

## Stroke Services Reconfiguration: Equality Impacts

## Appendix 4 Summary

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The Mott MacDonald report identified older people as having a disproportionate need for stroke services. High blood pressure is a key risk factor for strokes and this is common in older people.

For all shortlisted proposals (A-D), Mott MacDonald found no disproportionate impacts for patients aged 65 and over. This patient group was within five percentage points of the change to the patients overall for all proposals. It is important to note that the Mott MacDonald report does not include analysis for proposal E as this was introduced at a later stage.

The analysis completed by the Medway Public Health Intelligence Team found no disproportionate impacts for residents aged 65 and over for proposals A to E. However, it is important to note the following:

- Proposal A has the most negative impact upon accessibility as only 77 per cent of residents aged 65 and over would be able to access stroke services by blue light ambulance within 30 minutes, which is a reduction of 23 percentage points.
- Proposal D has the least negative impact upon accessibility as 84 per cent of residents aged 65 and over would be able to access stroke services by blue light ambulance within 30 minutes.

### Mott MacDonald Report Methodology

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The Mott MacDonald report presents travel and access impacts for blue light ambulance (BLA) as the journeys by patients for the services assessed would typically be made by this mode of transport. Activity data for 2015/16 was used for patients who accessed services within Kent and Medway and who are also resident in the study area. Travel times for the patients aged 65 and over were compared to the overall population travel times. This ascertains whether there is a greater impact on a particular group; see page 29 of the report for further details.

The tables in the Mott MacDonald report (see pages 29-32) highlight the travel times for stroke services by scoped equality groups, comparing the baseline scenario with the future proposals. They considered that equality groups which experience a five percentage point difference or more in comparison to the population overall to be disproportionality impacted by the proposal.

### Medway Public Health Intelligence Team Analysis

#### Medway Public Health Intelligence Team Methodology

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Medway Public Health Intelligence Team used Public Health England's [Strategic Health Asset Planning and Evaluation](#) (SHAPE) tool to complete the equality impacts analysis. SHAPE is a web-enabled, evidence-based application, which informs and supports the strategic planning of services. The application is built around a mapping tool and supports travel time analyses for existing and possible future sites.

SHAPE uses the [Route360°](#) catchment generation API created by Motion Intelligence to generate access catchments for walk, cycle, car and public transport, for one or many sites and then provides detailed population demographics for any specific catchment area.

The following parameters were selected for the stroke services reconfiguration equality impacts analysis:

## Stroke Services Reconfiguration: Equality Impacts

**Mode of transport:** Car off peak was used to represent travel times by blue light ambulance in line with the methodology used in the Mott MacDonald report.

- The SHAPE tool calculates travel times using the normal speed limits but takes into account junctions, crossings and traffic lights.
- The SHAPE tool has validated these travel times with similar data on Google Maps.

**Included population:** Estimated number of Kent and Medway residents that live within the specified travel time.

- For a specified travel time, the SHAPE tool determines a catchment area.
- Each Lower Super Output Area (LSOA) has a Population Weighted Centroid (PWC).
- If the PWC of an LSOA is inside the specified travel time catchment area, then the SHAPE tool counts the LSOAs entire population in the included population calculation.
- The SHAPE tool determines the LSOA population from ONS Small Area Population Estimates Mid-2015.

**Excluded population:** Estimated number of Kent and Medway residents that do not live within the specified travel time.

- If an LSOAs PWC is not inside the specified travel time catchment area, then the SHAPE tool counts the LSOAs entire population in the excluded population calculation.

\*There is one LSOA North West of Faversham that is not included in any of the travel time analysis. This LSOAs PWC is not inside any of the specified travel time catchment areas, which is likely due to issues with the SHAPE tool's road definitions in that area and the travel time algorithm. The population of this LSOA is 1,695 residents.

**Total population:** Estimated total number of Kent and Medway residents.

- The sum of both the included and excluded populations.

**Percentage within travel time:** The estimated percentage of the total Kent and Medway residents that live within the specified travel time:

$$\frac{\text{Included population}}{\text{Total population}} * 100$$

## Current

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**Table 1.** Current journey travel time to stroke services by BLA.

Current	Within 30 minutes	Within 60 minutes
Total residents	100%	100%
Residents aged 65+	99%	100%

**Date Accessed:** 24/01/2018.

## Stroke Services Reconfiguration: Equality Impacts

## Proposal A

**Locations:** 1) Darent Valley Hospital; 2) Medway Maritime Hospital; 3) William Harvey Hospital.

**Table 2.** Estimated percentage of Kent and Medway residents that would live within a 30 and 60 minute journey by BLA based on the HASU locations in proposal A.

<b>Proposal A</b>	Within 30 minutes	Percentage point change from baseline	Within 60 minutes	Percentage point change from baseline
Total residents	80%	-20pp	100%	No change
Residents aged 65+	77%	-23pp	100%	No change

**Date Accessed:** 24/01/2018.

## Proposal B

**Locations:** 1) Darent Valley Hospital; 2) Maidstone Hospital; 3) William Harvey Hospital.

**Table 3.** Estimated percentage of Kent and Medway residents that would live within a 30 and 60 minute journey by BLA based on the HASU locations in proposal B.

<b>Proposal B</b>	Within 30 minutes	Percentage point change from baseline	Within 60 minutes	Percentage point change from baseline
Total residents	85%	-15pp	100%	No change
Residents aged 65+	82%	-18pp	100%	No change

**Date Accessed:** 24/01/2018.

## Proposal C

**Locations:** 1) Maidstone Hospital; 2) Medway Maritime Hospital; 3) William Harvey Hospital.

**Table 4.** Estimated percentage of Kent and Medway residents that would live within a 30 and 60 minute journey by BLA based on the HASU locations in proposal C.

<b>Proposal C</b>	Within 30 minutes	Percentage point change from baseline	Within 60 minutes	Percentage point change from baseline
Total residents	85%	-15pp	100%	No change
Residents aged 65+	82%	-18pp	100%	No change

**Date Accessed:** 24/01/2018.

## Proposal D

**Locations:** 1) Tunbridge Wells Hospital; 2) Medway Maritime Hospital; 3) William Harvey Hospital.

**Table 5.** Estimated percentage of Kent and Medway residents that would live within a 30 and 60 minute journey by BLA based on the HASU locations in proposal D.

<b>Proposal D</b>	Within 30 minutes	Percentage point change from baseline	Within 60 minutes	Percentage point change from baseline
Total residents	87%	-13pp	100%	No change
Residents aged 65+	84%	-15pp	100%	No change

**Date Accessed:** 24/01/2018.

## Stroke Services Reconfiguration: Equality Impacts

## Proposal E

**Locations:** 1) Darent Valley Hospital; 2) Tunbridge Wells Hospital; 3) William Harvey Hospital.

**Table 6.** Estimated percentage of Kent and Medway residents that would live within a 30 and 60 minute journey by BLA based on the HASU locations in proposal E.

<b>Proposal E</b>	Within 30 minutes	Percentage point change from baseline	Within 60 minutes	Percentage point change from baseline
Total residents	84%	-16pp	100%	No change
Residents aged 65+	81%	-18pp	100%	No change

**Date Accessed:** 29/01/2018.