

Local demography and its impact on local policy

Session organizer: Piers Elias (Demographic Support)

Monday 10 September 1.30pm

Forecasting population change in a school setting

Heather Zawada, Hampshire County Council

Between 2010 and 2016, the school age population saw a growth in the numbers admitted to HCC schools that equalled the previous 12 years of decline. With birth rates continuously on the rise since 2001 until 2012 the numbers of children entering the Hampshire schools system has increased with a notable period of pressure on existing school places since 2010. The use of a forecasting model has been fundamental in predicting the localised areas particularly under pressure from this population growth, but with data indicating we have hit the peak in numbers, how does a forecasting model cope with change?

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Projecting school place demand for pupils with Special Educational Needs and Disabilities in London

Marta Lapsley, Ben Corr; Greater London Authority

Local Authorities have a duty to provide suitable school places for all children, including those who have Special Educational Needs and Disabilities (SEND). To support London's boroughs in their SEND place planning, the GLA is working to produce a projection model for SEND school place demand. Provision of SEND places is costly, on average three times more than mainstream places. It is crucial that boroughs are able to plan effectively for SEND places to ensure that some of the most vulnerable pupils are properly supported, and that the best use is made of tight resources. The demand for high-needs SEND school places in London has increased by 18 % since 2010, a much greater increase than in the rest of England where demand has increased by 4 %. There are also changing patterns in the types of SEND needs of London's pupils, which increases the complexity of the modelling process. The GLA's methodology uses a back series of data collected in the spring schools census, and projections are broken down by need type (e.g. autistic spectrum disorder, visual impairment etc) and severity. There are limitations to this data which mean that we are working closely with stakeholders in the boroughs and beyond to interpret the data and identify suitable parameters for projecting forward each need/severity. Initial results suggest that in London by 2025 the demand for high-needs SEND places will have increased for most need types, but that the total demand for SEND places will have fallen.

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Absurd population projections in Coventry & the destruction of the Green Belt

Merle Gering¹, Keith Kondakor², ¹Keep Our Green Belt Green Coventry and Warwickshire, ²Nuneaton and Bedworth Council

This paper describes the collusion of ONS, consultants, Coventry Council, and the Planning Inspectorate to use unreliable population figures as justification for building on green belt. SNPP2014 projects Coventry will grow 250% above the West Midlands average, 2011-2031, but no one could tell us why this would happen. Nonetheless, none of the principals, - ONS, the consultants, Coventry Council, the planning inspectorate, nor the planning minister would consider that the projections might be seriously mistaken. Andrew Tyrie aptly said, "The ONS has fallen a long way short, lacking intellectual curiosity, prone to silly mistakes and unresponsive to the needs of consumers of its statistics". Citizens found they were banging their heads against a brick wall, even though they presented plentiful evidence against the alleged population boom: mediocre job creation, below average birth rates, low house prices, middling population growth during 2001-2011, falling school admissions. Consultants exaggerated birth rates and depressed death rates, UPC is high. No matter. Officials, inspectors, and politicians did not want to know any of this, and the courts would not even consider the evidence. Detailed

analysis shows the excessive projections arise from over counting of foreign students - After London, Coventry has more non-EU international students than any other city in the UK. Analysis showed 3,750 students a year were wrongly padding out local growth, when HESA data showed they'd left the region. Result? Houses will cover the Green Belt, needlessly.

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Local migration and its impact – Tuesday 11 September 4.45pm

Planning health needs in new settlements

Richard Potter, Analytics Cambridge

The presentation will be to report on the planning of demand for health services for Northstowe new town. Northstowe, just north of Cambridge, is planned to be 10,000 dwellings. Construction has begun and the first residents moved in during 2017. The work carried out looked at the nearby new village of Cambourne where construction started in 1998. It comprises 4,500 houses. The factors considered were: the age of the population, language, ethnicity, types of housing and service provision at GP practice. The key aspect was how the characteristics of Cambourne compared to the surrounding area. One output from the work is forecasts of potential numbers of patients who would live in Northstowe. The presentation will include requirements that were put forward to be tested. It will discuss where these were possible and where there were difficulties in analysis. The study used data from a number of published sources: the Census of Population, Department for Education school census, NHS digital, the Post Office and South Cambridgeshire Planning Department. Anonymous data as supplied by the GP practice in Cambourne was also used. As well as discussing the ideas for health requirements explored the presentation will also look at the data sources used and their advantages and limitations. The potential application is for forecasting health needs for substantive development including sustainable urban extensions, new garden towns and villages.

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The shaping of local populations: smoothing and clustering internal migration data for England and Wales

Andrew Hind, University of Southampton & Local Authority School Planning Consultant

Research question: Local authorities require population forecasts for a range of planning purposes. Internal migration accounts for the majority of gains and losses to local populations and plays a major role in the shaping of their size and age structure. Rogers and Castro (1981) developed the concept of model migration schedules, comprising parameterised curves modelling migration at different life stages. Wilson (2010) extended this to include a student peak curve, now the most prominent single feature of internal migration in developed countries. Individual local authorities exhibit unusual features relating to special populations, such as school pupils and students. There are challenges in modelling these complexities. Methods: The paper explores methods for modelling internal migration, from the five-year averages used by ONS for subnational projections, developments of the methods proposed by Rogers et al, and Wilson, and other approaches such as kernel regression, and p-splines. The example of Winchester will be used for the purposes of the paper. Data sources: From 2011 to 2016 ONS has published data representing moves between English and Welsh districts by single year of age and sex. These are used as the basis for the construction of smoothed migration schedules. Potential applications: Smoothed migration schedules contribute to making improved local projections and forecasts. They stimulate thinking on how internal migration shapes local populations and the character of local areas. Preliminary results: The complexity of observed local migration patterns requires mixed methods to be used in order to model single year of age flows effectively.

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How has internal Migration changed at the Local Authority level since 2012

Piers Elias, Demographic Support

An extension to last year's presentation on Regional level migration, including an update of the data to 2016/17, this presentation will look at changes to migration patterns for Local Authorities within the North-East Region (and may be other Regions). The revised figures are those that are used in the Mid Year Estimates for the Internal Migration component and use a combination of moves as measured through Patient Register Data and student addresses from the Higher Education Statistical Agency data. The figures for 2011/12 to 2015/16 will be those used in the 2016 Based Sub-national Projections which were published (if all went to plan) in May 2018.

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