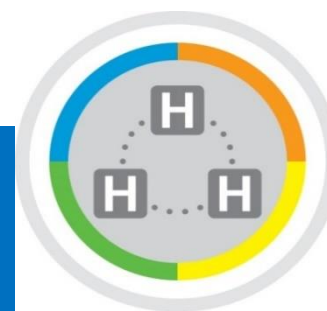


Reconfiguration of hospital services

A programme to sustain services and improve care

Appendix 8 - Access and Travel

7 September 2017



Overview

Theme

- A** Majority of care would stay local under proposed option
- B** Travel would be within 30 minutes for emergency patients transferred out of their local hospital. ~10% emergency patients would be transferred across the three sites
- C** Estimated ~20% of elective procedures would be transferred. For elective procedures >80% of residents would be within 45 minutes of the hospital by car
- D** Our region has higher than average car ownership, with lower ownership in areas closer to hospital. Need to address potential disadvantages of protected groups and minority who face long public transport journeys – service user input is influential
- E** Access to range of specialised services, and services out-of-hours

1. Used as cut-off in the London health programme

How it links to proposals

All day cases, outpatients, and emergency walk-ins would remain local

All travel times meet standards used in previous reviews

For elective patients who are transferred the majority of Mid & South Essex residents would have good car access to hospital

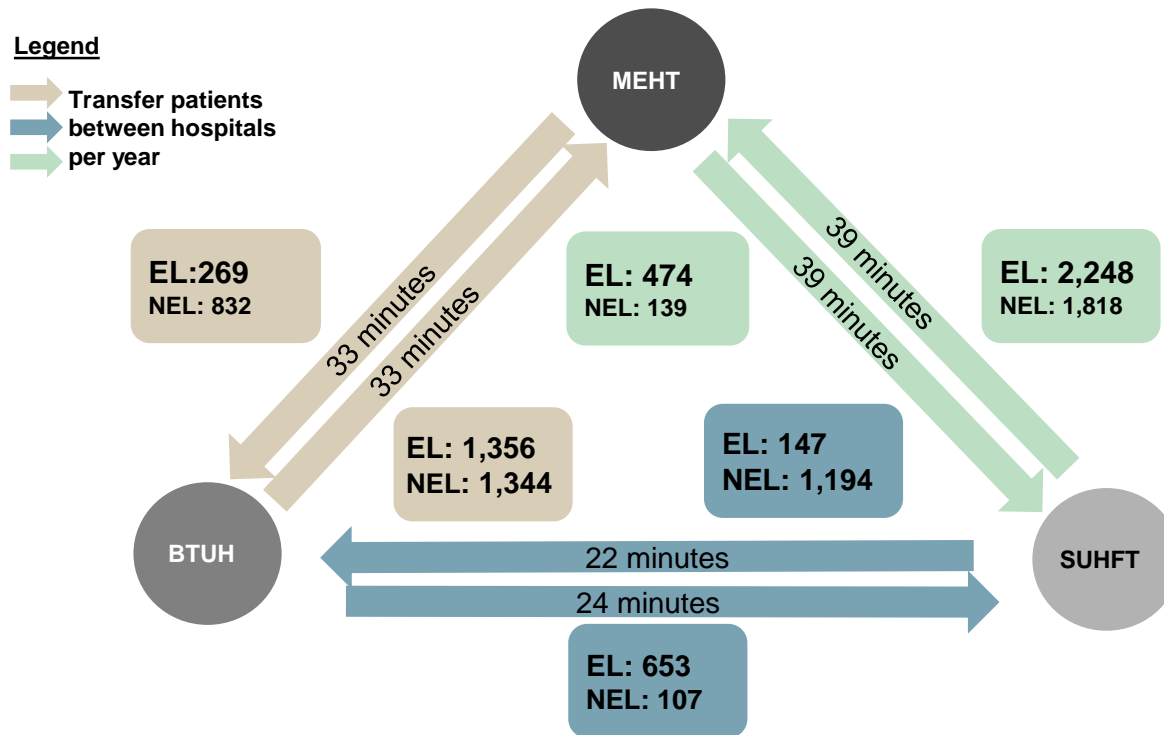
Potential to mitigate impact of any increase in travel time.

Walk-in and blue-light emergency care would be provided at all sites 24/7; in some cases patients may be stabilised at local hospital then transferred to specialist centres

Over 98% of core services would remain local post reconfiguration

Service		Current total attendances	Attendances staying local
Front door	Walk-in A&E attendances	225k	~100% (225k)
	Ambulance A&E attendances	87k	~100% (87k)
Inpatients	Elective daycases	114k	~100% (114k)
	Elective inpatients	24k	~79% (19k)
	Non-elective inpatients	53k	~90% (48k)
	Women's inpatients	30k	~100% (30k)
	Front door and Inpatient total	533k	~97% (533k)
OP	Outpatients	1,835k	100% (1,835k)
Overall total		2,368k	~98% (2,368k)

Flow of treat and transfer and elective inpatient movement between the three Trusts (changes in 20/21)



Total # patients transferred	Per Day	Per Week	Per year
Elective	14	99	5,147
Non - Elective	15	104	5,433

Current state: 99% of population within 45 minutes of nearest hospital by car

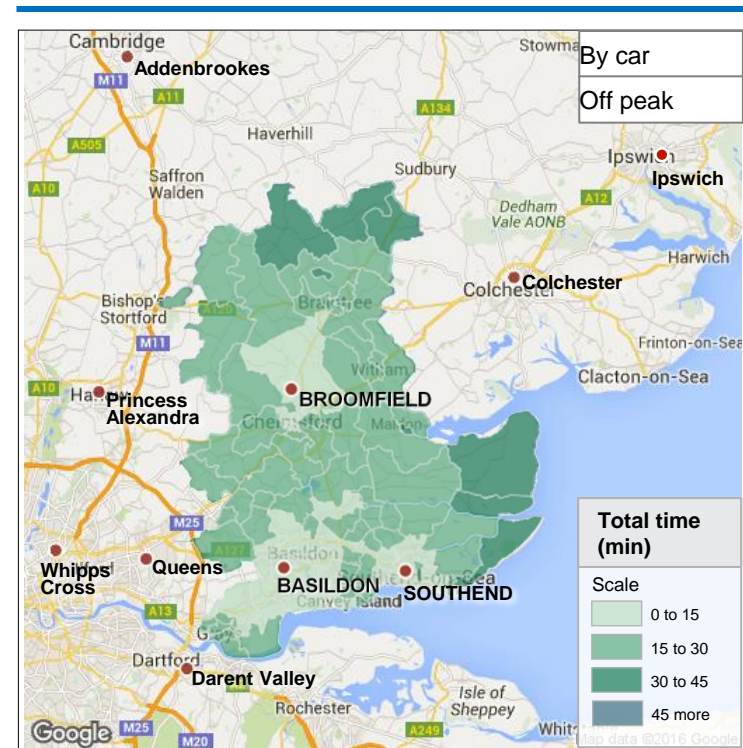
99% of population is within 45 minutes of nearest hospital, by car

	Catchment population	Avg. time (min)	% population within			Peak adj. (min)
			15m	30m	45m	
Basildon	470,688	16.0	45%	97%	100%	+ 0.8
Broomfield	326,323	20.2	20%	94%	100%	+ 1.0
Southend	247,683	13.6	66%	93%	99%	+ 1.1
Total	1,044,694	16.7	42%	95%	>99%	+ 0.9

86% of population is within 60 minutes of nearest hospital, by public transportation

	Catchment population	Avg. time (min)	% population within			Peak adj. (min)
			30m	45m	60m	
Basildon	262,261	36.9	39%	70%	95%	+ 0.2
Broomfield	300,780	50.2	11%	45%	74%	+ 3.2
Southend	336,520	35.2	57%	70%	88%	+ 3.3
Total	899,561	40.7	36%	61%	86%	+ 2.4

Average travel time (in min) to nearest hospital, by 4-digit postcode



Future state: Patients who need to be transferred will reach specialist care within 15 – 26 min by blue light

Emergency patients transferred



Assuming patients will arrive to a hospital and then transfer to a specialist centre if needed.

Estimated number of patients requiring transfer:

	Total patients	% transferred
MEHT	17,789	5%
SUHFT	18,363	16%
BTUH	17,195	8%

Transfer Transfer time (minutes)

		To		
		MEHT	SUHFT	BTUH
From	MEHT		2.7 26.2	16.0 22.1
	SUHFT	35.0 26.1		23.0 14.7
	BTUH	25.8 22.3	2.1 16.3	

Legend	 # NEL Patients per week
	 Additional travel time (mins)

Note: assumes blue light travel time is 33% faster than car travel times.
 Methodology: Using Google Maps API, 4 different departure times (8:30, 13:00, 17:00, 21:00) were used to simulate journeys over 3 days, including the weekend, to find ranges & averages. Source: Google Maps API SR A&E model

Note: Transferred referring to patients who are stabilised at local hospital then transferred to specialist centre. Source: HES A&E, inpatients and outpatients data, 20/21.

Future state: Elective patients who have procedures at other hospitals will add between 12 – 32 minutes to their journey

Elective patients rerouted



Patients who might normally have their elective surgeries at one hospital might have their procedure moved to another site, potentially adding time to their journey from home.

The number of patients to be transferred for elective procedures is:

	Total patients	% rerouted
MEHT	9,184	8%
SUHFT	9,684	25%
BTUH	5,557	36%

Additional travel time (minutes)

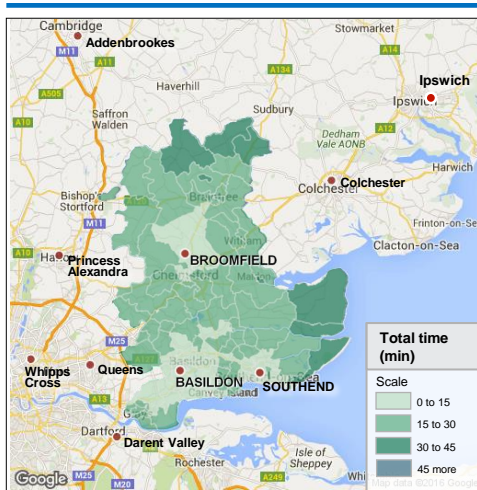
To \ From	MEHT	SUHFT	BTUH
Broomfield area		9.1 22.9	5.2 17.4
Southend area	43.2 32.1		2.8 15.8
Basildon area	26.1 20.8	12.6 11.8	

Legend	 # EL Patients per week
	 Additional travel time (mins)

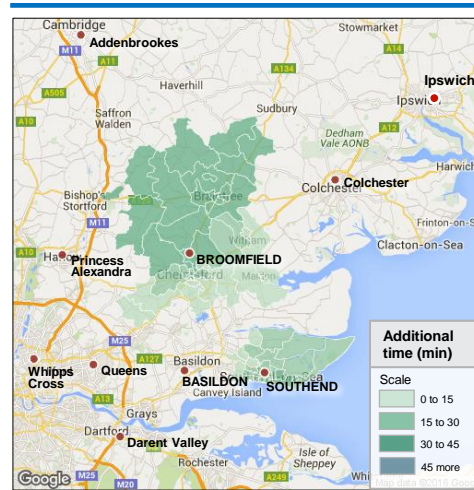
Note: Rerouted defined as patients receiving elective procedure at hospital not currently being used Source: HES A&E, inpatients and outpatients data, 20/21.

Back up: Future state: travelling to different site (Basildon)

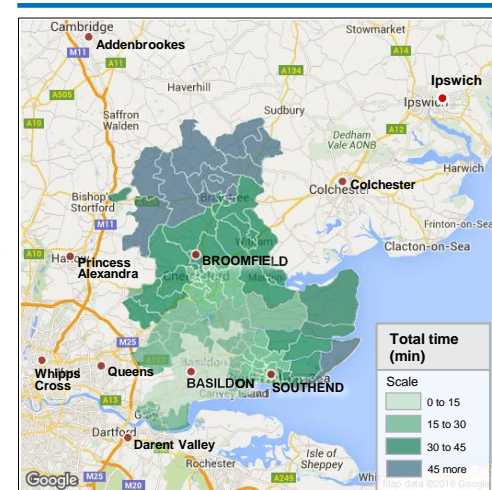
Travel times to hospital under current service configuration



Additional travel time to hospital if services moved



New travel times to hospital if services moved



Current configuration

Current hospital	Population	Current travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon	470,688	16.0min	45%	97%	100%	+ 0.8min	+ 20.9min
Broomfield	326,323	20.2min	20%	94%	100%	+ 1.0min	+ 30.0min
Southend	247,683	13.6min	66%	93%	99%	+ 1.1min	+ 21.6min
Total	1,044,694	16.7min	42%	95%	>99%	+ 0.9min	+ 24.2min

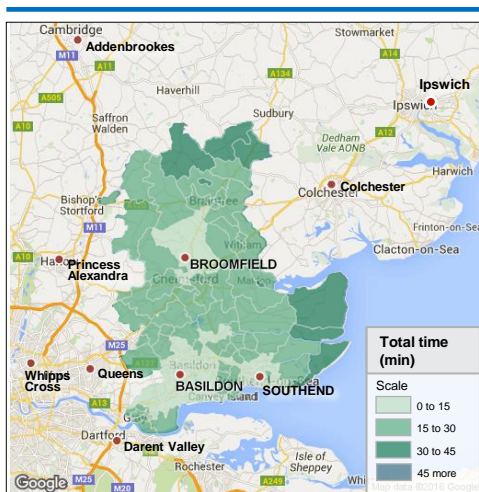
If service moved to Basildon

New hospital	Population affected	Additional travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon→	-	-	45%	97%	100%	-	-
Broomfield→Basildon	326,323	17.4min	0%	31%	75%	+ 6.7min	+ 74.7min
Southend→Basildon	247,683	15.8min	0%	60%	94%	- 0.1min	+ 27.9min
Total	574,006	16.7min	20%	68%	91%	+ 3.8min	+ 49.9min

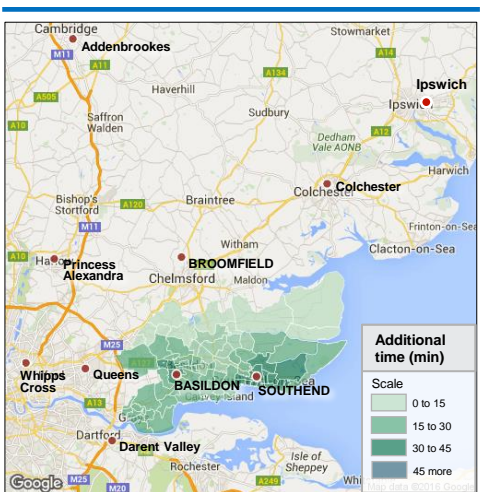
1. Simulated for travel by private transport (car) during daytime off peak hours (1pm)

Back up: Future state: travelling to different site (Broomfield)

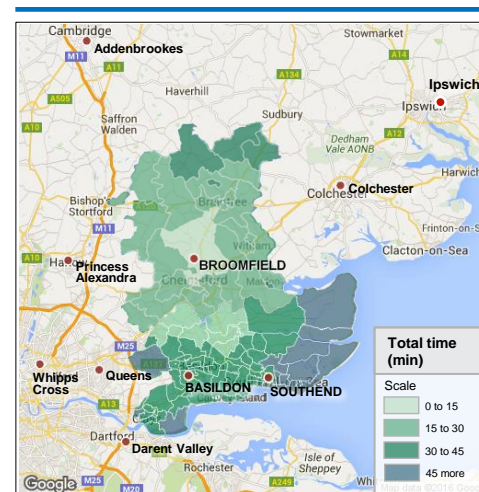
Travel times to hospital under current service configuration



Additional travel time to hospital if services moved



New travel times to hospital if services moved



Current configuration

Current hospital	Population	Current travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon	470,688	16.0min	45%	97%	100%	+ 0.8min	+ 20.9min
Broomfield	326,323	20.2min	20%	94%	100%	+ 1.0min	+ 30.0min
Southend	247,683	13.6min	66%	93%	99%	+ 1.1min	+ 21.6min
Total	1,044,694	16.7min	42%	95%	>99%	+ 0.9min	+ 24.2min

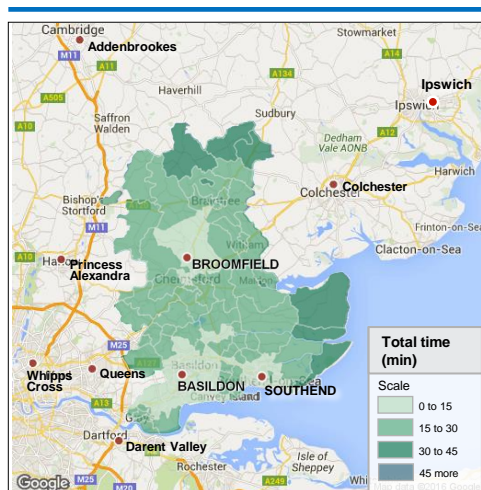
If service moved to Broomfield

New hospital	Population affected	Additional travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon→Broomfield	470,688	20.8min	0%	15%	90%	- 0.8min	+ 65.6min
Broomfield→	-	-	20%	94%	100%	-	-
Southend→Broomfield	247,683	32.1min	0%	0%	56%	- 1.3min	+ 35.0min
Total	718,371	24.7min	6%	36%	85%	- 1.0min	+ 48.4min

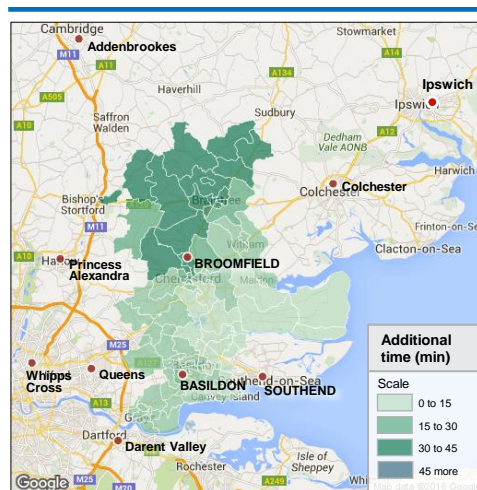
1. Simulated for travel by private transport (car) during daytime off peak hours (1pm)

Back up: Future state: travelling to different site (Southend)

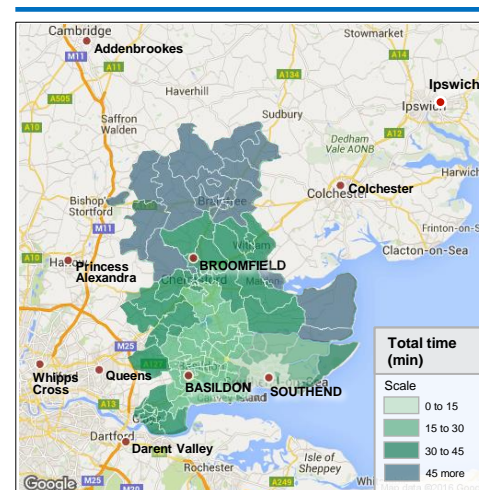
Travel times to hospital under current service configuration



Additional travel time to hospital if services moved



New travel times to hospital if services moved



Current configuration

Current hospital	Population	Current travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon	470,688	16.0min	45%	97%	100%	+ 0.8min	+ 20.9min
Broomfield	326,323	20.2min	20%	94%	100%	+ 1.0min	+ 30.0min
Southend	247,683	13.6min	66%	93%	99%	+ 1.1min	+ 21.6min
Total	1,044,694	16.7min	42%	95%	>99%	+ 0.9min	+ 24.2min

If service moved to Southend

New hospital	Population affected	Additional travel time ¹	% population within ¹			Adjustments for:	
			15m	30m	45m	Peak hrs	Pub. trans
Basildon→Southend	470,688	11.8min	0%	66%	97%	+ 4.2min	+31.0min
Broomfield→Southend	326,323	22.9min	0%	7%	60%	+10.1min	+45.9min
Southend→	-	-	66%	93%	99%	-	-
Total	797,011	16.4min	16%	54%	86%	+ 6.7min	+38.9min

1. Simulated for travel by private transport (car) during daytime off peak hours (1pm)

Mitigation of potential increase in car journeys

Day cases remain at local hospital; walk in and ambulance A&E remains local; a phased approach over a 2/3 year period for specialisms that may change; patient choice

Not all specialisms will change location these are to be finalised after consultation

Scoping is taking place by specialism and suggested hospital location to determine level of activity and potential number of patients

Consideration will be given to potential increase in activity by location and associated impact on current parking arrangements

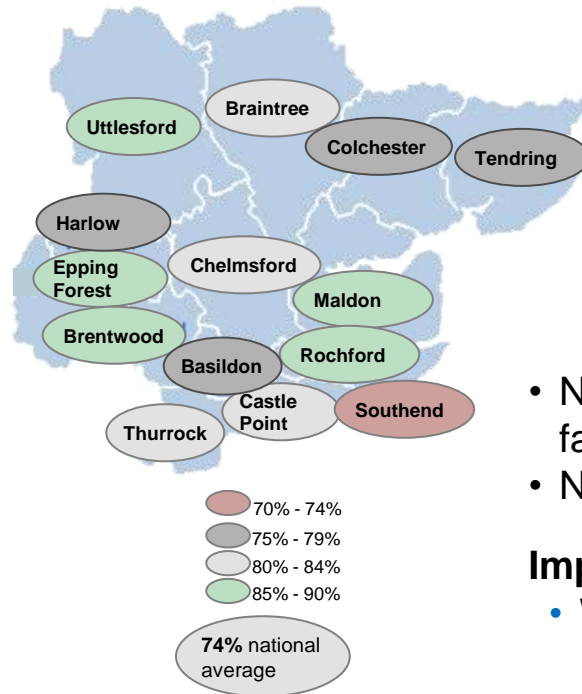
Base data will need to be gathered to determine the number of patients who travel to their appointments by car across the 3 hospitals for assumptions to be forecast

High level car ownership across the footprint

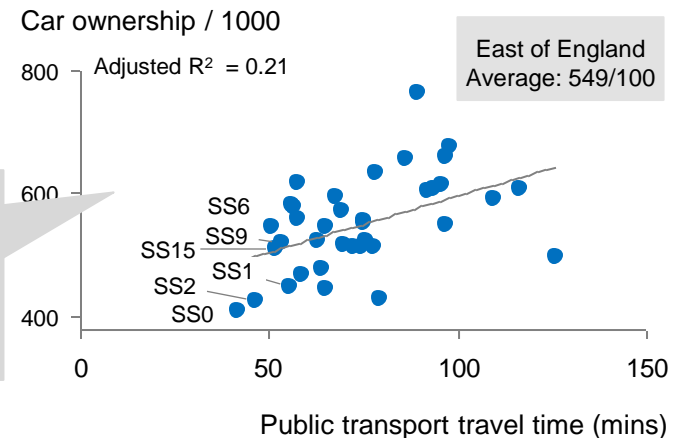
Low ownership in areas close to hospital

In general, high level of car ownership across the patch...

% of households with car/van



... with lower car ownership in areas close to hospital and public transport¹



- Need to address potential disadvantages of minority who face long distances by public transport
- Need to address potential issues for protected groups

Impact assessments for patients and carers

- Working with local authorities, vol sector, service users

1. $p < 0.05$, $n = 37$. Travel time for each district calculated as the average of travel times to BTUHFT, MEHT, and SUHFT. Source: Public transport travel times based on average of simulated journeys at 8:30AM and 1:00 PM, collected from Google Maps API in November 2016; DVLA vehicle licensing statistics, July – Sept 2016, DoT vehicle licensing statistics Q3 2016; ONS statistics, Southend-on-sea borough council

Access by public transport: low estimated incremental volume per day

~697 patients and visitors requiring public transport will be affected annually¹

	From Basildon area to MEH	From Basildon area to SUH	From Mid Essex area to BTUH	From Mid Essex area to SUH	From Southend area to BUHFT	From Southend area to MEH
Additional travel time (mins)	66	31	75	46	28	35
# patients affected (elective)	36	18	8	14	4	56
# visitors affected (elective and non elective)	145	41	67	37	67	204
Total affected	182	58	75	51	71	260

Initial findings

Initial analyses suggest a small daily impact equating to ~0.4 patients per day and ~1.5 visitors per day

- Partially driven by all day cases and outpatient procedures remaining local
- Partially driven by treat and transfer model for non elective procedures

Modelling indicates that larger numbers of additional relatives may require public transport

- Visits for both elective and non-elective in-patients

Patient transport service impact may reduce load e.g. shuttle bus between hospitals

137 patients and 561 visitors per year impacted by change

1. Assumes that patients or visitors without a car will take a taxi or get a lift 95% of the time. Assumes patients are visited by two people

Back up: Impact of shift in elective procedures on patients and friends / family taking public transport

For elective patients & their visitors without cars...

Car ownership differs across the areas as below, however elective patients are likely to avoid public transport for procedures. It is likely they would take a taxi, or ask a friend or family member for a lift (assumed ~95% of the time)

	Car Ownership
Broomfield area	60%
Southend area	50%
Basildon area	54%
Average across areas: 55%	

... reconfigured hospitals will result in an increased journey time (minutes)

To \ From	MEHT	SUHFT	BTUH
Broomfield area		14 29 45.9	8 16 74.7
Southend area	56 113 35.0		4 17 27.9
Basildon area	36 73 65.6	18 35 31.0	

Legend	
	# EL Patients per year
	# Visitors to EL patients per year
	Additional travel time (mins)

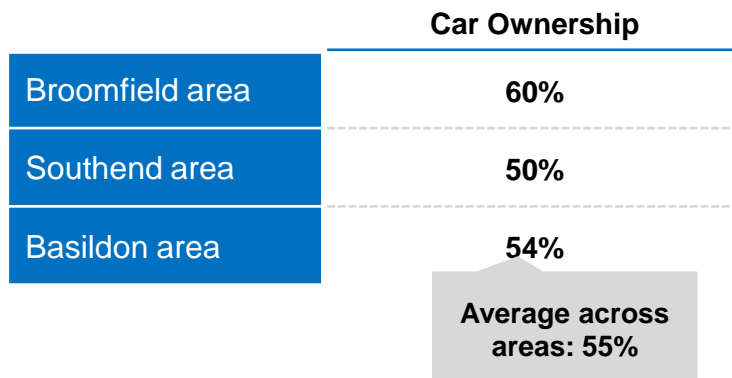
Note: Assumes that patients or visitors without a car will take a taxi or get a lift 95% of the time. Assumes patients are visited by two people

Back up: Impact of emergency patients transferred for visitors using public transport

For visitors of emergency patients without cars...

Emergency patients who have been transferred (by ambulance) will not be affected by public transport times, regardless of their car ownership.

However, the visitors of emergency patients will be affected.



... reconfigured hospitals will result in an increased journey time (minutes)

To \ From	MEHT	SUHFT	BTUH
Broomfield area		8 45.9	50 74.7
Southend area	91 35.0		60 27.9
Basildon area	72 65.6	6 31.0	

Legend	
	# Visitors to NEL patients per year
	Additional travel time (mins)

Mitigation of increase in public transport travel time

To address remaining concerns regarding travel times for some users, a transport project team has been established, scoping the impact of the preferred option on planned elective activity

- Data analysis taking place by specialty and age on elective numbers
- Range of assumptions being developed
 - Car ownership, inter-site shuttle, LA subsidised transport use
 - Continued contractual arrangements of non-emergency patient transport services
 - Patient choice
 - Access to alternative hospitals outside of footprint

We are exploring opportunities via the Essex Transport Integration Programme to plan networks and services to deliver transport between hospital sites with commercial operators

- There may be potential to decrease vehicle congestion at hospital sites with additional bus routes
- Major towns where hospitals are located are largely well-served with routes operating at regular frequencies between them

The STP is working with Local Authorities considering wider strategic plans for future changes to road infrastructure as part of the Essex Traffic Management Strategy

Impact on neighbouring Trusts and STPs

No additional flows are expected off patch from this preferred model

There will need to be consideration of the capacity for regional services as units become specialised for example:

- ensure pathways for CTC remain aligned across path
- ensure that Trauma network continues to work effectively

It is anticipated that there will be impact of some repatriation of work from Private Providers and London Trusts

As the sites become increasingly specialised there may be additional work and patients referred to sites e.g. Cardiac will become a tertiary centre and grow fast