Imperial College Healthcare NHS Trust

connecting care for children

Do models of integrated child health reach those most in need in the community they serve?

Dr Matthieu Poudevigne[1], Prof Mitch Blair[1,2,3], Dr Mando Watson[1,4].
[1]Imperial College Healthcare NHS trust
[2]London North West University Healthcare NHS trust
[3]Department of Public Health and Primary Care
[4]Connecting Care for Children

Objectives

Integrated services for children's health have been set up across the UK to align and integrate a range of local strategies, create partnerships across NHS and local authorities, and foster the conditions for innovation and impact. Child Health GP 'Hubs' are a good example, set up between volunteer Primary Care Networks (PCNs) and secondary care paediatric units.

With recent reports of widening health inequalities [1], this paper asks:

i) are these integrated services set up in PCNs with a registered population representative of the level of deprivation of the local population, and
ii) could these services have an impact on health inequality.

Methods

The regional investigation spans 17 Hubs of 95 General Practices spread over 7 Boroughs in the North West London Integrated care system (NWL ICS) - a total population of 572,075.

Two deprivation indices were calculated for each Hub: the Index of Multiple Deprivation (IMD, range 0-50) and the Income Deprivation Affecting Children Index (IDACI, range 0-1). Scores were calculated by linking GP patients in each Lower layer Super Output Areas (LSOAs) to the Deprivation indices in each LSOA [A,B,C].

The mean difference in IMD and IDACI between the Hubs and boroughs for NWL was calculated and significance tested with a Paired t-test.

Results

Overall IMD scores (15.03 to 41.70) and IDACI scores (0.09 to 0.28) (Table 1) showed low to medium deprivation levels.

Mean percentage difference in scores between Hub and Borough showed: a mean IMD score 4.8% higher ($p<0.10$) in the Hubs' population compared to the borough in which they were located, and a mean IDACI score 7.3% higher ($p<0.10$).

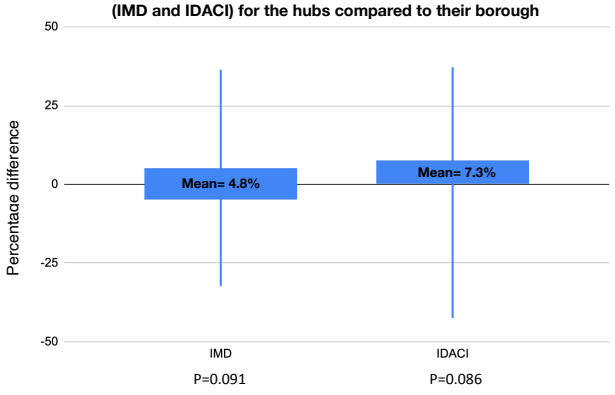
Table

Table 1: Hub vs Borough IMD and IDACI scores and their difference expressed as a percentage (Differences in black represent more deprived, in red less deprived)

Hub IMD	Borough IMD	IMD difference	IMD difference as %	Hub IDACI	Borough IDACI	IDACI difference	IDACI difference as %
23.345	22.27	1.075	4.827	0.186	0.185	0.001	0.541
32.096	21.526	10.57	49.103	0.269	0.121	0.148	122.314
25.868	25.558	0.31	1.213	0.182	0.178	0.004	2.247
33.89	21.526	12.364	57.438	0.251	0.121	0.13	107.438
32	20.334	11.666	57.372	0.253	0.165	0.088	53.333
23.846	21.526	2.32	10.778	0.166	0.121	0.045	37.190
13.76	20.334	-6.574	-32.330	0.095	0.165	-0.07	-42.424
17.085	20.334	-3.249	-15.978	0.128	0.165	-0.037	-22.424
24.359	22.71	1.649	7.261	0.171	0.164	0.007	4.268
41.705	25.558	16.147	63.178	0.279	0.178	0.101	56.742
24.853	18.223	6.63	36.383	0.185	0.153	0.032	20.915
24.411	25.558	-1.147	-4.488	0.191	0.178	0.013	7.303
24.14	25.558	-1.418	-5.548	0.162	0.178	-0.016	-8.989
22.294	18.223	4.071	22.340	0.169	0.153	0.016	10.458
16.807	22.27	-5.463	-24.531	0.147	0.185	-0.038	-20.541
19.738	20.334	-0.596	-2.931	0.188	0.165	0.023	13.939
15.031	15.031	0	0.000	0.125	0.122	0.003	2.459

Graph

Graph 1: Mean percentage difference in deprivation scores (IMD and IDACI) for the hubs compared to their borough



Conclusion

The majority of the Hubs serve a more deprived population than the general population of their borough.

Established hubs are likely to facilitate access to specialist care and mitigate the inverse care law for those children in most need.

Further studies with larger datasets will be able to test this in future as hubs expand in the UK, and may also be used to prioritise new Hubs in areas most in need.

Reference/data source

Data source:
A- 2019 English indices of deprivation LSOA level MHCLG Open Data : English Indices of Deprivation 2019 - LSOA Level (opendatacommunities.org)
B- Patient registered at a GP practice 2022 Patients Registered at a GP Practice, July 2022 - NHS Digital
C- Indices of deprivation for London Indices of Deprivation – London Datastore

Reference:
1- The country is getting sicker The urgent need to address growing health inequalities and protect our health in the face of an economic crisis, BMA, December 2022