Equitable prevention: implementing a targeted universalism, paediatric oral health promotion programme in a hospital setting

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Agenda

- The problem
- The programme
- Intervention design
- Programme theory
- Measurement
- Strategy
- Results
- Challenges and limitations
- Implications
- What's next

The Problem

- Tooth extraction costs the NHS £33 million annually

- Tooth extraction is the most common hospital procedure for children aged five-nine years in England.

- Tooth decay is almost entirely preventable and is inequitably distributed across the population.

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CWFT Catchment

- 3 in 10 young children in CWFT catchment area have signs of visible tooth decay

- 2016-17, 1,555 children underwent dental extractions in CWFT, two-fifths of these were amongst the most deprived quintile of the population

- Of the 1,555 children, 85% of had multiple extractions costing £1,566 per child

The Programme

- A three-year programme (2019-2021)

- Multi-partner oral health programme (OHP)

- Delivered using a targeted universalism approach

- Aim: to equitably improve the oral health of paediatric patients admitted to CWFT through 3 intervention components:

(i) promotion activities (HPA)

(ii) Evidence-based targeted supervised toothbrushing (STB)

(iii) Tailored oral health (OH) staff training

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Intervention Design

- Developed and overseen by an OHP team (RBKC public health department, PHE and CWFT)

- Quarterly governance meetings

- Evaluation supported by NIHR ARC NWL

- Delivery and monitoring supported by CWFT

Intervention Design - Programme Theory

Measurement

| Interventions		Indicators and other data monitored	Data source	Objective
(i) Health promotional material	**KPI 1**	Proportion of children/ families that reported seeing promotional material at the Trust	Bedside survey	>= 75%
(ii) Supervised toothbrushing	**KPI 2**	Number of children receiving supervised toothbrushing	Bedside survey	Increase (*)
		Proportion of children/families who identified something they had learned during the STB session	Bedside survey	>= 75%
		Proportion of children/families committing to an oral health behaviour change	Bedside survey	>= 75%
		Number of children who were not regularly seeing a dentist that have been signposted	Bedside survey	100%
		Frequency of toothbrushing	Bedside survey	Improvement compared to baseline data
		Frequency of sugar intake	Bedside survey	Improvement compared to baseline data
		Demographic data of children seen for supervised toothbrushing (ethnicity and socio-economic status)	Bedside survey	N/A
		Themes of learning and commitment to change	Bedside survey	N/A
		Number of childre that were given fluoride containing toothpaste	Bedside survey	N/A
(iii) Staff training	**KPI 3**	Number of people attending the training session.	Online booking platform	Increase (**)
		Proportion of attending staff claiming to have learned something	Online staff feedback survey	>= 75%
		Proportion of attending staff committing to positive change in professional and personal practice	Online staff feedback survey	>= 75%
		Themes of learning and commitment to change	Online staff feedback survey	N/A
		Role, grade and department of attendants	Online booking platform	N/A

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Measurement

Data collection (November 2019 and August 2021)

- STB and HPA – bedside survey
- Training - online booking platform and an online staff feedback survey

Data analysis

- Statistical Process Control (SPC) charts
- Summary statistics and
- Qualitative analysis

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Strategy
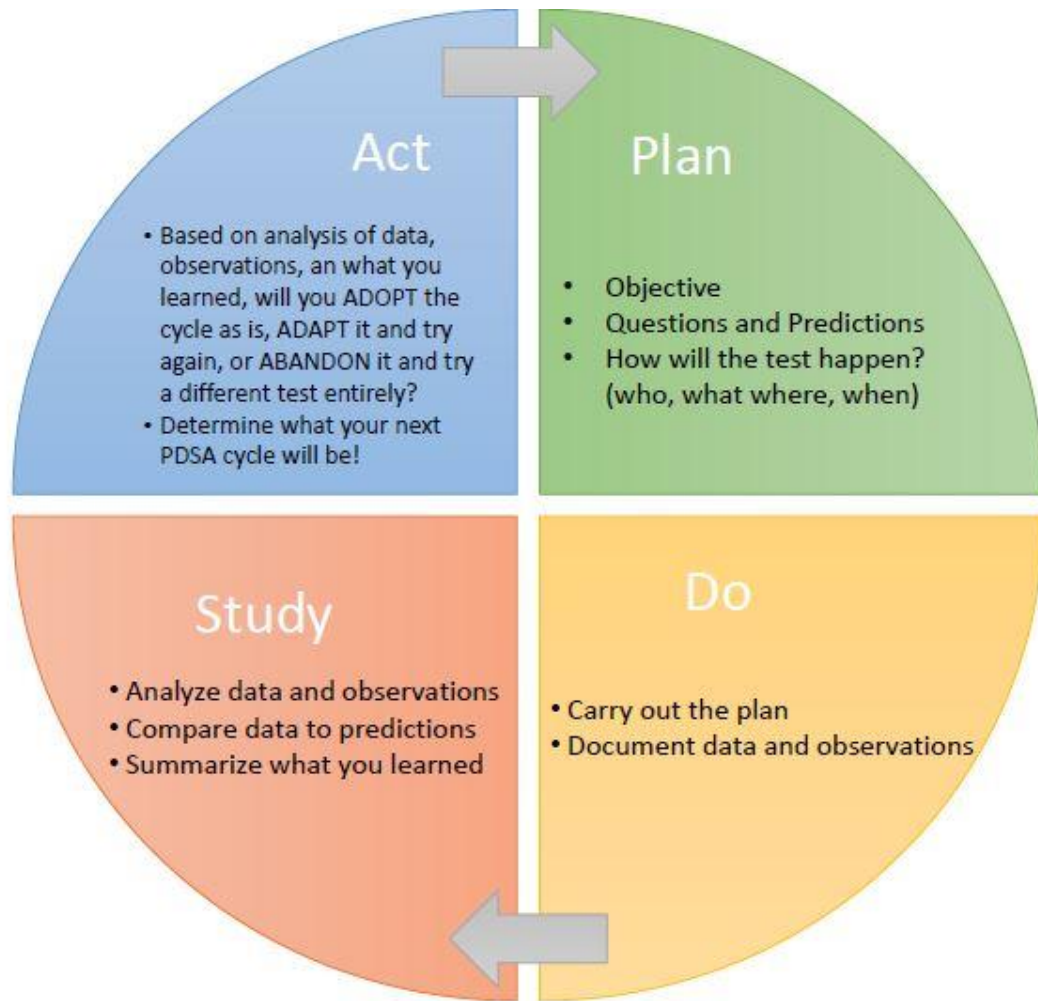
- PDSA cycles 1-4: introduction of the three interventions

- PDSA 1,3,6: intervention refinement

- PDSA cycle 2/2a & 4: data issues

- PDSA 6, 7a-d: delivery challenges

- PDSAs 5-7b,c: stakeholder preferences
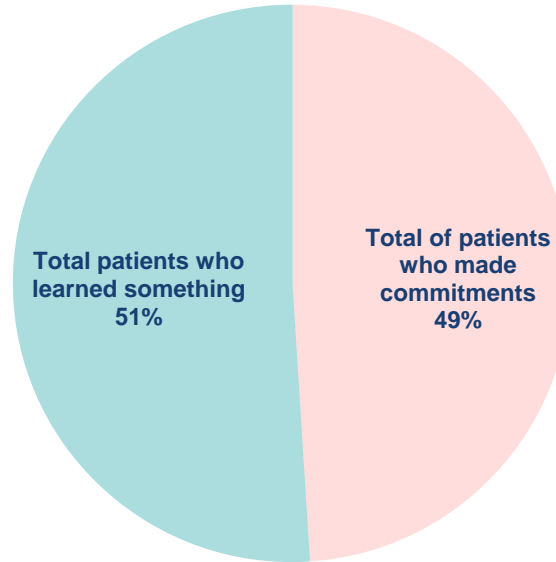
Results – health promotion

- 93 posters were deployed across the hospital site along with animated videos

- Expected reach in maternity 5,074

- 41% of families recalled seeing OHP materials across the hospital site

- Those identifying as Asian or Asian British ethnicity were least likely to report seeing OHP materials across the hospital site (29.3%) compared to those of White or White British ethnicity (46.0%)

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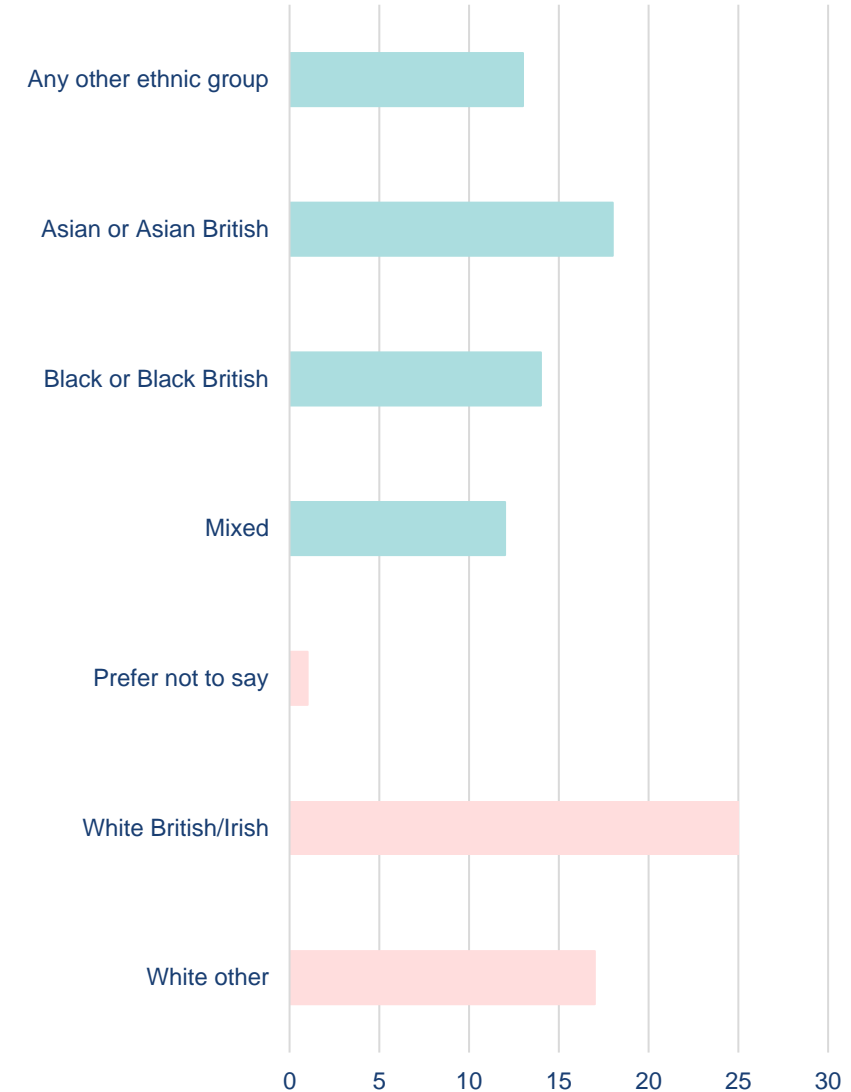
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Results -STB

- 737 children received STB
- Potential reach: 1,680
- Ethnicity: 57% belonged to BAME
- Demographic: 54% lived in most deprived areas
- Learning something new: 96%
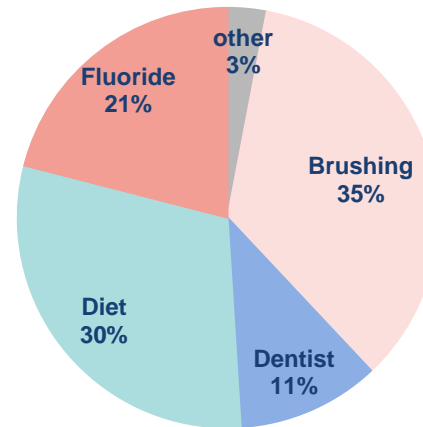- Committed to a behavioural change: 91%
- Signposted to dental services: 100%

BEHAVIOURAL CHANGE

Total patients who learned something
51%

Total of patients who made commitments
49%

THEMES OF LEARNING

other
3%

Fluoride
21%

Brushing
35%

Diet
30%

Dentist
11%

ETHNICITY DATA

Any other ethnic group

Asian or Asian British

Black or Black British

Mixed

Prefer not to say

White British/Irish

White other

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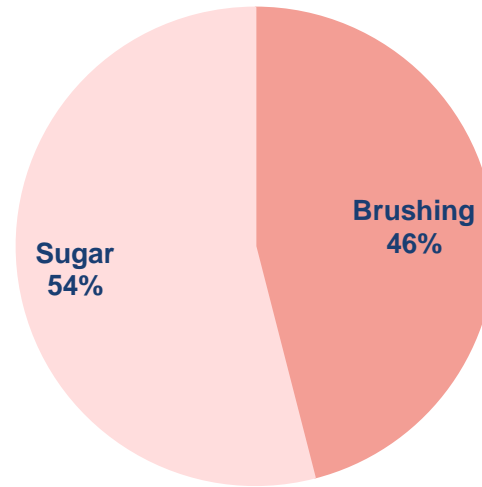
Results - Training

- 73 staff members trained

- Cohort included doctors, nurses, midwives and Allied Health Professionals.

- 84% of staff reported learning something new and stating that they would do things differently in the future.

STAFF THEMES OF LEARNING

Sugar 54%

Brushing 46%

"I work with adults however it was still very interesting as most patients have bad oral hygiene. I didn't know most of the information, its useful for me personally because I have a two year old and newborn!"

"Signpost patients for dental checks inc babies and new mums. Community dental referrals for patients with additional needs and read labels about sugar content!"

ROLE OF STAFF TRAINED

Other
Doctor
Dietician
Midwife
MSW
Nurse

0   10   20   30   40

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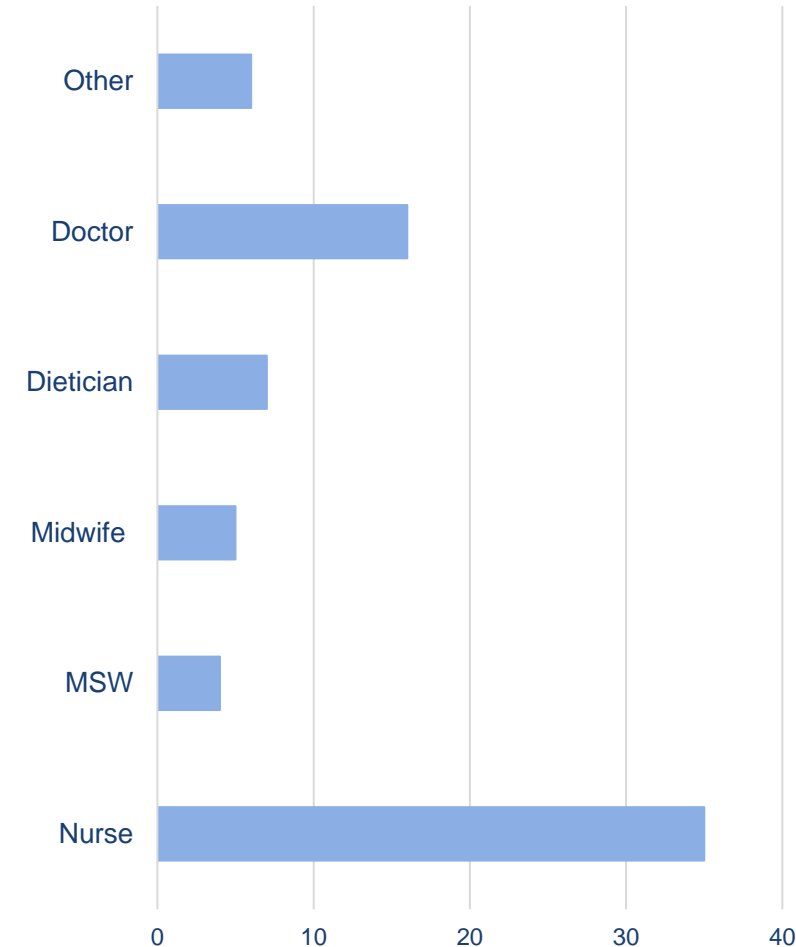
Challenges and limitations

Oral health promotion programme activity - bedside health promotion and staff training
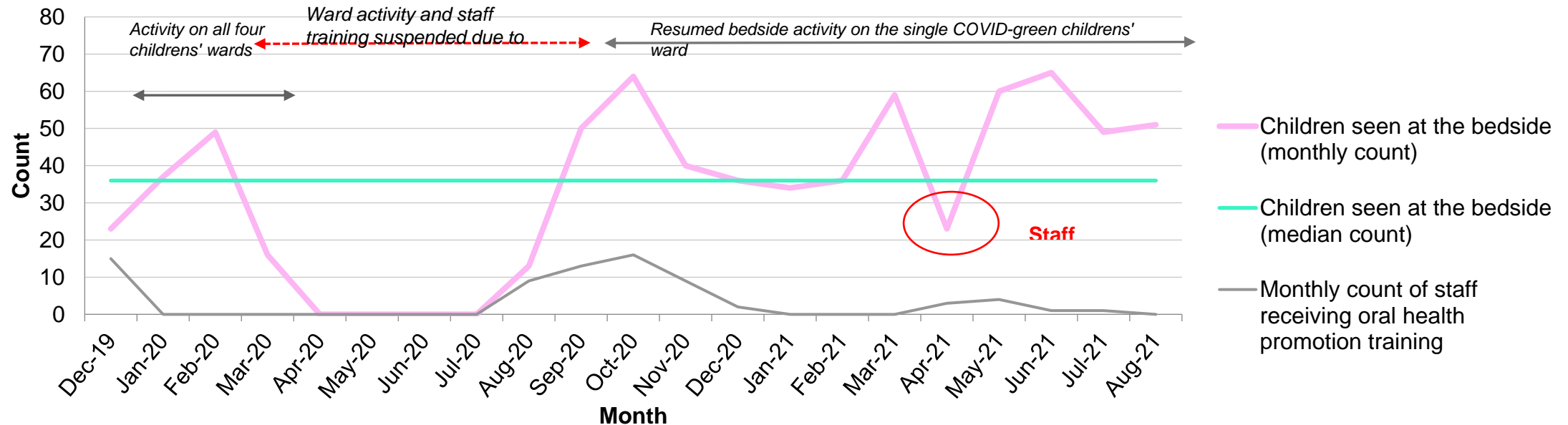
- Limitations on downstream evaluation .
- Impact of COVID-19 revealed importance of flexibility in order to adapt for unforeseen/uncontrollable circumstances.
- The delivery of bedside oral health promotion activities over time was heavily influenced by the staff time dedicated to the OHP delivery.

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Implications

- Future work is needed to understand behavior change and impact.

- Health promotion programmes, an approach to reduce pressure on the NHS through prevention.

- Key learning from this project can be applied to other NHS hospitals.

- Future work should consider 'down steam' evaluation

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What's next

- A third year of funding was awarded in 2021

- Data collection continues for future evaluation

- This will support rollout in other sites and settings

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