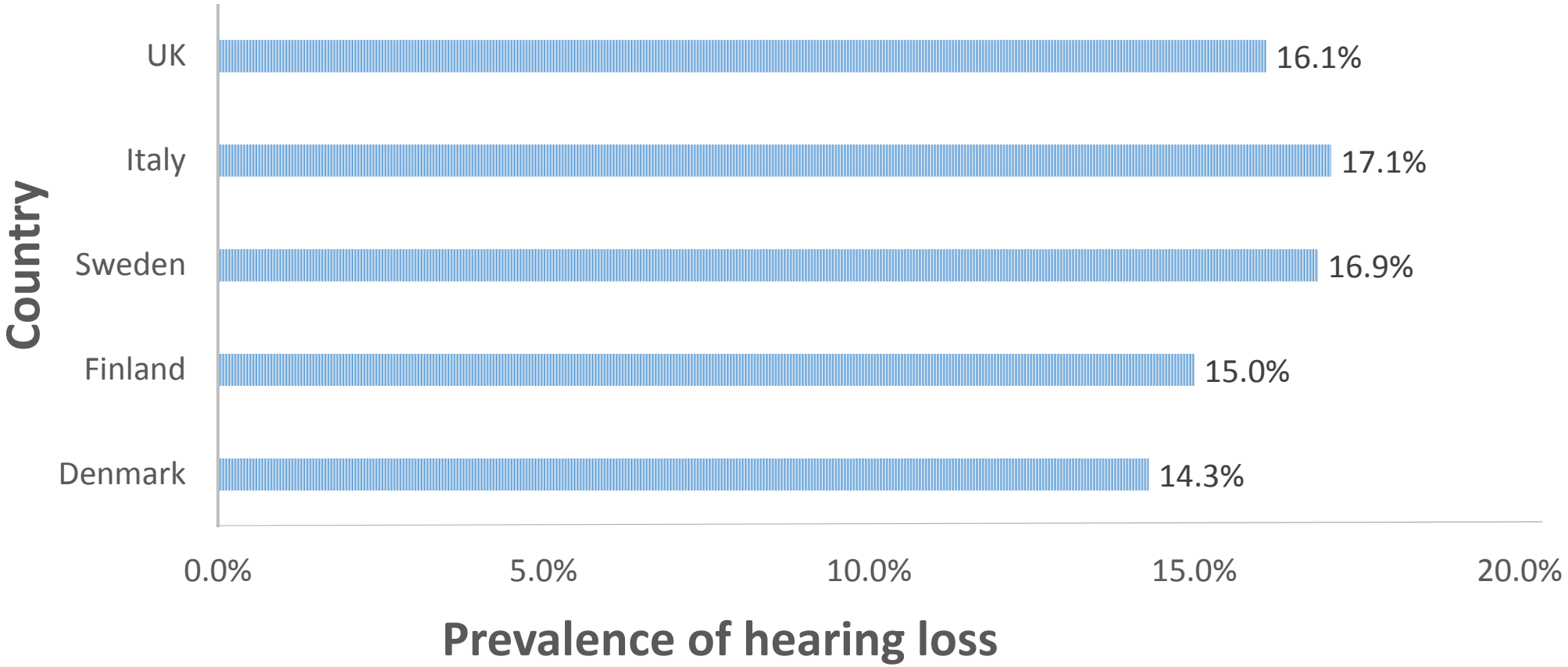
Does deprivation affect access to health care services for hearing impairment?

Hearing loss in UK adults



Source: 1-5

Hearing health inequalities

Higher incidence of hearing loss among;

- *Men* [6-9]
- *Persons with cardiovascular risk factors* [10-14]
- *Ethnic minorities* [15]
- *Persons of low socioeconomic status (SES)* [6,7,13,15,16]

Relationship between SES and hearing loss

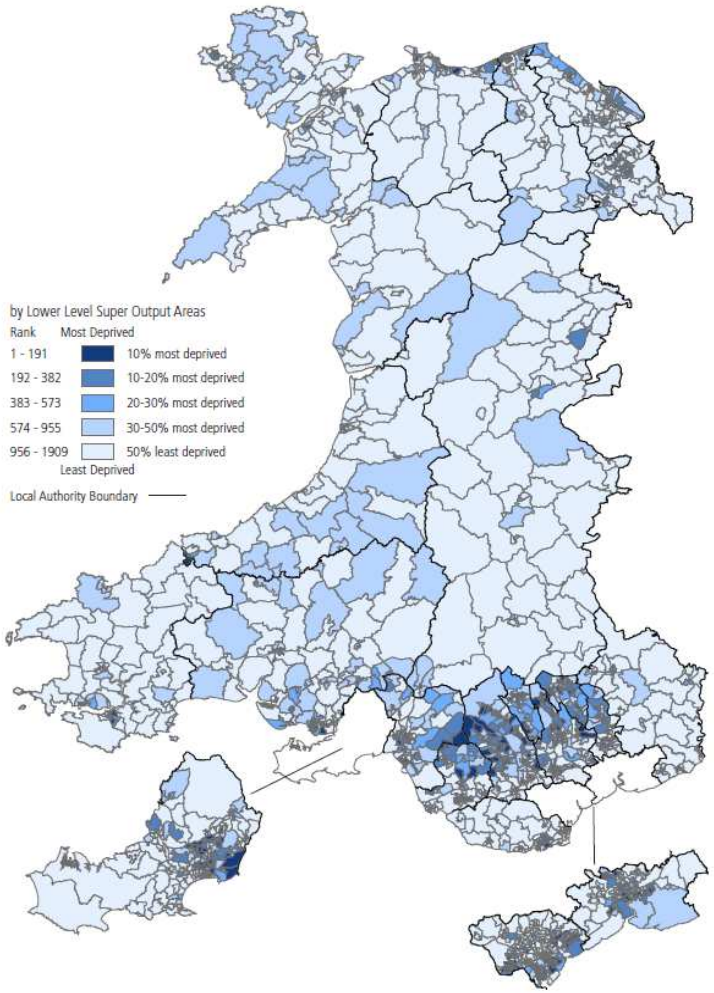
Low SES is associated with;

- *Unhealthy behaviours* [17,18]
- *Manual labour / industrial occupation* [19,20]

Pilot study

- *First hearing aid fitting appointments*
- *Retrospective analysis between 2015-18*
- *Compare by age and SES*
- *Welsh Index of Multiple Deprivation as a surrogate for SES*

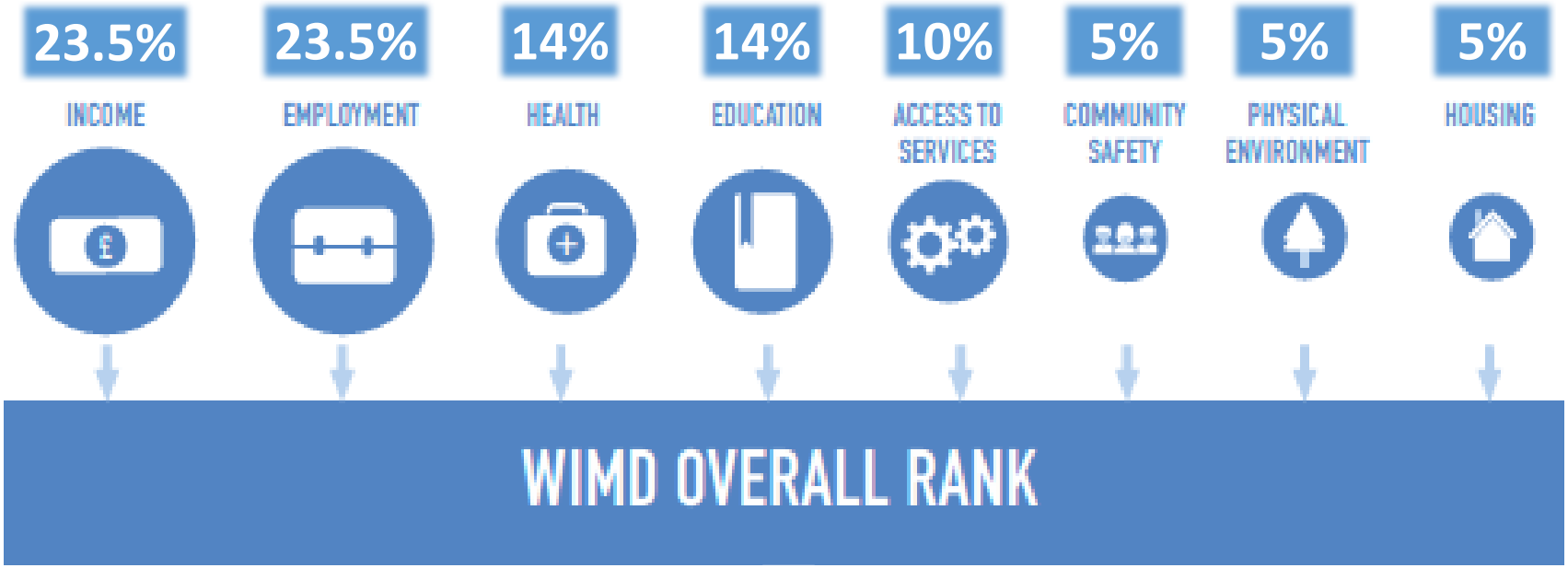
Welsh Index of Multiple Deprivation (WIMD)



- *Lower Super Output Areas (LSOAs)*
- *1909 LSOAs in Wales*
- *Average population of 1600 people per LSOA*

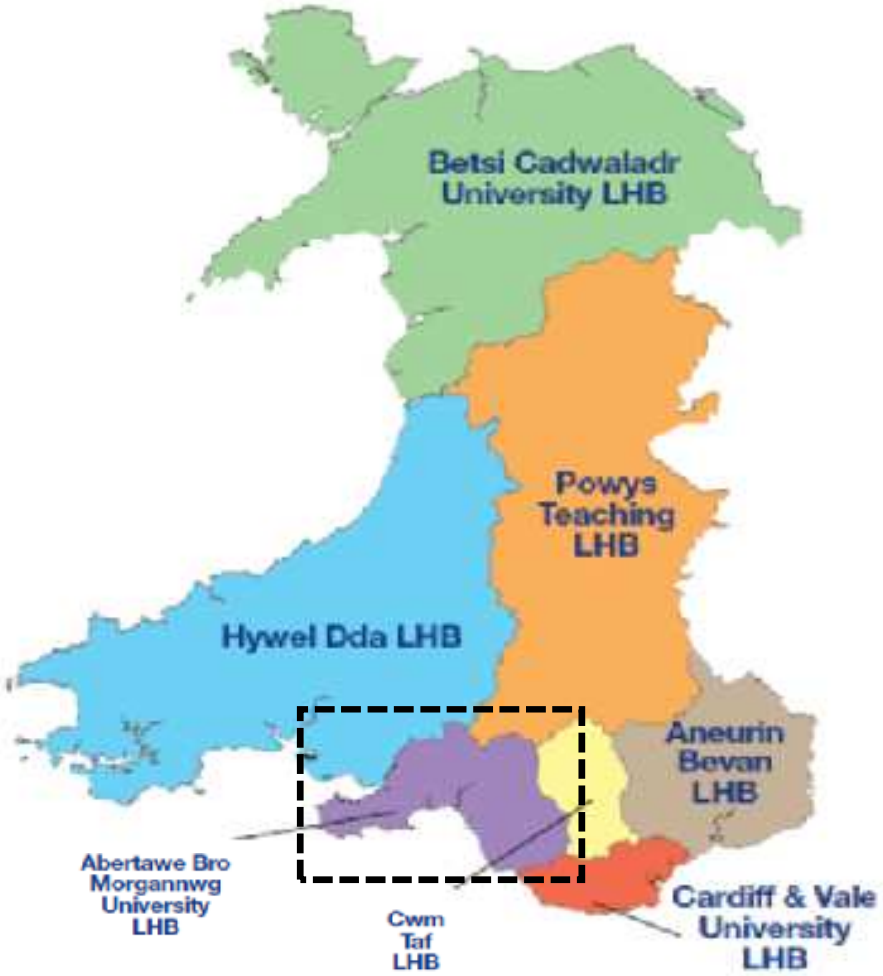
Source: Stats Wales [21]

WIMD rank



Source: Welsh Government

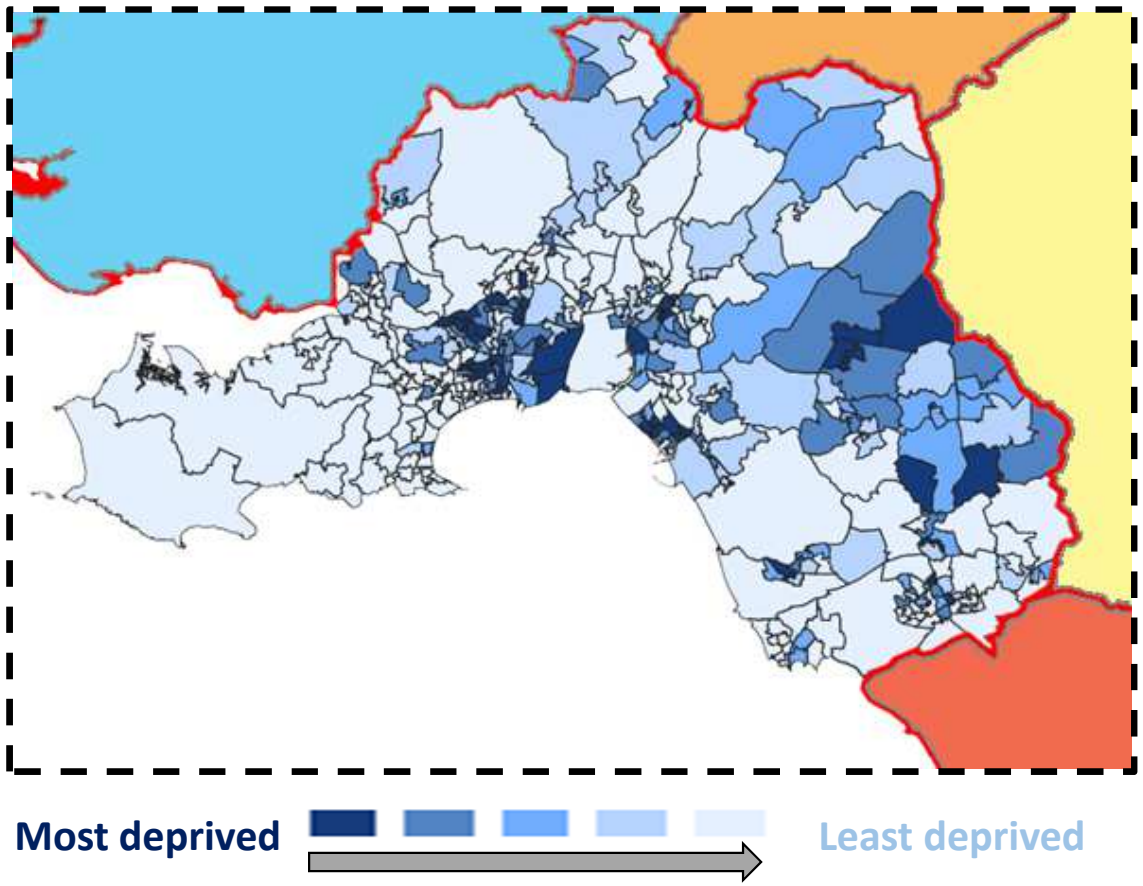
WIMD by health board



- Seven health boards responsible for all of Wales
- Abertawe Bro Morgannwg University health board (ABMU)

Source: Welsh Government

LSOAs within ABMU boundary



- *327 LSOAs*
- *Lowest = 6*
- *Highest = 1908*

Source: Welsh Government

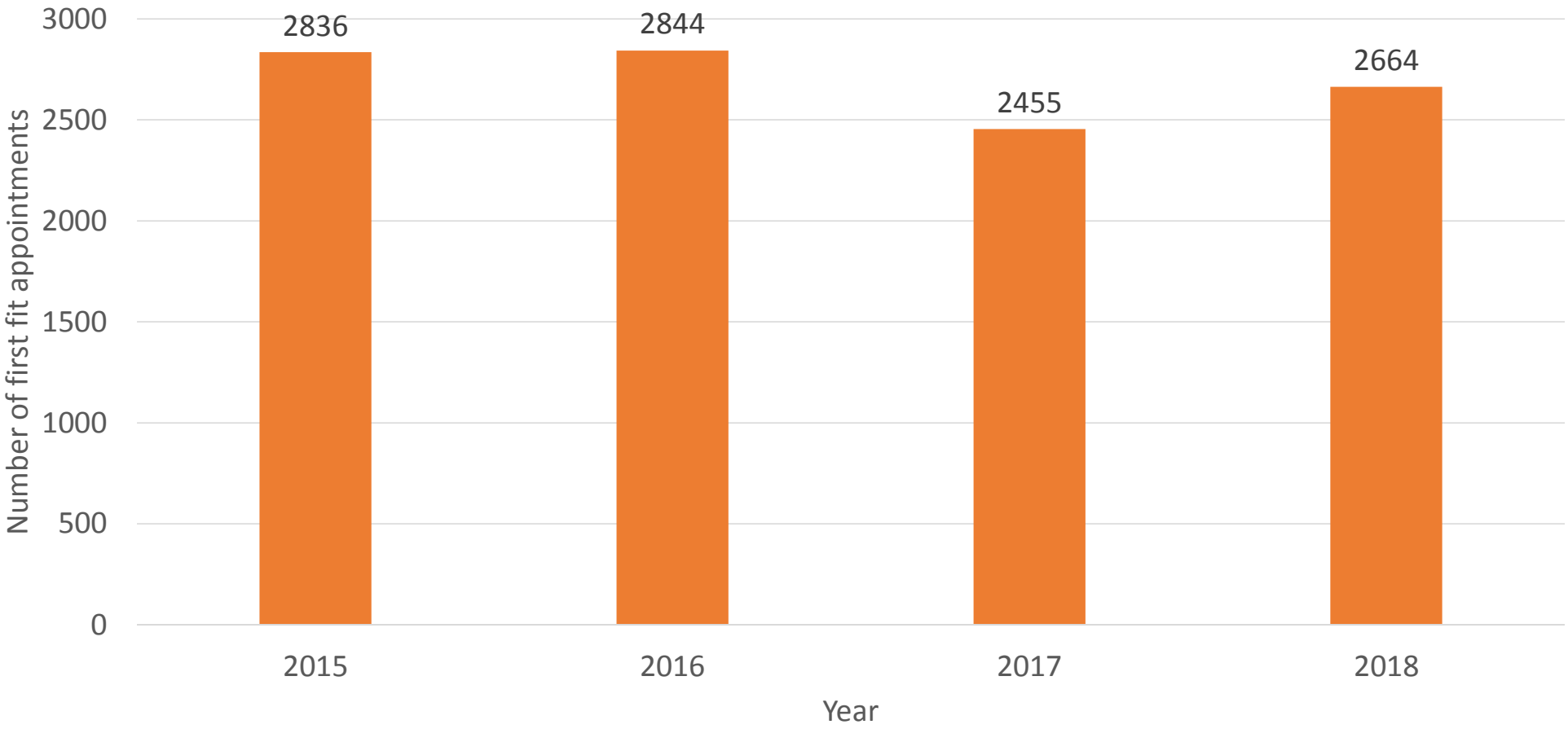
LSOAs within ABMU boundary

- *10 "decile" groups*
- *9 Groups contained 33 LSOAs*
- *1 Group contained 30 LSOAs*

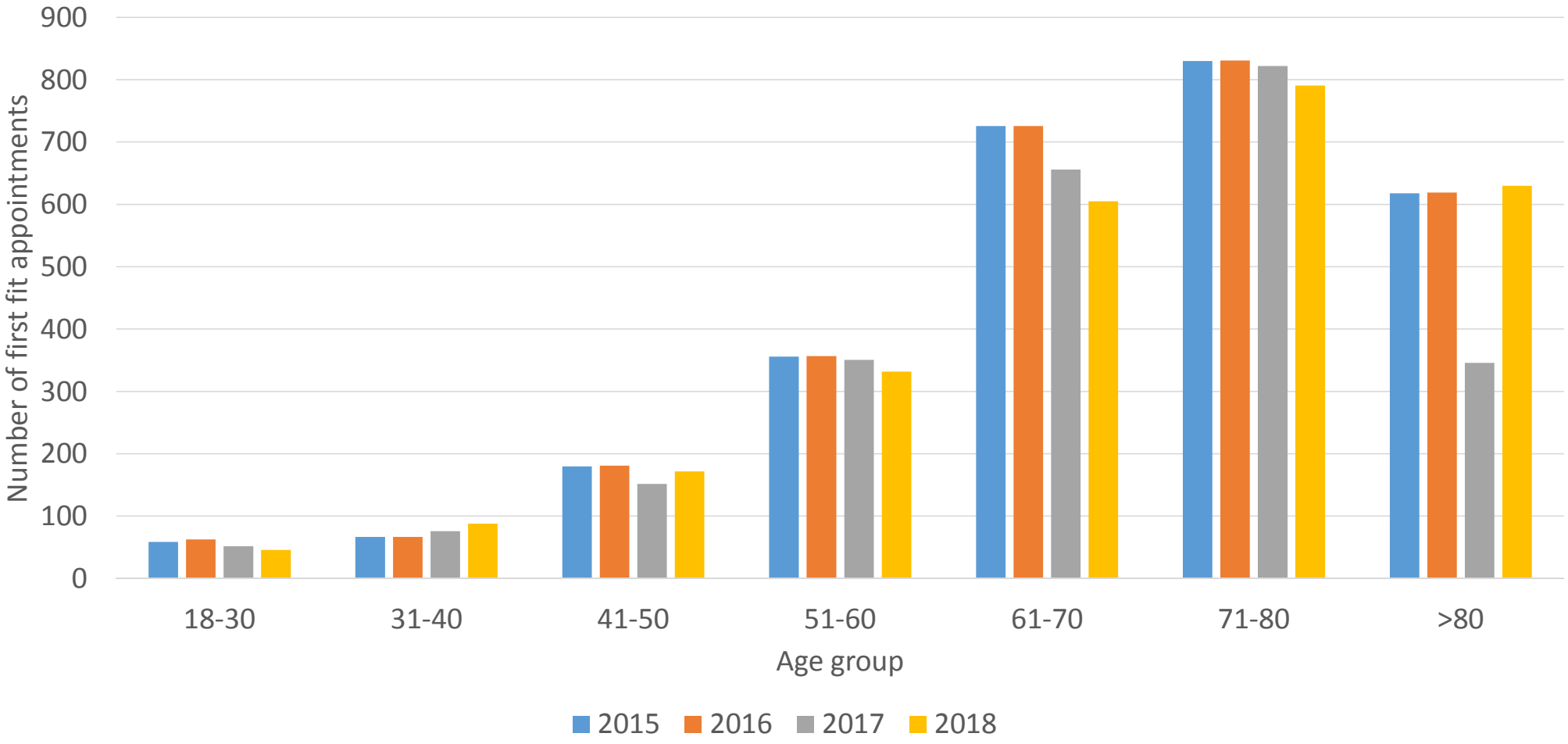
Group 1, G2, G3, G4, G5, G6, G7, G8, G9, Group 10

Most deprived → **Least deprived**

ABMU total 1st fit appointments by year



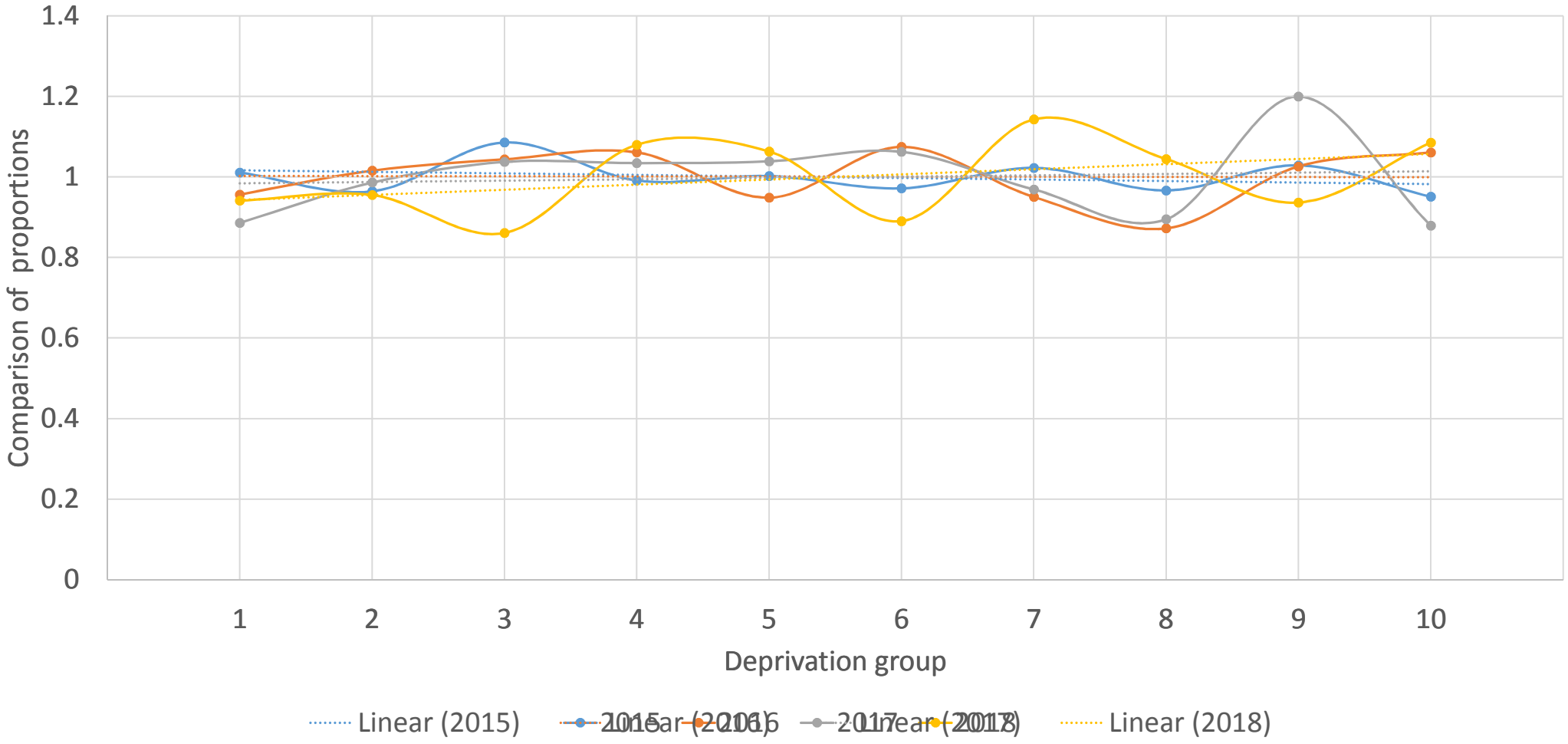
ABMU 1st fit appointments by year & age



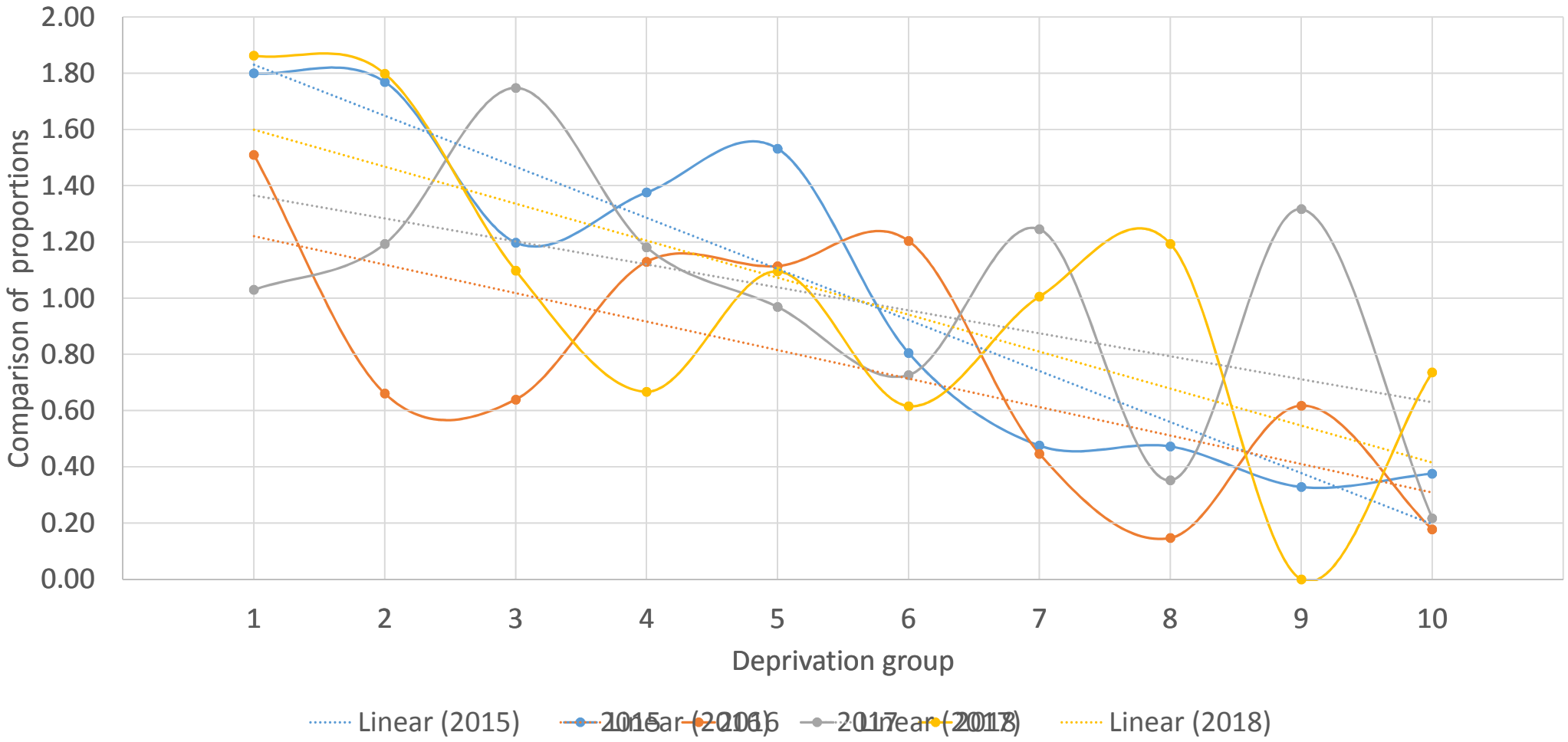
1st Fit appointments by deprivation group

- *Age demographics vary between LSOAs*
- *Number of 1st fit appointments alone may give skewed results.*
- *1st Fit appointment rate as a proportion of;*
  - *Population within ABMU*
  - *Population within deprivation group*

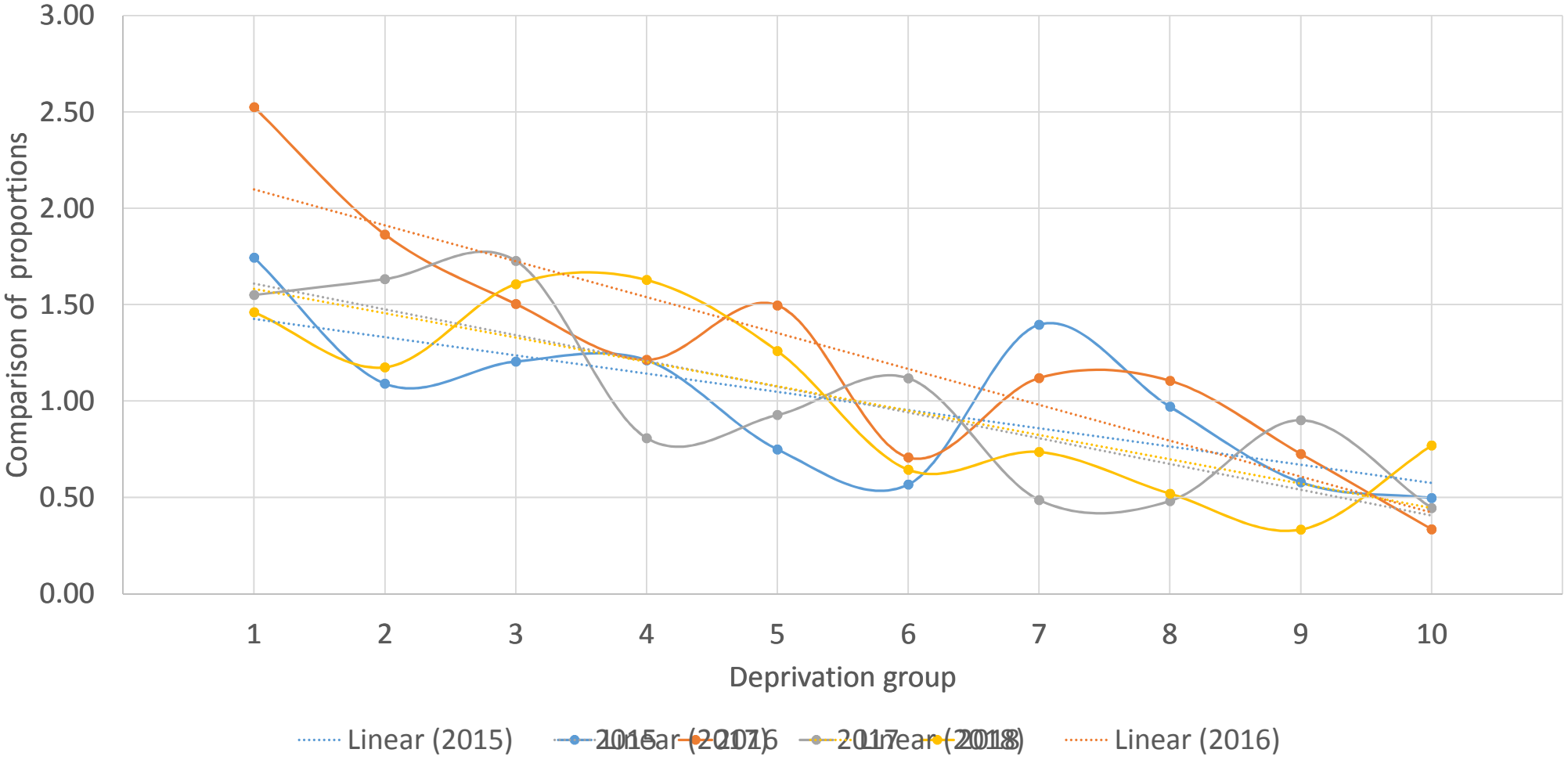
1st Fit appointments all adults (>18)



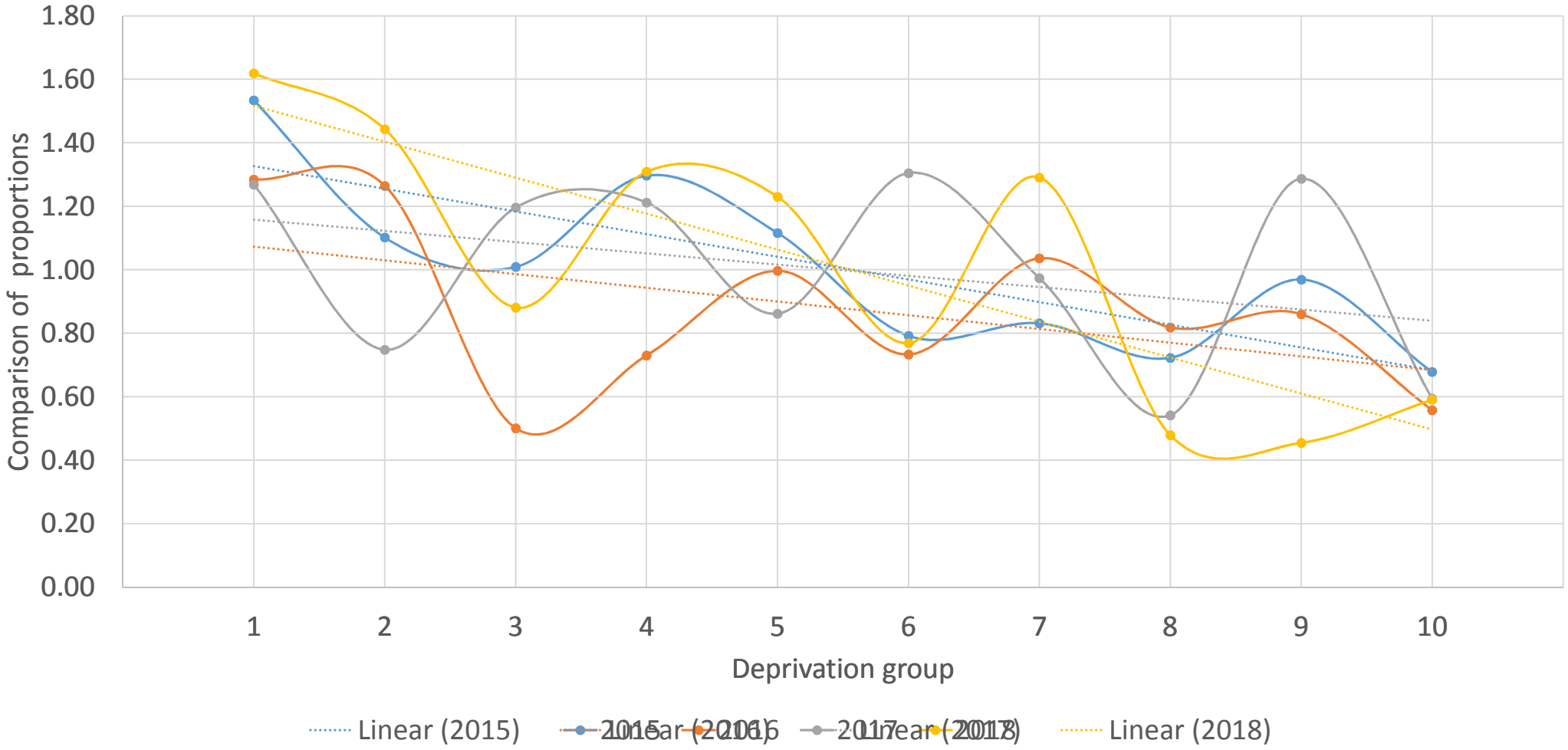
1st Fit appointments by year (18-30)



1st Fit appointments by year (31-40)

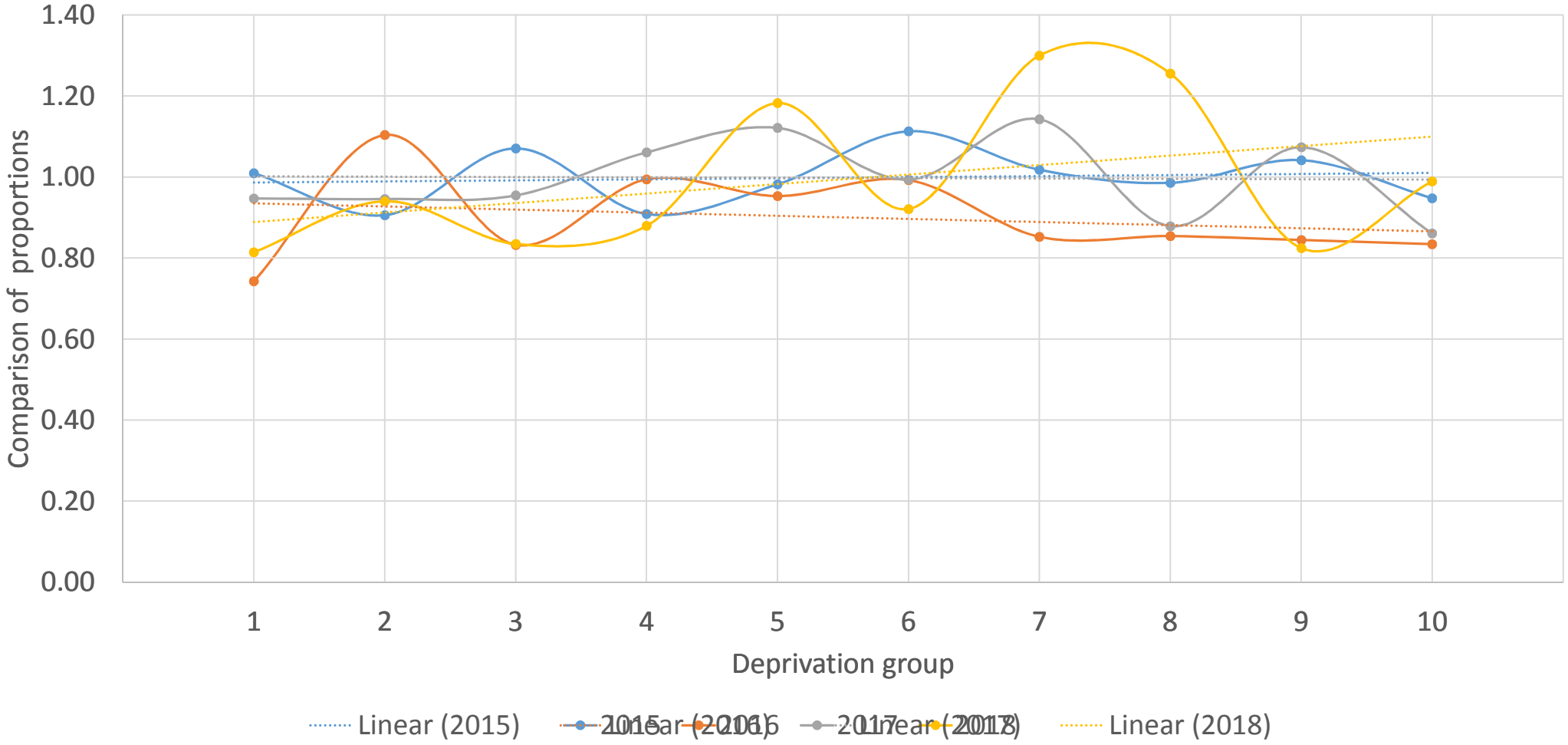


1st Fit appointments by year (41-50)

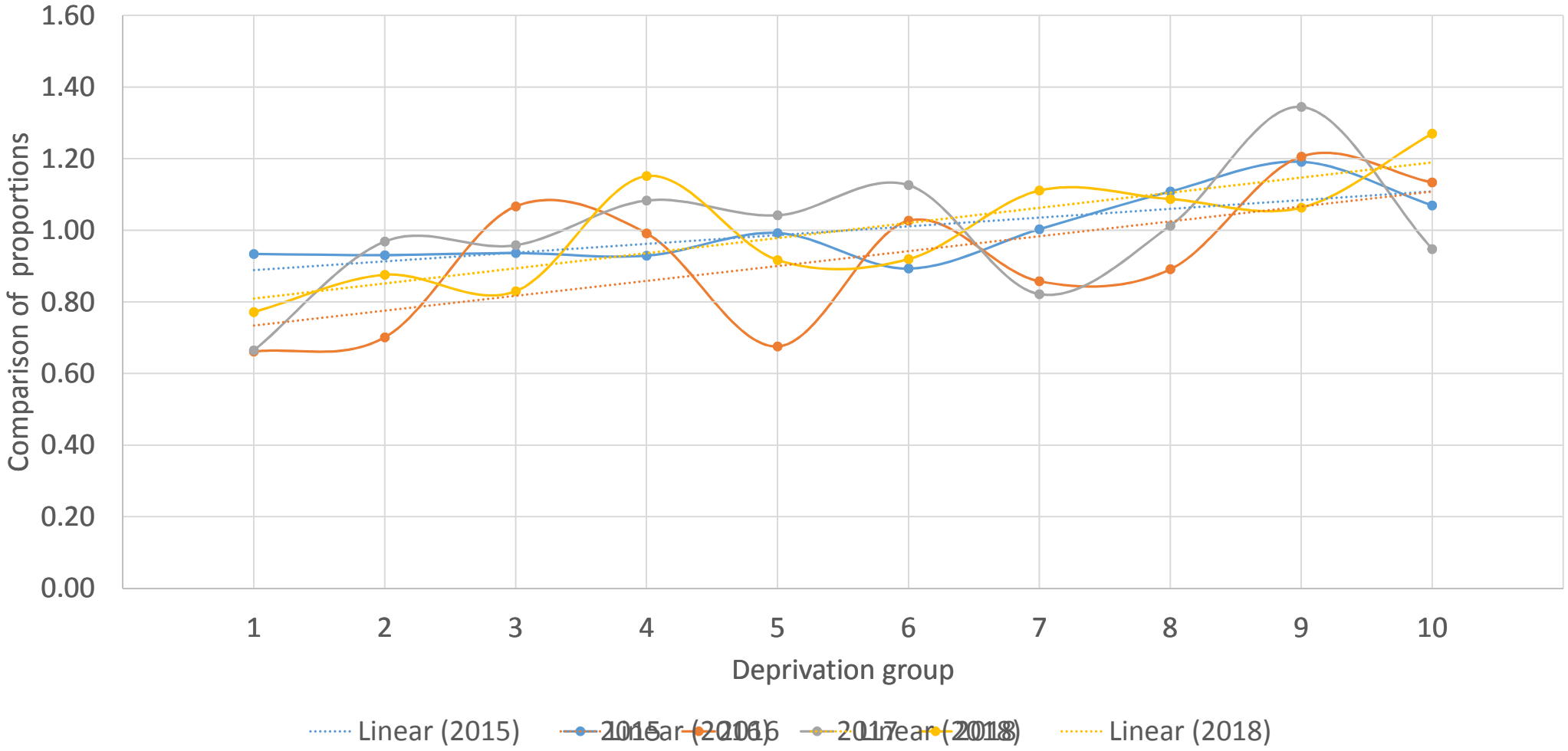


1st Fit appointments by year (51-60)

1st Fit appointments by year (61-70)



1st Fit appointments by year (71-80)



1st Fit appointments by year (>80)

Summary of findings

- *Overall 1st hearing aid fitting appointments are being accessed evenly between deprivation groups*
- *Age of accessing hearing aids varies by deprivation group*
- *Those living in the most deprived areas are accessing interventions younger*

Limitations

- *Are these observations statistically significant?*
- *Use of WIMD rank as surrogate of individual SES*
- *Influence of private healthcare services?*
- *No objective measures of hearing loss*

First hearing aid fitting appointments

- *Majority of adults with a hearing loss do not wear hearing aids* [23-27]
- *Hearing help seeking and hearing aid use not associated with SES* [28,29]
- *Can we use hearing aid fitting as a proxy for significant hearing loss*

Going forward

- *Statistical analysis*
- *Investigate hearing threshold when accessing hearing aids*
- *Investigate access to all audiology services*
- *Investigate why people living in more deprived areas appear to be accessing hearing aids younger*
- *Repeat throughout NHS trusts*

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