

The Peninsula Collaboration for Health Operational Research & Development

Allocating patients to community teams: by GP or home location?

Summary:

Community teams in Plymouth have more than 500,000 patient contacts per year. The majority of these contacts require travel to and between patients. The allocation of patients to teams may have a significant impact on the travel distances and travel time required by the teams. The aims of this project were to assess workload of local teams and to compare two ways of allocating patients to teams: (i) Allocate patients to teams by home address of patient, and (ii) allocate patients to teams by GP. We found that in three Plymouth community teams allocating patients by GP adds ~30% travel costs and time compared with allocating patients by home location.

Context:

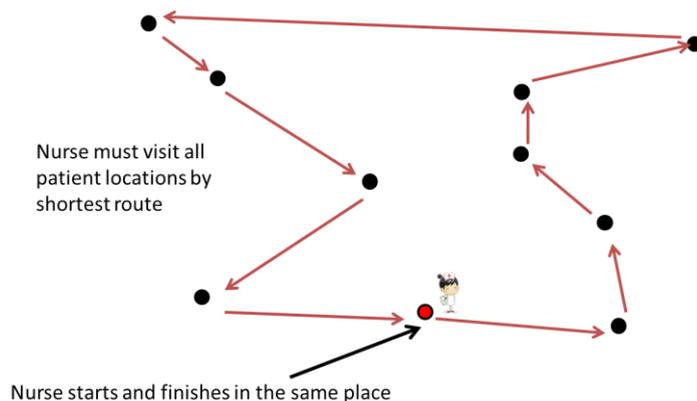
The work was requested by NHS Devon Plymouth Torbay and Plymouth Community Healthcare. They were assessing the predicted workload of teams being divided between new locality regions.

Method:

We examined the visits of three team types: Mental Health, Long Term Conditions and Community Nursing.

Patients were allocated to teams either based on their home postcode (patients were assigned to teams based on which team's hub was closest), or based on their GP (GPs were assigned to teams based on which team's hub was closest).

Workload was constructed that was composed of units of 8 patients per day. These patients were sampled randomly from each team's patient register. A heuristic algorithm was used to find the shortest route from the hub, around the 8 patients, and back to the hub.



Outputs:

Allocating patients to teams based on GP affiliation, rather than patient postcode, adds approximately 30% more travel distance per year. Across the three teams this is equivalent to more than 100,000 miles per year (or £45,000 per year based on 45p/mile).

		Travel distance /yr (miles 000's)*		
Team	Average visits /yr	Home postcode	GP Surgery Postcode	Difference
Mental Health	7,172	17	22	5
Long Term Conditions	7,316	18	22	4
Community Nursing	144,791	337	435	98

Allocating patients to teams based on GP affiliation, rather than patient postcode, adds more than 600 working days spent travelling per year.

		Travel days (7.5 hr days) per year*		
Team	Average visits /yr	Home postcode	GP Surgery Postcode	Difference
Mental Health	7,172	99	128	29
Long Term Conditions	7,316	107	130	23
Community Nursing	144,791	2,020	2,609	589

Discussion:

There is a tension between allocating patients to teams based on home location or based on GP affiliation. GPs may often state a preference for dealing with just one locality team. However, as patient location and GP location do not always closely align (for example, a patient may retain their GP as they relocate across the city) our analyses shows that allocating patients according to GP affiliation adds significantly (~30%) to the amount of travel that the community teams need to undertake. This adds costs both in terms of car mileage and also in terms of lost productivity.

Contact and more information:

For more information, please contact Dr Mike Allen (Senior Research Fellow, PenCHORD):
m.allen@exeter.ac.uk