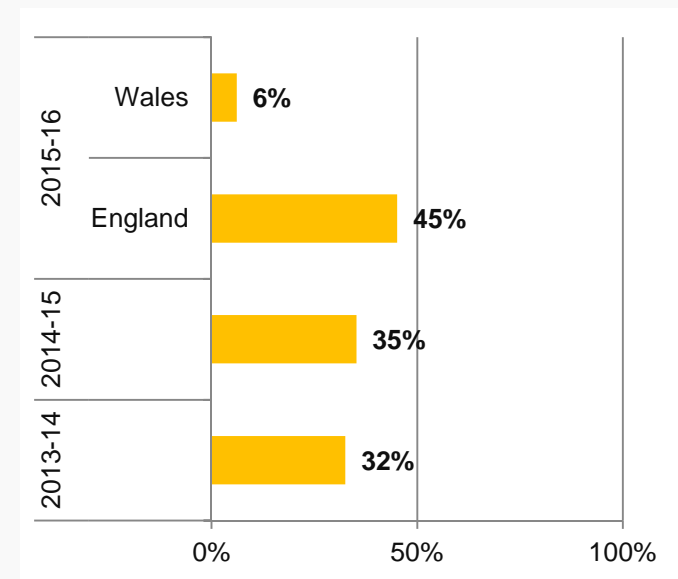
4. Achievement of Treatment Goals

Treatment Goal – Hypoglycaemia

The percentage of people that reached their hypoglycaemia reduction treatment goal after starting pump therapy, by audit year

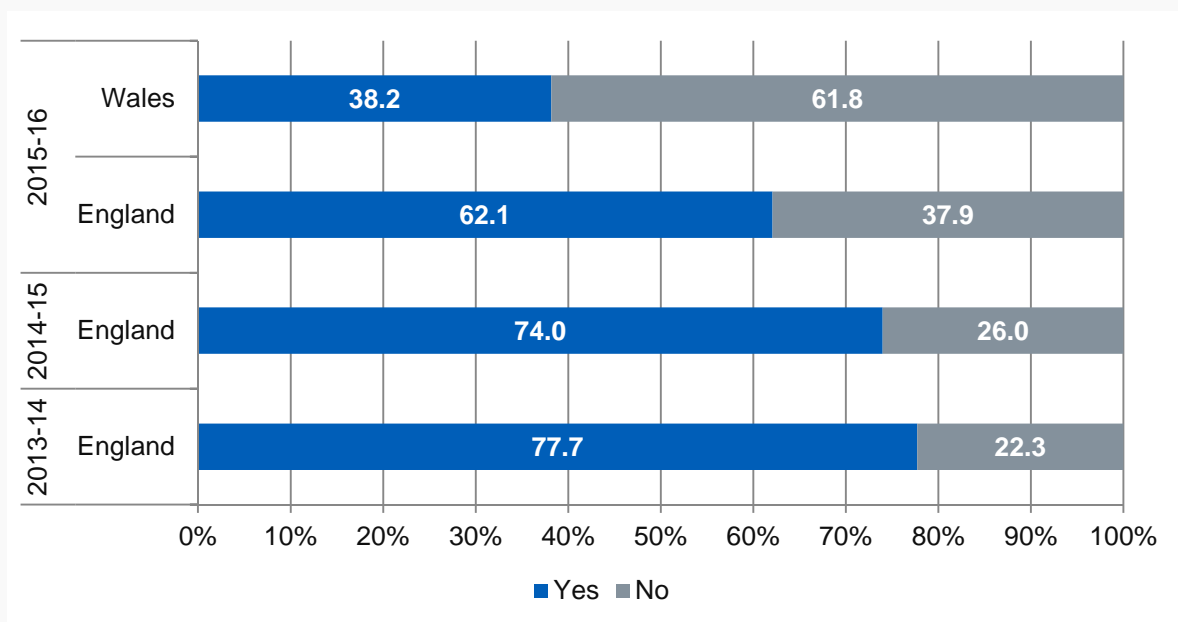


Percentage with hypoglycaemia reduction goal recorded

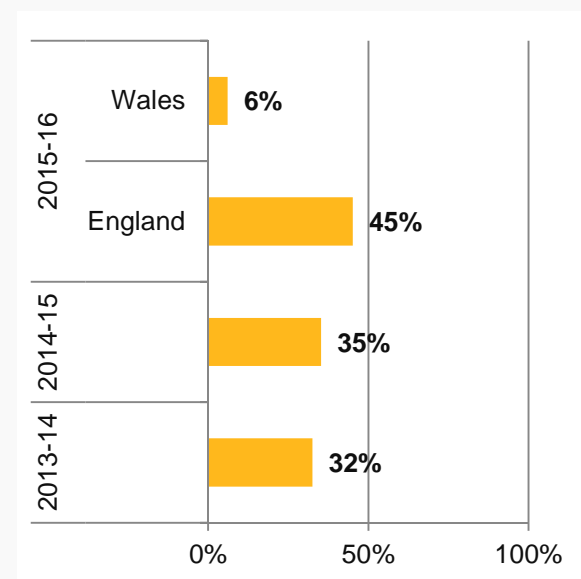


Treatment Goal – Glucose Control

The percentage of people that reached their glucose control treatment goal after starting pump, by audit year



Percentage with glucose control treatment goal recorded



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5. Care Process Completion

Care Processes

Percentage of people with Type 1 diabetes receiving NICE recommended care processes by care process, for those on insulin pump and those not on an insulin pump, 2015-2016

	England		Wales	
	People on an insulin pump	People not on an insulin pump	People on an insulin pump	People not on an insulin pump
HbA1c	92.4	91.1	68.1	73.6
Blood pressure	92.5	90.8	89.3	85.0
Cholesterol	83.6	84.3	59.8	67.5
Serum creatinine	86.8	87.5	66.5	73.9
Urine albumin	59.6	59.5	33.0	39.9
Foot surveillance	67.3	71.9	57.7	62.6
BMI	85.0	83.1	69.4	67.4
Smoking	79.9	81.9	68.9	71.9
Eight care processes ³	38.9	42.2	19.4	27.1

3. Please see full list of footnotes in the definitions and footnote section.

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6. Treatment Target Achievement

Treatment Targets

Percentage of people with diabetes achieving their NICE recommended treatment targets for those on insulin pump and those not on an insulin pump, 2015-2016

England and Wales

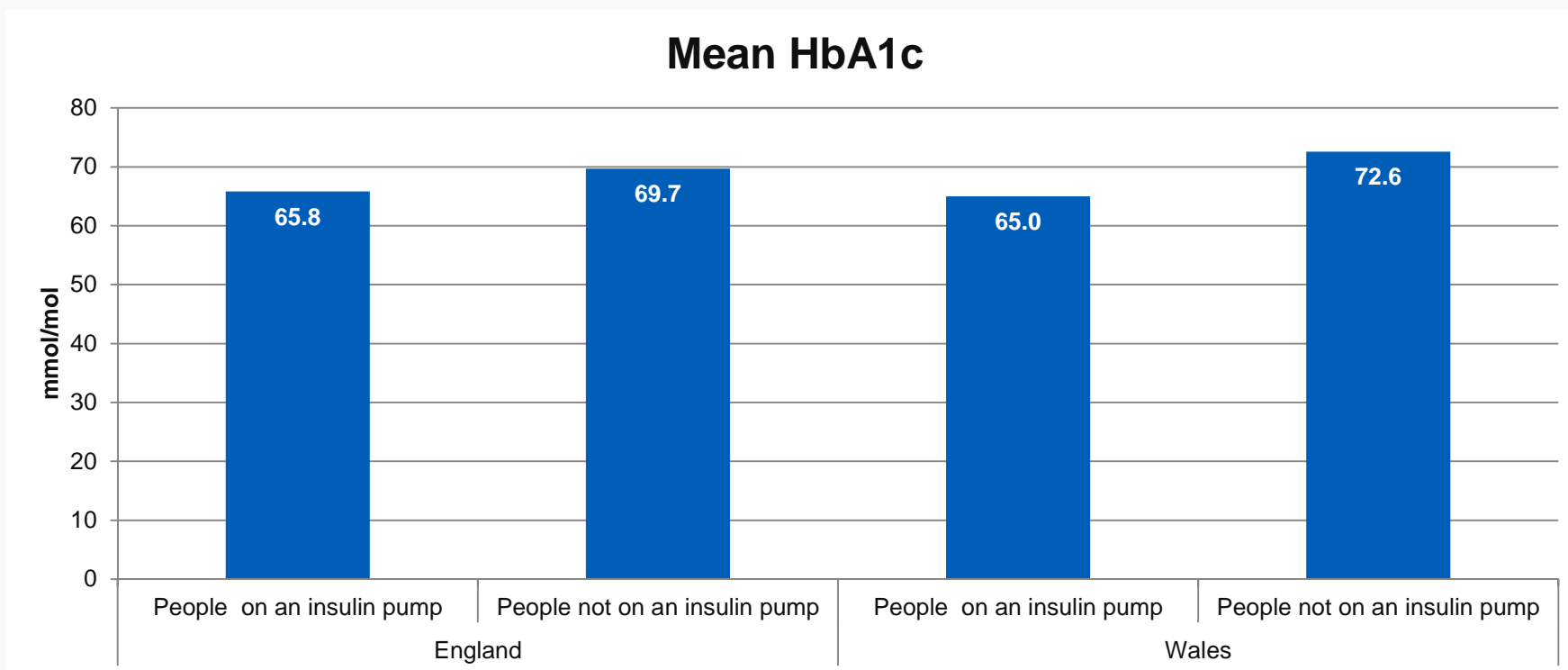
	England		Wales	
	People on an insulin pump	People not on an insulin pump	People on an insulin pump	People not on an insulin pump
HbA1 _c ≤ 58 mmol/mol	32.0	27.8	33.5	23.3
Blood Pressure ≤ 140/80	71.9	70.3	75.8	74.6
Cholesterol < 5mmol/L	72.7	70.6	71.4	69.6
Meeting all three treatment targets	19.0	15.8	19.9	13.9

1. National Diabetes Insulin Pump Audit Report, 2013-2015, <http://content.digital.nhs.uk/catalogue/PUB20436>.

2. National Diabetes Audit – 2015-2016: Report 1, Care Processes and Treatment Targets, <http://content.digital.nhs.uk/catalogue/PUB23241>.

Treatment Targets – Mean HbA1c

Mean HbA1c (mmol/mol) for those with Type 1 diabetes on an insulin pump compared to those not on a pump, 2015-2016



Key Findings

- Improved participation and data quality means that the report this year is more comprehensive and, hopefully, clinically useful.
- The rate at which people with Type 1 diabetes are starting pump treatment has stabilised.
- The proportion of people with Type 1 diabetes treated with pumps varies between centres from >50% to <5%.
- More people are recorded as starting pump treatment to lower glucose levels than to reduce hypoglycaemia.
- Of those recorded between two thirds and three quarters of pump users are achieving their pump treatment goals.
- Type 1 diabetes pump users are more likely to achieve all their treatment targets and on average have a lower HbA1c than their non-pump using peers, despite being a younger cohort.

Recommendations

- Given the evidence for effectiveness in practise, more people with Type 1 diabetes should be considered for pump treatment.
- Investigate the reasons for the ten fold variation between specialist centres in pump use by people with Type 1 diabetes.
- Try further to improve HbA1c in pump users
- Improve Data Quality & Participation

Pump Audit Going Forward 2018-19

- New 3(+2)yr NDA contract starts June 2017
- 'Directions' means that every Trust should participate
- Opportunity to add pump questions for 2017-18
- All HbA1c, BP, BMI, Cholesterol records harvested
- Spotlight audits (in collaboration with NPDA)
 - Pump service Structures (capacity & capability)
 - CGM

Thank You

- NDA team (NHSD & DUK)
- NDA Advisory Groups
 - Pumps Subgroup
 - Phil Weston, Emma Wilmot, Peter Hammond, Pratik Choudhary, Partha Kar
- All the NDA pump audit Participants