

Frequently asked questions about area-based measures (POLAR and TUNDRA)

How can area-based measures be used?

Area-based measures can be used:

- to compare areas across the UK
- to identify areas with the lowest young participation in higher education
- to evaluate whether gaps in participation have changed year on year
- to compare relative levels of participation in higher education across the UK
- as part of an assessment of the background of an individual. When making background assessments these measures should never be used alone and only with other information.

Area-based measures should not be used:

- to identify people who are less likely to enter higher education
- to describe the socio-economic background of an area
- to describe any other factor associated with participation in higher education.

Why are these area-based measures based on young participation?

Young people are more likely to be living in the area where they grew up when they apply to and enter higher education. This makes young participation from an area uncomplicated by movement for work or other reasons.

Also, the age profile of students is younger than the age profile of the adult population in general. This is because most people are more likely to enter higher education when they are young. The biggest single year of age in higher education are those who enter aged 18, and more than half of undergraduate entrants and over two-thirds of full-time undergraduate entrants are under 21. This makes young participation particularly relevant.

Mature participation is important, but needs a different approach, considering the proportion of the population that already have a higher education qualification.

How big are the areas used in the area-based measures?

Both POLAR4 and TUNDRA MSOA use third-level statistical building block areas. For POLAR4, this is the Middle layer Super Output Areas for England and Wales, Intermediate Zones for Scotland, and 2 Super Output Areas for Northern Ireland (second-level statistical building block). For TUNDRA MSOA, this is the Middle layer Super Output Area for England.

On average each area has approximately 85 people in each cohort, but this can be as little as 10 in areas with few young people and as many as 300 in areas with high numbers of young people.

TUNDRA LSOA uses the Lower layer Super Output area for England. LSOAs are smaller than MSOAs and contain a smaller population. In order to publish for as many areas as possible, the TUNDRA LSOA classification requires a population of 30 in the LSOA which can lead to random variation in the classification. The effects of this are described in the documentation.

Are people who live in quintile 1 of the area-based measure less likely to enter higher education?

No. They all live in an area where fewer young people are likely to enter higher education, but each individual will have other circumstances that influence their likelihood to go to university.

This is why measures of such as UCAS's Multiple Equality Measure (MEM), or our experimental Associations Between Characteristics of Students (ABCS) measure use POLAR alongside other factors to create a measure that is closer to an individual measure.

Generally, no one is exactly like their neighbours (in the same way that not all people of the same ethnicity or the same gender are identical), but in broad terms there are more similarities within neighbourhoods than between them.

This feature of POLAR and TUNDRA is the same as any measure of background that describes groups of people, whether this is other area-based measures (e.g. the Index of Multiple Deprivation) or school-based measures. Within any group there can be sub-groups that have different levels of participation.

The Higher Education Funding Council for England (HEFCE) analysis of POLAR3 showed that in general the differences within POLAR3 areas were smaller than the differences between POLAR3 areas. The majority of the young population are likely to live in sub-ward areas with participation in higher education similar to that of the ward in which they live. This held true for different regions within the UK, including London.

Are area-based measures a measure of socio-economic disadvantage?

No. POLAR and TUNDRA are measures likelihood of entry to higher education.

The original research for POLAR showed that, in many parts of the UK, low participation areas were also the areas with the highest measures of socio-economic disadvantage, but this was not the only factor in determining participation in higher education. Other factors that influence the level of young participation in an area include:

- the ethnicity profile of the area

- the adult education level amongst the population
- the relative school outcomes of the area
- the availability of local, accessible higher education places
- the availability of alternative post-school pathways.

Are free school meals a better measure for assessing under-representation in higher education?

When looking at representation in higher education, free school meals and POLAR quintile 1 have similar rates of young participation (further information is available in the government's [widening participation in higher education 2018 official statistics](#)). However, POLAR and TUNDRA quintile 1 represents a greater proportion of the population and therefore across the whole population it is better at identifying groups likely to enter higher education.

Young people who claimed free school meals while at school are much less likely to go to university, but [UCAS analysis](#) showed that, similarly to area-based measures, their chances of entering higher education varied by gender, ethnicity and POLAR quintile even if they had claimed free-school meals.

Like those other factors, free school meal status is just one important element of a young person's background, but no single factor completely describes the circumstances of an individual. Factors need to be considered in combination.

Do these area-based measures work in London?

Young people across London are more likely to access higher education than young people elsewhere in the UK.

Both POLAR and TUNDRA reflect this and therefore there are very few areas of London that are POLAR4 or TUNDRA quintile 1 or 2. This does not mean that these area-based measures are indicating that all young people in London are highly likely to enter higher education, just that a greater proportion will do so relative to other areas of the UK.

London is the region of the UK with the highest number of small areas that are simultaneously classified as deprived using the Index of Multiple Deprivation (IMD), and not classified as low participation using POLAR4 or TUNDRA.

This effect may be associated with other factors driving higher levels of participation in those areas, such as:

- level of parental education
- school performance
- breadth of higher education provision
- ethnicity profile.

These area-based measures are not a measure of socio-economic disadvantage, of either the individual or of areas.

Across the UK, and therefore within London too, there will be individuals living in areas with relatively high participation who may have other characteristics that are associated with lower access to higher education. Therefore assessments of individuals should consider multiple aspects of their background.

Approaches that use multiple characteristics, such as UCAS's Multiple Equality Measure (MEM) or our Associations Between Characteristics of Students (ABCS) measure, are useful to identify the combination of factors that could otherwise be missed.

POLAR4

What are the benefits of POLAR?

POLAR is directly relevant to higher education participation.

There are approximately equal populations of young people in each of the POLAR quintiles. This means that the groups are large enough to reliably measure year on year changes in participation inequality.

It can be used for identifying areas of the UK with the lowest young participation for targeting interventions.

As an area-based measure it is particularly straightforward to use in targeting outreach and evaluation as it does not require sensitive personal data from individuals.

POLAR is publicly available, including our postcode to POLAR quintile look-up facility and associated data files for free onward use.

What are factors that could be varied in estimating participation for POLAR?

POLAR4 uses third-level statistical building block areas. These are larger areas with higher populations than the areas used in the Index of Multiple Deprivation (IMD).

There were a number of factors considered when choosing the areas for POLAR:

- availability of population estimates at single year of age
- size of population of young people in the area
- number of cohorts of young people.

Population estimates are available at smaller geographical areas, but not consistently across the countries of the UK.

Increasing the size of the area used to estimate participation will lead to better estimates of participation, but introduces the risk that the areas contain sub-areas of very different natures, so the participation measured may be less relevant.

For POLAR4 we found that 90 per cent of postcodes would either be assigned to the same quintile or move up or down by 1 quintile if the lower population lower level of geographical area was used to create POLAR4.

Increasing the number of cohorts used to estimate participation would lead to better estimates of participation, but mean that the areas are defined using patterns from many years earlier. If participation has changed through time in an area this could mean that the estimated participation is less relevant.

TUNDRA

Is TUNDRA a replacement for POLAR?

No. TUNDRA is a supplement, not a substitute for POLAR because they contain different information. Using both together can lead to more insights about higher education participation than one of the measures alone.

Why does TUNDRA only apply to English students when POLAR covers the UK?

TUNDRA uses a different method in calculating participation from POLAR, which uses a particular dataset accessible only for English students. Further data request from other UK sources is not needed at this stage because TUNDRA is an experimental statistic and may undergo future developments.

What are state-funded mainstream schools and why does TUNDRA only include them?

State-funded mainstream schools are defined by the Department for Education's [Widening Participation in Higher Education publication](#).

Evidence suggests that young participation rates for pupils from other types of schools, such as independent schools, special schools, and pupil referral units (PRUs) are generally different than for pupils from state-funded mainstream schools. For an area based measure such as POLAR, this may mean that participation rates for state school may be masked by higher participation rates of independent schools in the area. For outreach and access and participation programmes, this masking may mean that certain areas could be excluded from potential funding and opportunities. TUNDRA's purpose is to reveal such areas.

What does it mean for me if my POLAR and TUNDRA quintiles are different?

TUNDRA and POLAR are both area-based measures, so they cannot act as indicators for any particular individual in an area. A different quintile for an area under the POLAR and TUNDRA classifications could be a result of multiple factors, such as different years used under each classification, the effects of including only state-funded mainstream schools in the measure, and different methodology in calculating participation rates.

More information is available in our TUNDRA and POLAR4 comparison document, available in the section [How do POLAR and TUNDRA differ?](#) on our webpage [About TUNDRA](#).

What does it mean if there is no TUNDRA quintile or participation rate for my area?

In order to maintain accurate calculations of participation rates, areas with too few people are not included in the TUNDRA measure. For TUNDRA MSA areas with less than 50 people have the quintile hidden, and for TUNDRA LSOA areas with less than 30 people have the quintile hidden. No interpretations should be drawn from these areas. Areas with enough people but very low or very high numbers of higher education participants will have TUNDRA quintiles, but the participation rate is hidden if it is below 10 percent, or above 90 percent.

More information is available in the [TUNDRA LSOA release documentation](#).

Are all outreach or access and participation programmes expected to use TUNDRA?

Although TUNDRA is developed for this purpose, there are no set expectations when it comes to the usage of TUNDRA in ongoing programmes. As an experimental statistic, any feedback would be welcome for the ongoing development of TUNDRA. This feedback should be sent to Catherine Barnaby at official.statistics@officeforstudents.org.uk.