

The Future of Attleborough's Population

Health & Demand for Healthcare



Attleborough Town Council

Historic Market Town in the Heart of Norfolk



Health Economics Consulting is a not-for-profit consultancy, fully owned by the University of East Anglia with a focus on supporting medical education at UEA through its commercial activities. Our role is to provide academic-quality evaluations and assessments from economic and other perspectives. HEC staff are members of one of the largest health economics research groups in the country. We have considerable experience of health economics and other related topics and undertake groundbreaking work in areas such as medical technology, digital health, medical devices, diagnostics and pharmaceuticals, clinical pathway redesign and public health interventions. We have a track-record of building models of complex healthcare interventions that incorporate specialised costings, cost-effectiveness, cost-utility and cost-benefit analyses as well as burden of disease and return on investment. We also specialise in other health outcomes, including qualitative analysis and carbon and environmental impacts.

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The Attleborough Health, Care and Wellbeing Trust (ATT CARE) was registered in 2017 to facilitate the delivery of Themes 5 and 6 of The Attleborough Neighbourhood Plan (ANP). The Charity has maintained direct links with developers, local authorities, commercial health, and care providers as well as primary care providers, NHS England, care commissioning agencies and their communities.

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Attleborough Health Baseline

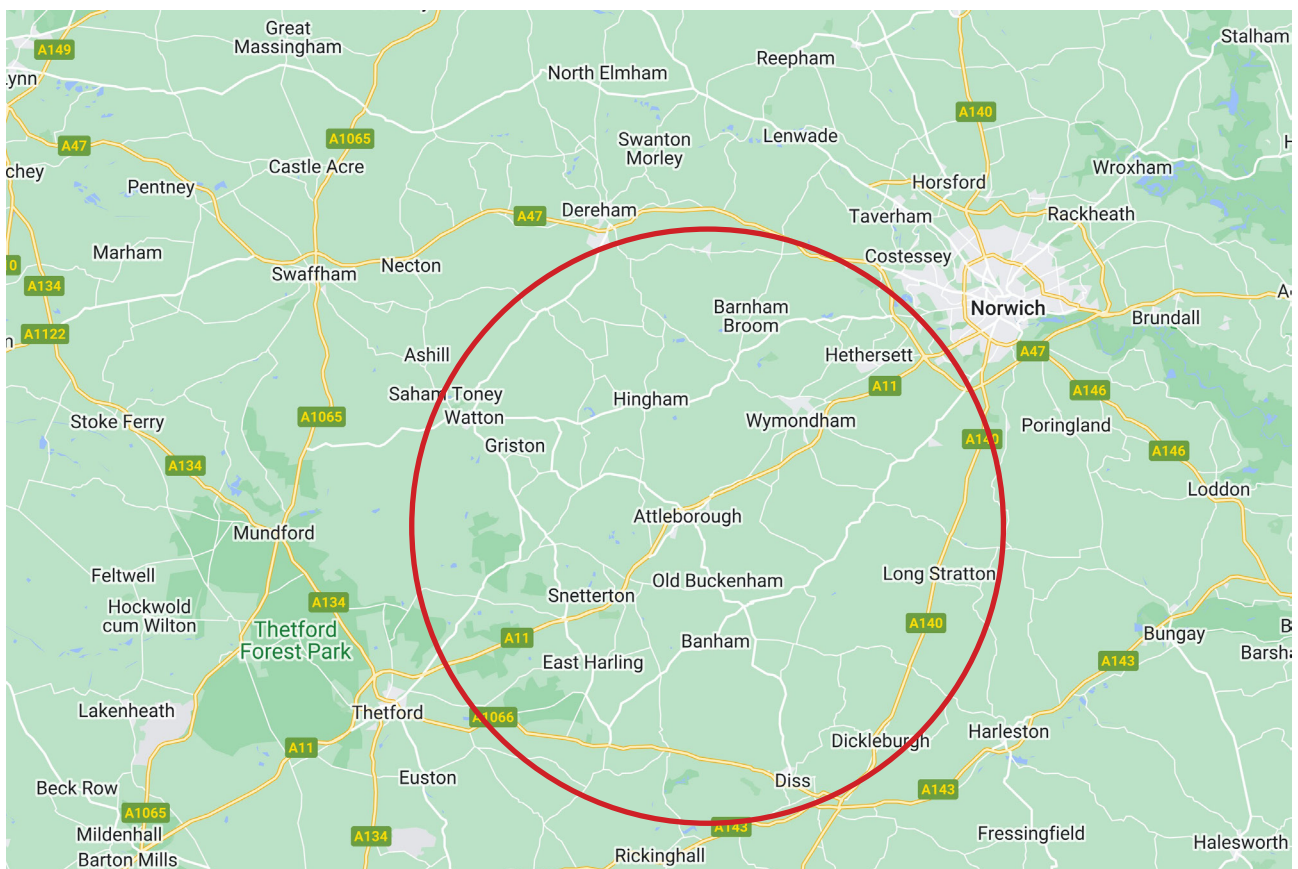
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What Does This Report Address?

This report builds on previous work conducted by Health Economics Consulting (HEC) to assess current healthcare needs and provision. It examines the consequences of the planned and unplanned population growth of Attleborough, and in particular, what this means for healthcare and service provision in the town and its surrounding area. In addition, the novel planning tool developed alongside this report can provide added insights about future scenarios based on the most relevant healthcare data and epidemiology available. Given some uncertainty, this tool allows different assumptions to be made, based on local knowledge as well as aspirations.

The findings show that along with an increased population, there will be changes to healthcare needs and potentially a greater need for more primary care. However, this is not a certainty; the report also discusses and models changes in key behavioural factors that may have an impact on demand for health services.



Picture: Google MyMaps - Attleborough and Surrounding Area

Introduction

This report has been commissioned by the Attleborough Health, Care and Wellbeing Trust (ATTCARE) a charity organisation set up as part of the town of the Attleborough Neighbourhood Plan.

The aim of this report is:

- to build upon the previous work performed on assessing the current health and wellbeing plans and infrastructure in Attleborough (Attleborough Health Baseline Profile, 27 September 2021)
- inform future health service planning and wellbeing needs, in relation to expected population growth, using the novel planning tool developed specifically for this purpose using the latest local data.

Previous work performed by HEC revealed that health service needs in Attleborough are currently being met, but there is some strain on the local general practice (GP) surgery. Although Attleborough is not significantly worse off than the rest of Norfolk in health terms – nor, indeed, compared with other parts of England in terms of meeting health demand – there has been a rapid increase in Attleborough's population size, which has had a severe impact on the epidemiological profile of the area. This growing pressure is putting the town of Attleborough at risk of underachieving on its health status and contributing to poor wellbeing.

The proposed housing expansion could bring about a huge opportunity for infrastructure and population improvement, but it also increases strain on health and social care resources. The GP practice (which has surgeries on two sites in the town) and the health centre are several decades old and already cater to a higher-than-average number of registered patients, including those the surrounding areas beyond the town boundaries. This strain has been exacerbated in the wake of the Covid-19 crisis, where isolation and access to healthcare have been problematic. The core strategy of the plan requires Attleborough to accommodate 4,000 new homes by 2026 in a growth location referred to as the Strategic Urban Extension (SUE), as well as new employment land and retail facilities (Figure 1). The Attleborough Neighbourhood Plan (ANP) is designed to look at a wide range of issues currently affecting Attleborough and consider what will be required in the future to accommodate the planned growth.

The vision is to facilitate the provision of integrated health, social care, and wellbeing resources that will accommodate this growth in Attleborough and its surrounding villages, with a goal of establishing a robust framework for addressing Section 5 of the ANP. Theme 5 (Health and Social Care) of the ANP overlaps with Theme 6 (Sports and Community Facilities) (Figure 1) in terms of investigating physical activity as a preventative measure against chronic conditions. This report should be read in conjunction with those plans.



Figure 1: Attleborough Neighbourhood Plan

Having investigated the current health care needs of Attleborough's population and health provision in the area, HEC has developed a bespoke planning tool that will help to inform future health service planning and wellbeing needs, especially as those needs relate to the expected population growth. The main aim of the tool is to assess population and epidemiological trends in Attleborough based on inputs from Public Health England (PHE) and National Health Service (NHS) reports, published literature, and user-defined values. The model also takes into consideration the impact of specific health and behavioural risk factors that can affect the prevalence of certain conditions and the subsequent impact on health service demand.

This report provides the outcomes from the planning tool and all the data inputs and assumptions. These include the main findings, discussion of the strengths and any shortcomings in the methodology. Recommendations are made about addressing trends, negative impacts and especially about reducing avoidable demand on primary care and improving community wellbeing.



Picture: JTP Masterplanners Design and Access Statement

Future Planning

The Bigger Picture

HEC followed a holistic approach influenced by the World Health Organisation (WHO) definition of health as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity”. This work is backed by research evidence HEC has previously analysed, which includes the socioeconomic, epidemiological, and behavioural risk profile of the population of Attleborough.

HEC modelled the population increase based on expected growth reported by the Office of National Statistics (ONS). This was subsequently used to estimate the prevalence of the most common health conditions in Attleborough, adjusted by the national average and UK-wide prevalence estimates. The GP practice national average full-time equivalent (FTE) per 1,000 patients was used to assess current and future demand and strain on the health care provision in Attleborough.

As the town’s population increases through the incentives for families to move into Attleborough, it is expected that the epidemiological profile of the town will change by increasing the demand for health services.

Taking into consideration the impact of behavioural health risk factors (such as alcohol, smoking, high BMI, dietary risks or low physical activity) on the prevalence of the most common conditions in Attleborough, the town’s policymakers can estimate more accurately the expected impact of these factors on health resources required for the population.

The current version of the planning tool (Figure 4) utilises data from various sources including the Quality and Outcomes Framework (QOF), Public Health Strategic Health Asset Planning and Evaluation application (Shape Atlas), and PHE Fingertips data. Users can specify the yearly increase they expect in the population and the number of years for which they expect to have this increase. The users can also update the population and epidemiological mix of the population, which is currently based on available sources. Users can also adjust the impact of the population increase and the decrease of the health risk factors on the epidemiological data of the future population adjusting them as per Norfolk, England, or across the United Kingdom.

A Probabilistic Sensitivity Analysis (PSA) on the population and conditions proportions was implemented to improve the robustness of the results. This is a technique used in economic modelling that allows the level of confidence to be quantified in the output of the analysis. In relation to uncertainty in the model inputs as parameters are represented as distributions around the point estimate to address the issue of uncertainty in the model.

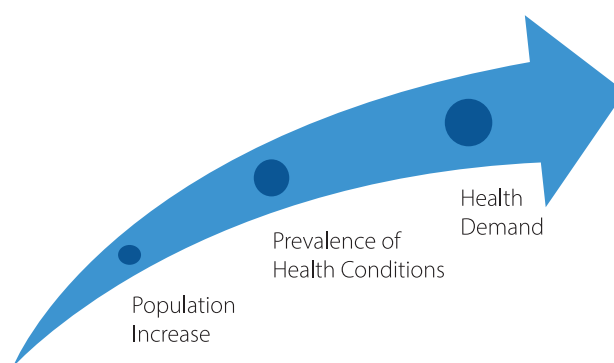


Figure 2: Impact of Population Increase on Health Demand

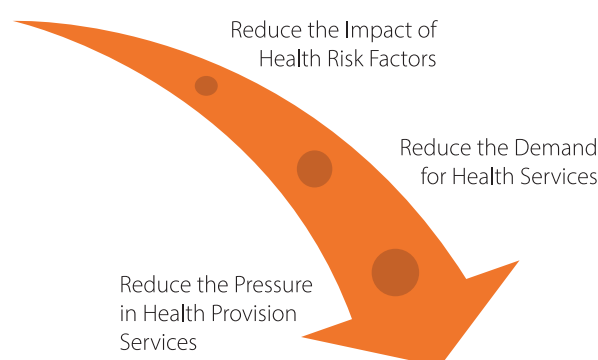


Figure 3: Impact of Improvement on Health-Related Risk Factors on Health Demand



Figure 4: Attleborough Planning Tool Landing Tab

Population

Attleborough’s population has seen a steady increase (based on reported census data from the ONS). During the 10-year period between 2001 and 2011, the town saw a rate of growth of 8% from 9,702 residents (distributed between 4,185 households) to 10,482 residents (distributed between 4,481 households). In 2019, the estimated population figure for Attleborough was 12,448 with an even distribution of both female (6,367) and male (6,081).

According to ONS data, Breckland (the district authority in which Attleborough falls) is projected to have a 4.1% increase in its population by 2026 and a 10.7% increase by 2036. The population increase will be a fundamental driver in service demand and utilisation, especially from the younger and older ends of the age range, whose use of health services is usually larger.

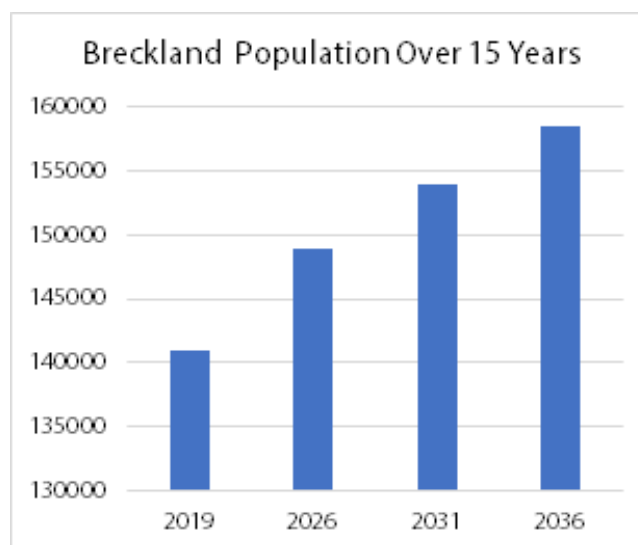


Figure 5: Projection of Breckland Population Over 15 Years Old Until Year 2036

In May 2022, Attleborough’s GP practice had 18,750 registered patients with a total of 9,417 male and 9,333 female patients. This report concentrates on health demand planning for this population, and the planning tool is designed to reflect more accurately the pressure that primary care units will face in the future in Attleborough. Based on the ANP, we assumed a further population increase of 5% until 2025.

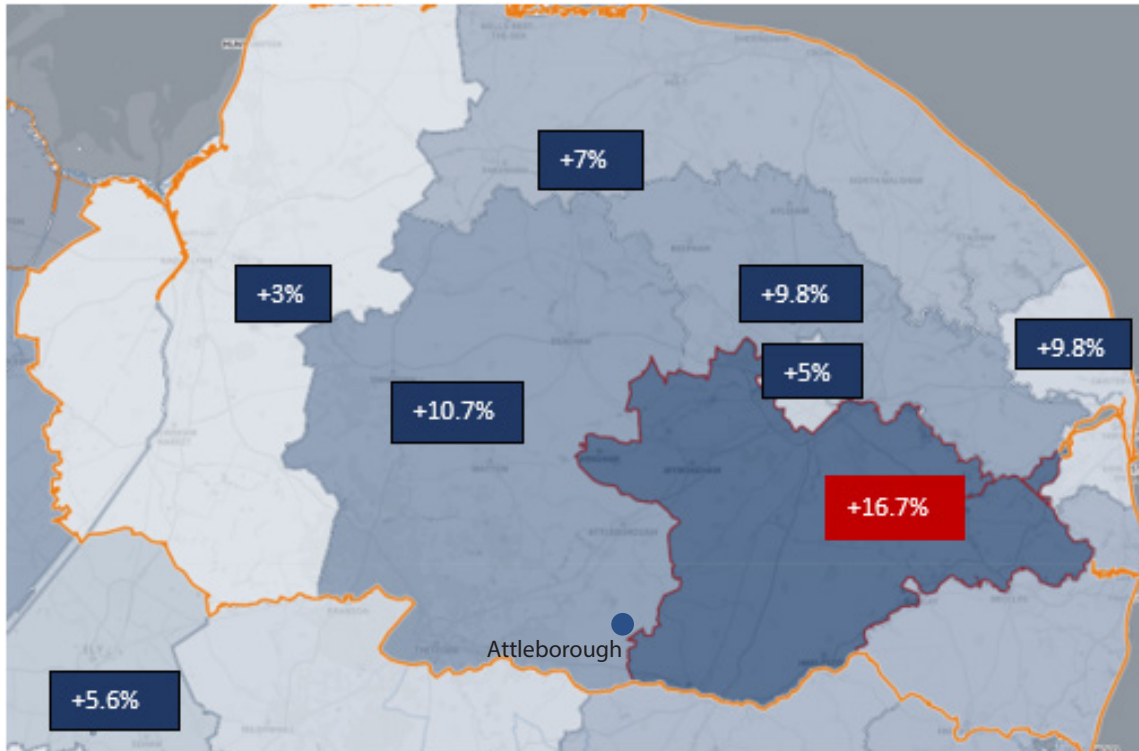


Figure 6: Breckland Population Projection by 2035 (Source: ShapeAtlas.net)

Figure 7 shows the comparison between the current and the estimated future population per age group that will be registered in Attleborough's GP practice. The total estimated future population is calculated to 20,395 (upper 95% confidence interval 25,469) people (10,594 male and 9,801 female patients).



Figure 7: Attleborough GP Practice Current and Future Population per Age Group

Health Profile

Based on available data from NHS Digital’s Quality and Outcomes Framework (QOF), the chart below (Figure 8) shows the prevalence of health conditions among those registered with the Attleborough practice. QOF points are achieved based on the proportion of patients on the defined practice register who receive such treatment. It should be noted that each statistic is representative of the total number of patients within specific age groups for which each health condition pertains (ie adults, children or both).

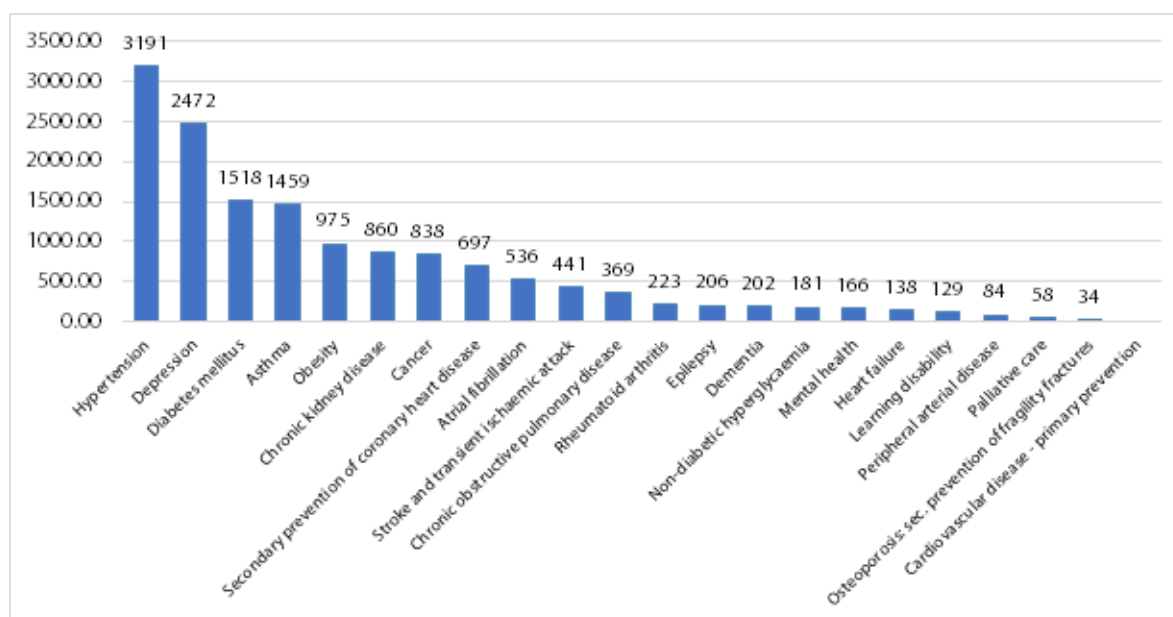


Figure 8: Attleborough Surgery Health Condition Prevalence as of May 2022 (Source: NHS Digital)

Table 1 presents the national prevalence of the targeted conditions while Table 2 presents the future health profile in Attleborough based on current prevalence in Attleborough and adjusted by the national prevalence.

Table 1: National Prevalence

Health Conditions (Male and Female Population)	National %	Source
Hypertension	29.00%	NICE
Depression	4.50%	NICE
Diabetes Mellitus	8.60%	Public Health England
Asthma	12.00%	British Lung Foundation
Obesity	27.00%	NICE
Chronic Kidney Disease	8.50%	NICE
Atrial fibrillation	2.50%	NICE
Stroke and Transient Ischaemic Attack	2.11%	NICE
Chronic Obstructive Pulmonary Disease	2.00%	British Lung Foundation
Rheumatoid Arthritis	1.00%	NICE
Epilepsy	3.00%	NICE
Dementia	7.10%	NICE
Non-diabetic Hyperglycaemia	10.70%	Public Health England
Mental Health	25.00%	Public Health England
Heart Failure	2.00%	NICE
Learning Disability	2.19%	Mencap
Peripheral Arterial Disease	5.00%	NICE
Osteoporosis: Prevention of Fragility Fractures	2.00%	NICE

Table 2: Attleborough Future Health Profile

Health Conditions (male and female population)	Unadjusted %	Adjusted by national %
Hypertension	17.02%	18.75%
Depression	13.18%	12.28%
Diabetes mellitus	8.09%	8.27%
Asthma	7.78%	8.42%
Obesity	5.20%	8.00%
Chronic kidney disease	4.59%	5.14%
Cancer	4.47%	3.97%
Secondary prevention of coronary heart disease	3.72%	3.30%
Atrial fibrillation	2.86%	2.86%
Stroke and transient ischaemic attack	2.35%	2.20%
Chronic obstructive pulmonary disease	1.97%	2.00%
Rheumatoid arthritis	1.19%	1.18%
Epilepsy	1.10%	1.35%
Dementia	1.08%	1.84%
Non-diabetic hyperglycaemia	0.96%	2.20%
Mental health	0.89%	3.92%
Heart failure	0.73%	0.90%
Learning disability	0.69%	0.88%
Peripheral arterial disease	0.45%	1.03%
Palliative care	0.31%	0.28%
Osteoporosis: sec. prevention of fragility fractures	0.18%	0.41%
Cardiovascular disease – primary prevention	0.00%	0.00%

¹ As cancer can include many different types we have used the sum of the prevalence of the most common cancers in UK population (breast, prostate, lung and colorectal cancer).

Impact on Health Demand

Currently, although primary care practice in Attleborough meet the demand for health services, our analysis shows that based on a 0.46 fulltime equivalent (FTE) per 1,000 patients as a national average, the Attleborough practice has to dispose 0.42 FTE per 100 patients (Table 3). This demonstrates that Attleborough's primary care practice is already under pressure and that this pressure is expected to increase as the population grows. We estimated that currently 0.75 FTE more is required in order for Attleborough's practice to be able to operate according to the national average.

Table 3: Current GP FTE in Attleborough and National Average

GP FTE Current Position	
National Average GP FTE	0.46 per 1000 patients
Attleborough GP FTE	0.42 per 1000 patients
Attleborough Total Current FTE	7.88
Attleborough Total FTE Required	8.63
FTE Required	0.75

Based on the calculations for the estimation of the expected population increase, the FTE required will increase to 3.84 for the primary care practices to operate close to the national average (table 4).

Table 4: Current/Future GP FTE in Attleborough and National Average

GP FTE Current / Future Position	
National Average GP FTE	0.46 per 1000 patients
Attleborough GP FTE	0.42 per 1000 patients
Attleborough Total Current FTE	7.88
Attleborough Total FTE Required	11.72
FTE Required	3.84

Attempting to examine the impact of behavioural risk factors that negatively impact health, we have used a database developed by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington School of Medicine. This assesses the risk contribution of:

- alcohol
- dietary risks
- high BMI
- low physical activity
- smoking

on the most prevalent conditions in Attleborough as they were described by QOF above.

Although those using the findings of this report can create various scenarios based on future improvement against these risk factors, an indicative reduction of 10% on them could reduce the primary care FTE required to cover the future population needs by 6%.

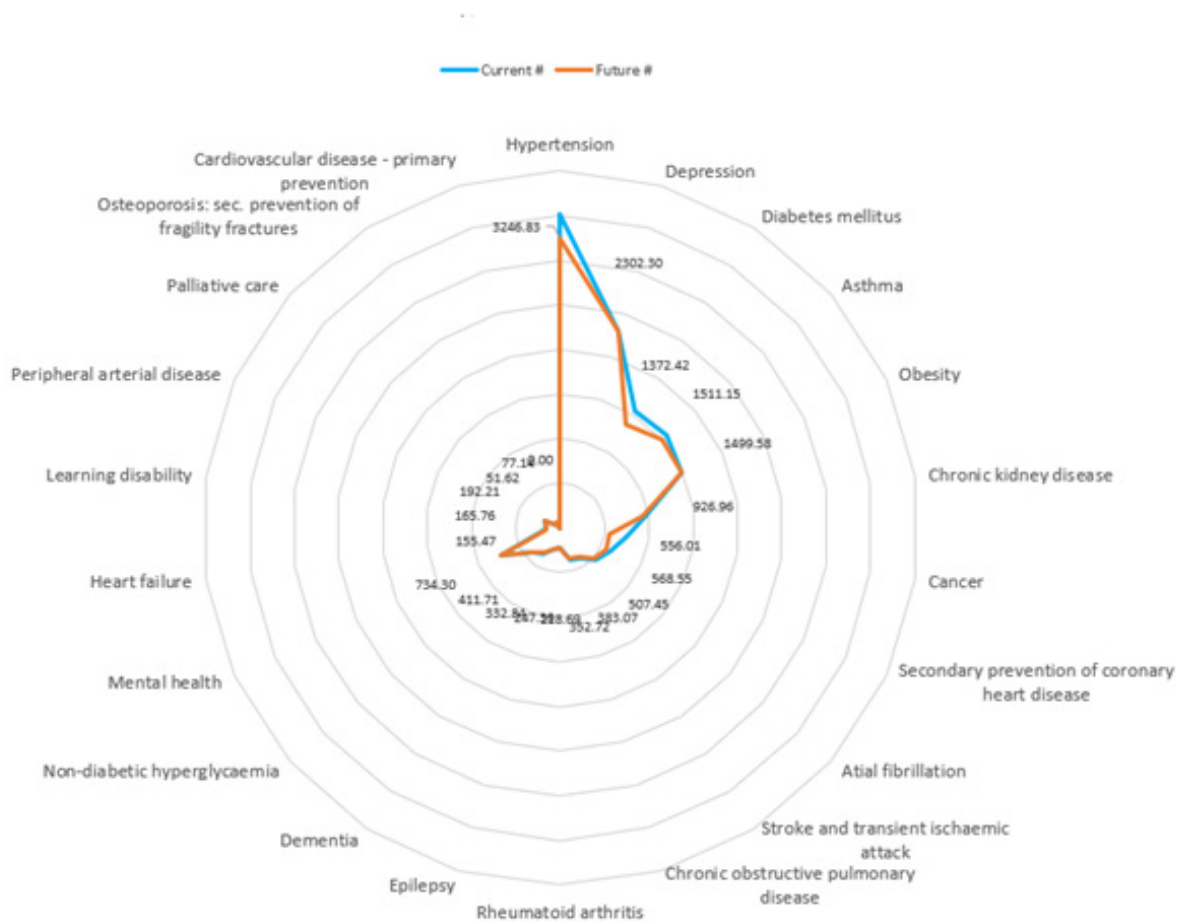


Figure 9: The Impact of a Reduction by 10% of Behavioural Risk Factors on the Cases of Attleborough's Most Prevalent Conditions

What Does This Report Tell Us?

The expected increase in Attleborough's population will put health provision units at risk of underachieving on meeting healthcare needs and demand. Based on the current health needs of Attleborough's population and health service provision in the area, HEC produced a detailed baseline report, and developed a bespoke planning tool to model the population growth and the subsequent changes in the health profile of the town.

HEC decided to use the GP practice's registered population as the target population for all calculations – this was in order to reflect more accurately the current and future challenges of primary care units in Attleborough. Some assumptions had to be made about the expected increase of the population during the next 2.5 years and the reduction on the behavioural risk factors. The planning tool is futureproof so that the users can update the inputs based on the latest NHS and GP practices reports.

HEC's findings show that along with increased population, there will be a need for more primary care FTE. This may also result in the need for future or earlier replacement of health facilities such as surgeries and clinics, an investment analysis that falls outside this report. This association could be moderated by the improvement of the behavioural factors discussed and their impact on the demand for health services.

HEC will remain in contact with ATTCARE trustees and Attleborough local authorities to provide support regarding future calculations and updates to support, with evidence, their future decision-making processes.

ATTCARE appreciates the skill and applied knowledge and academic research that HEC has put into this report. The charity is very grateful for the high level of knowledge and care that has been included in the report, together with the baseline detail. This is an important document and a powerful planning tool.

ATTCARE remains concerned that in order to provide appropriate health and care provision in the expanded town through to 2036 and beyond, other care facilities and services are equally important, alongside primary care provision. An integrated care system needs to be available if the town is to be an attractive and healthy place to live and work.

The design for a local health care system must also include integrated facilities for:

- Mental health advice and support
- Maternity care, advice and support
- Supported living accommodation for those with specific needs
- End of life and other palliative care units
- Safe and secure residential care facilities
- Integrated social prescribing for balanced wellbeing support and, most importantly, the sustainability, local training and skills education provision to continue to feed quality care and support staff to operate the integrated care system envisaged in the Neighbourhood Plan.

An integrated care system will need to be planned in terms of both physical provision and the use of modern, easily accessible technology.

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The Future of Attleborough's Population

Attleborough Health Baseline

Profile



Attleborough Town Council

Historic Market Town in the Heart of Norfolk

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Introduction

Outline of the Attleborough Plan and Project Aims

This report has been commissioned by the Attleborough Health, Care and Well-being Trust (ATTCARE); a charity organisation set up as part of the town of ANP. The aim of this report is to provide an overview of the current health and wellbeing plans and infrastructure in Attleborough to inform future health service planning and wellbeing needs, especially as it relates to the expected population growth.

Attleborough Town Council has produced a neighbourhood plan to cover the period 2016-2036 (ANP 2017). This plan sets out the future for how the town's growth will be accommodated by ensuring that the right infrastructure is put in place. The core strategy of the plan requires Attleborough to accommodate 4,000 new homes by 2026 in a growth location referred to as the Strategic Urban Extension (SUE), new employment land as well as retail facilities (Figure 1). The Attleborough's Neighbourhood Plan (ANP) is designed to look at a wide range of issues currently affecting Attleborough and consider what will be required in the future to accommodate the planned growth.

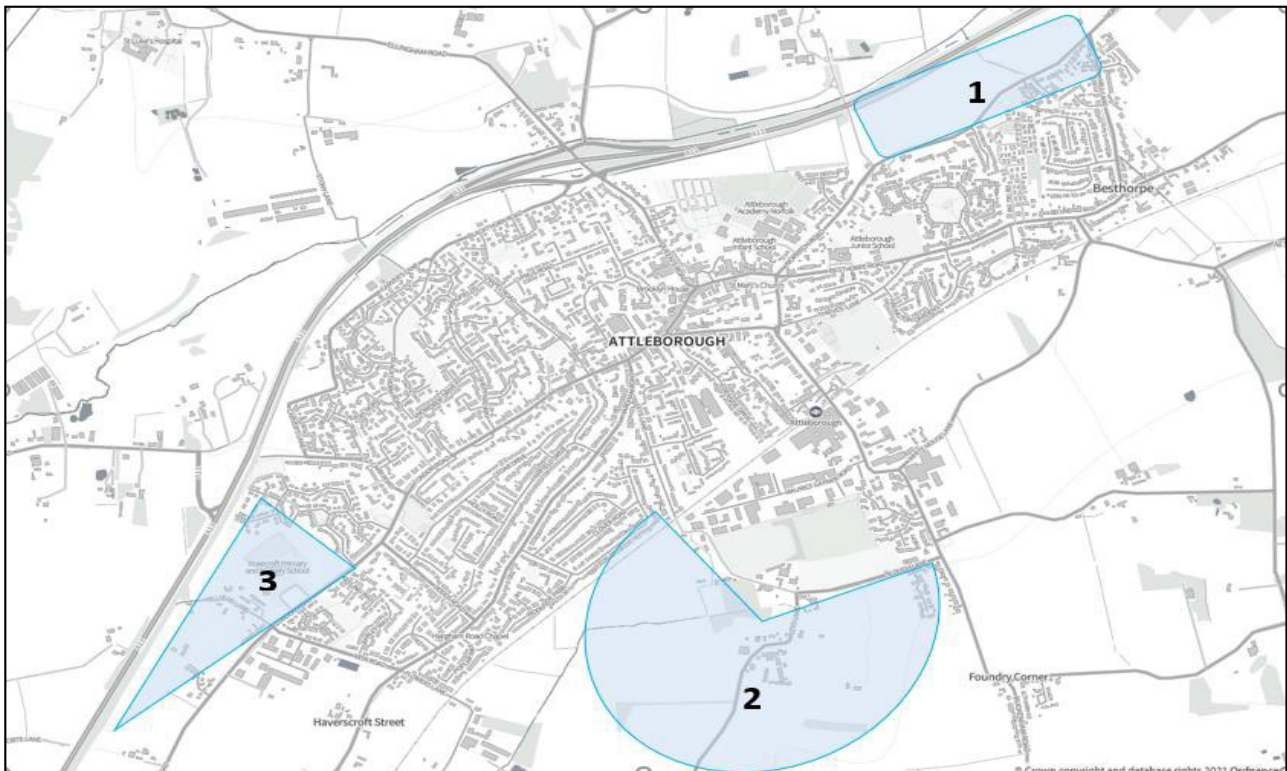


Figure 1: Urban Extension New Housing Lots

The vision is to facilitate the provision of integrated health, social care, and well-being for this growth in Attleborough and its surrounding villages, with a goal to establishing a robust framework for addressing Section 5 of the neighbourhood plan. Theme 5 (Health and Social Care) of the Plan has significant overlaps to Theme 6 (Sports and Community Facilities) (Figure 2) in terms of investigating the physical activity as a chronic conditions' preventive measure. This report should be read in conjunction with those plans.

In fact, all seven themes of the ANP report overlap in some way with the cumulative impact on a town's health. We are minded of the WHO definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' as the goal. For example, research has shown that poor housing has an impact on educational achievement, both of which have notable impact on health and wellbeing. The links are complex and too numerous to explore here but should be kept in mind as this report focusses mainly on health and areas that directly influence health and social care whilst recognising the many overlaps.



Figure 2: Attleborough Neighbourhood Plan

Attleborough Town Metrics

Attleborough sits outside of the main city of Norwich and has seen continuous growth in the last few years as the city and region grows. Part of this is due to government incentives to build new housing nationally and part is overspill and better transport infrastructure.

Population

Attleborough's population has seen a steady increase based on available census data from the Office of National Statistics (ONS). In the 10-year ten period between 2001 and 2011, the town saw a rate of growth of 8% from 9,702 residents (distributed between 4,185 households) to 10,482 residents (distributed between 4,481 households). In 2019, the estimated population figure for Attleborough was 12,448 with an even distribution of both female (6,367) and male (6,081).

The age group distribution is consistent with that of the rest of Norfolk for most age groups. However, Norfolk appears to have more females between 30-34 and more males between 50-54 age groups. There also appears to be fewer males ages 55-85+ compared to the females.

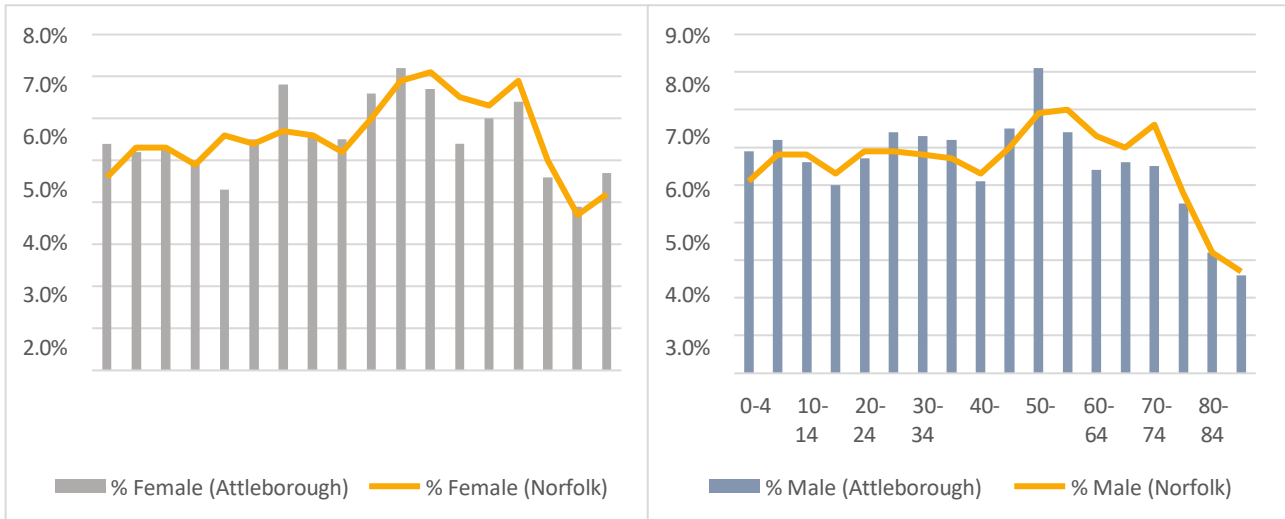


Figure 3: Attleborough 2019 Population Distribution (Source: Norfolk Insight)

According to the Office of National Statistics (ONS), Breckland (in which District Authority Attleborough falls) is projected to have a 4.1% increase in its population by 2026 and a 10.7% increase by 2036. The population increase will be a fundamental driver in service demand and utilisation, especially from both younger and older members of the population, whose use of health services is usually disproportionate in these age ranges.

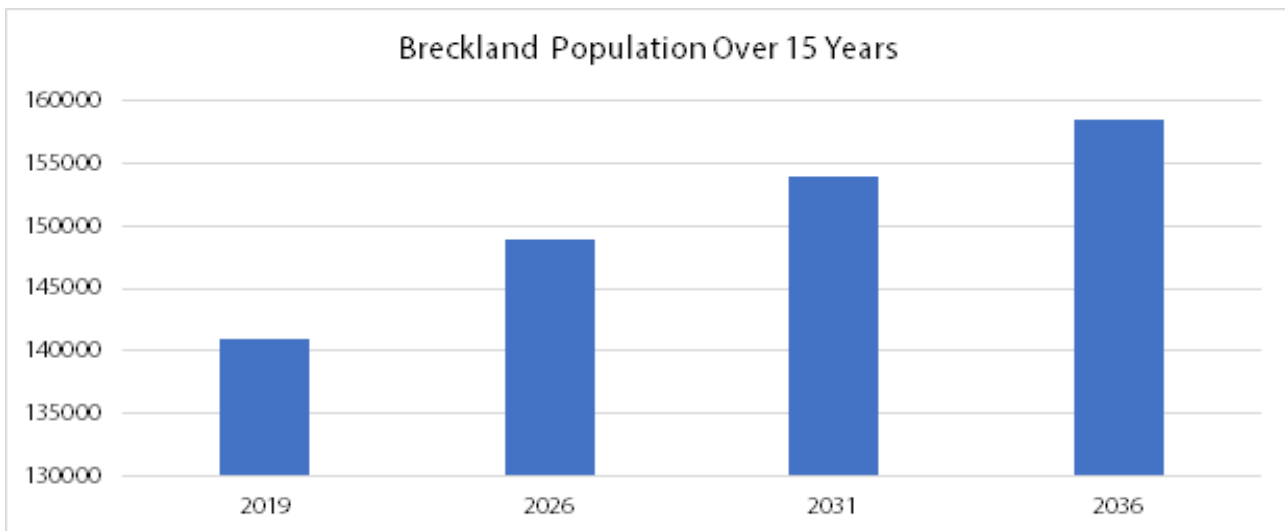


Figure 4: Projection of Breckland Population Over 15 Years Old Until Year 2036

It should be noted that this population projection is an assumption based primarily on recent observed demographic trends and does not reflect the impact of government policies like the housing developments in an area. Given the proposed housing developments already planned, population increase is expected to be much greater than current projection. Neighbouring districts are also projected to experience significant population growth as depicted in the Figure 5 below:

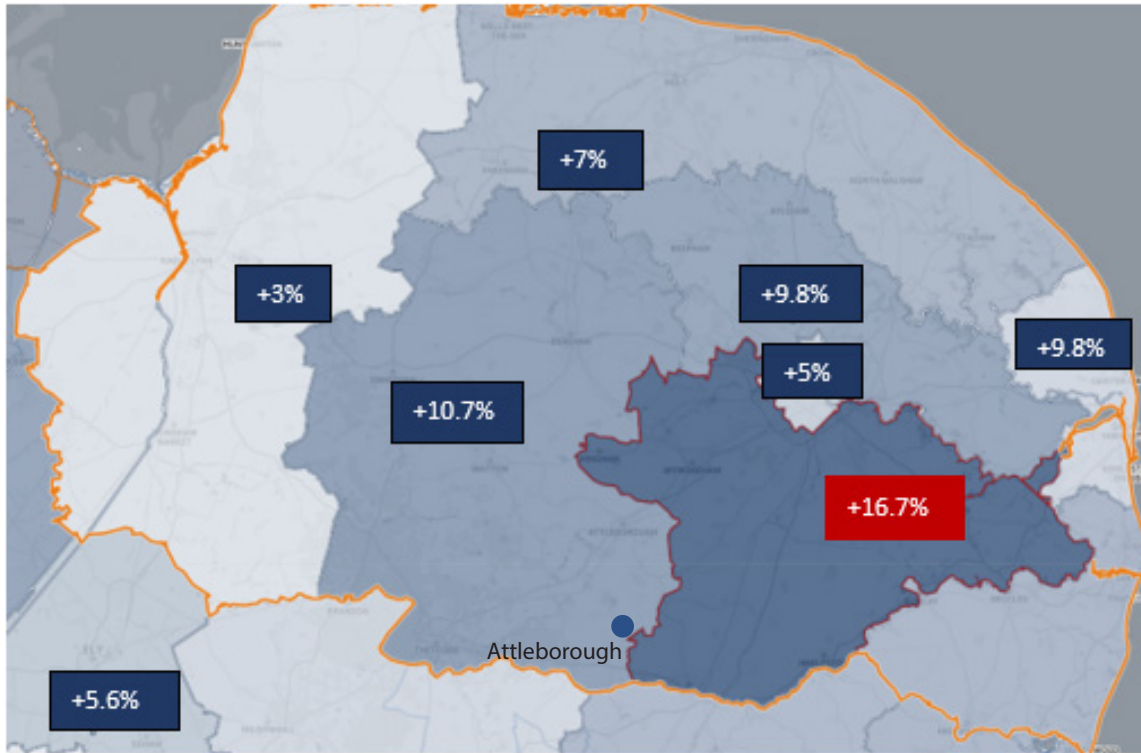


Figure 5: Breckland Population Projection by 2035 (Source: ShapeAtlas.net)

Population growth is expected to put more demand on health and related services, perhaps in the medium term (3-5 years) in the area but also on central, more specialised services in nearby Norwich. In the next phase of the project HEC plan to develop more accurate demand forecasts.

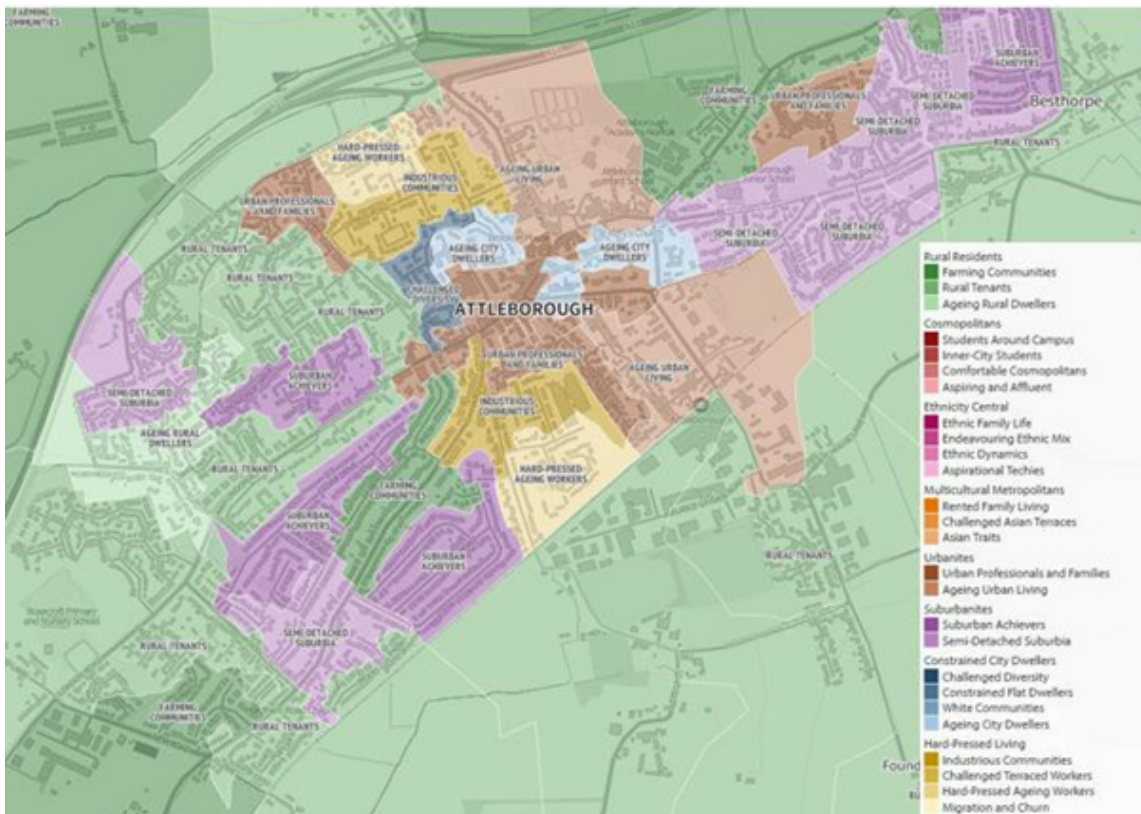


Figure 6: Output Area Classification (Source: ShapeAtlas.net)

Judging from these rather arbitrary area classifications (we could not find any definitions of these), it is likely that the newer populations will be more socially mobile, also implying better educated and younger groups within the population.

Deprivation Index

Following on from the recent Marmot Review 'Build back fairer: the Covid-19 Review' the elements having most direct influence on a population's health and creating social gradients are: Pollution; Green and Open Space; Transport; Food; Housing and Community participation. According to the government strategy for public health in 2011 'Healthy Lives, Healthy People' (which is still current guidance), population health should always be considered at the planning stage.

To gain a deeper insight into data regarding these aspects of Attleborough, we examined the Index of Deprivation for the relevant wards. This can be divided into several categories and refers to poverty, inequality or relative disadvantage for example, through the absence of certain services or benefits. The English Indices of Deprivation measure relative deprivation in lower-layer super-output areas (LSOA) of England (Ministry of Housing Communities and Local Government, 2019).

The index of multiple deprivation (IMD) is the most widely used of these indices combines information from seven domains to produce an overall relative measure of deprivation. Domains are:

- The **Income Deprivation** domain measures the proportion of the population experiencing deprivation due to low income. This domain includes both those people willing and able to work that are out-of-work, and those who have low income.
- The **Employment Deprivation** domain measures the proportion of the population in a LSOA that is of working-age but involuntarily excluded from the labour market due to unemployment or other reasons including sickness, disability or caring responsibilities.
- The **Education, Skills and Training Deprivation** domain measures the lack of attainment and skills in the local population. The indicators include two sub-domains, one relating to children and young population and one relating to adult skills.
- The **Health Deprivation and Disability** domain measures the risk of premature death and the reduction of quality of life through poor physical or mental health. This domain of deprivation does not measure aspects of behaviour or environment that may be predictive of future health deprivation.
- The **Crime Deprivation** domain measures the risk of personal and material victimisation.
- The **Barriers to Housing and Services** domain measures the physical and financial accessibility of housing and local services. The indicator takes into consideration 'geographical barriers', which relate to the physical proximity of local services, and 'wider barriers' such as affordability.
- The **Living Environment Deprivation** domain measures the quality of the local environment relating to both the 'indoors' living environment which measures the quality of housing; and the 'outdoors' living environment.

According to the Shape Atlas and the workplace zones classification in the area based on 2011 Census data (Figure 7), Attleborough is described accurately as a rural area with some core services (educational facilities and health care units), surrounded by areas employing non-local workers.

There is also a restricted area of industrial activity too, mainly located around the train station and close to the small (non-commercial) airport. This area is mainly Banham Poultry's factory with 376 employees, rather than other business park activities in other parts of Attleborough.

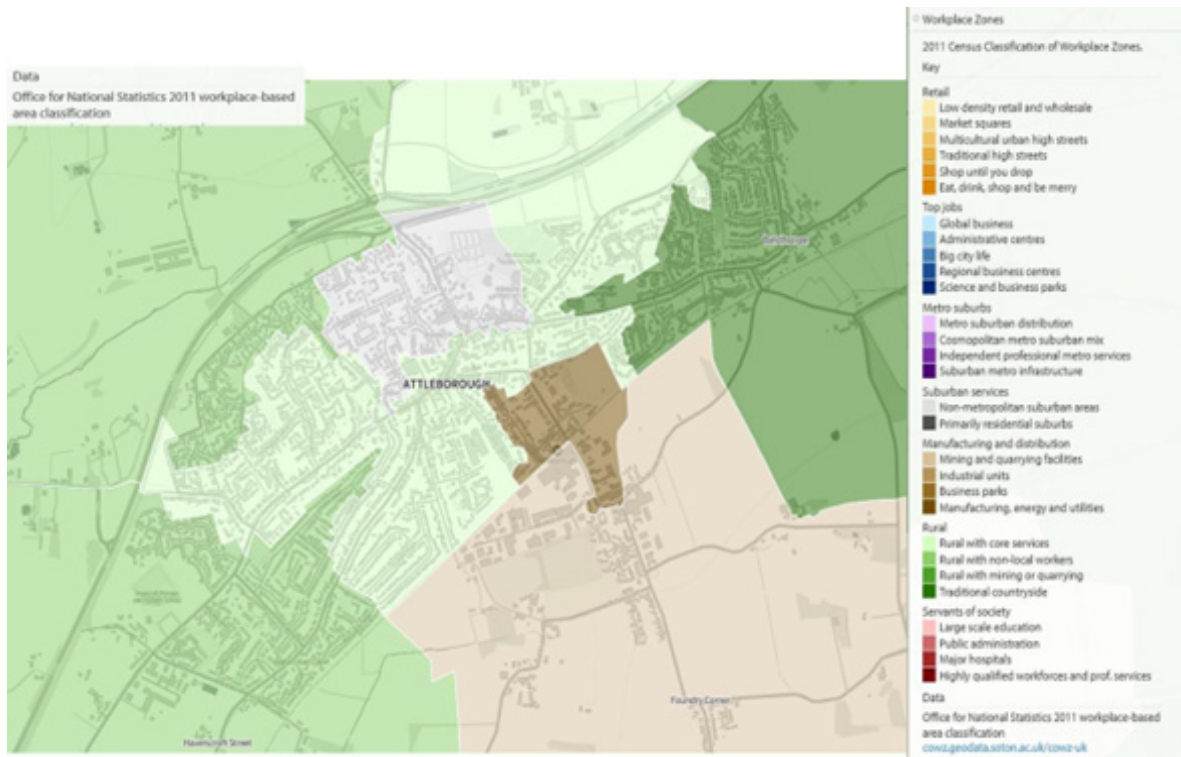


Figure 7: Attleborough Workplace Zones Classification (Source: Shapeatlas.net)

The following tables compare the deprivation index in Attleborough to Breckland and England overall across health, crime, housing, living environment, income, employment, and education. (NB. these indicators should be taken as broad measures and related to the area in general).

Table 1: Deprivation Index Comparison between Attleborough (including nearby areas between Attleborough, Thetford & Wymondham) and England (where 1 is most deprived)

		IMD Rank	Income Rank	Employment Rank	Education, Skills & Training Rank	Health Deprivation & Disability Rank	Crime Rank	Barriers to Housing & Services Rank	Living Environment Rank
England	Min	1	1	1	1	1	1	1	1
	Max	32,844	32,844	32,844	32,844	32,844	32,844	32,844	32,844
	Average	16,422	16,422	16,422	16,422	16,422	16,422	16,422	16,422
	Median	16,423	16,423	16,423	16,423	16,423	16,423	16,423	16,423
	U95	32,023	32,023	32,023	32,023	32,023	32,023	32,023	32,023
	L95	822	822	822	822	822	822	822	822
Attleborough	Min	9,589	8,815	9,043	4,371	8,115	21,934	222	2,606
	Max	27,789	28,420	31,649	19,542	27,918	32,800	29,429	31,794
	Average	18,663	21,879	21,533	12,038	20,084	28,579	10,557	14,172
	Median	18,336	23,484	21,703	12,846	19,573	28,909	8,349	7,664
	U95	27,747	28,032	30,389	18,421	27,615	32,400	26,841	31,112
	L95	10,897	10,363	11,203	4,405	9,300	22,368	537	2,616

On average, Attleborough ranks higher (less deprived) in comparison to England in areas of income, employment, health and crime but lower (more deprived) in areas of education, housing and living environment.

Table 2: Deprivation Index Comparison between Attleborough (including nearby areas between Attleborough, Thetford & Wymondham) and All Breckland (where 1 is most deprived)

		IMD Rank	Income Rank	Employment Rank	Education, Skills & Training Rank	Health Deprivation & Disability Rank	Crime Rank	Barriers to Housing & Services Rank	Living Environment Rank
Breckland	Min	2,938	4,298	3,495	56	2,060	1,492	168	1,414
	Max	27,789	29,276	31,649	22,731	29,085	32,800	32,340	32,019
	Average	15,966	18,030	16,705	9,426	16,458	23,884	13,103	18,653
	Median	16,170	19,163	17,474	9,192	17,490	25,535	11,926	20,443
	U95	26,739	28,058	29,111	19,748	26,983	32,018	29,662	31,794
	L95	3,940	5,623	4,651	360	5,236	4,310	228	2,085
Attleborough	Min	9,589	8,815	9,043	4,371	8,115	21,934	222	2,606
	Max	27,789	28,420	31,649	19,542	27,918	32,800	29,429	31,794
	Average	18,663	21,879	21,533	12,038	20,084	28,579	10,557	14,172
	Median	18,336	23,484	21,703	12,846	19,573	28,909	8,349	7,664
	U95	27,747	28,032	30,389	18,421	27,615	32,400	26,841	31,112
	L95	10,897	10,363	11,203	4,405	9,300	22,368	537	2,616

Similarly, on average, Attleborough (and its nearby areas) ranks more highly in comparison to Breckland overall in most areas except its 'barriers to housing and services' as well its 'living environment'.

Investigating further the deprivation specific LSOAs around the planned urban extension (for new housing lots), these areas are close to or part of, some of the most or less deprived Breckland areas. However, housing Lot 1 (North-East of Attleborough area) is close to one of the lesser deprived areas (Area ID: E01026448 - Breckland 013C) in terms of overall deprivation index, health, income, employment, crime, education and living environment deprivation domains. Housing Lot 2 (South Attleborough area) is close to the most deprived areas (Area ID: E01026423 - Breckland 011B) in terms of crime, education and income deprivation domains (Figure 8). New Housing Lot 3 (South-West Attleborough area) although less deprived in terms of housing, crime, employment, income deprivation domains are part of an area (Area ID: E01026422- Breckland 011A) with high "living environment domain" of deprivation (Figure 8).

Depending on the type of housing built, the potential of the 'new build' to exacerbate inequalities in these area is quite possible. For example, a preponderance of 'affordable housing' or lack of supportive infrastructure for new-build could increase health inequalities. As we have pointed out however, but this depends on infrastructures such as schools, jobs, housing, sport and leisure, and transport opportunities also under review (elsewhere). The environment and its diversity should also be taken into consideration given the proposed changes in land-use.

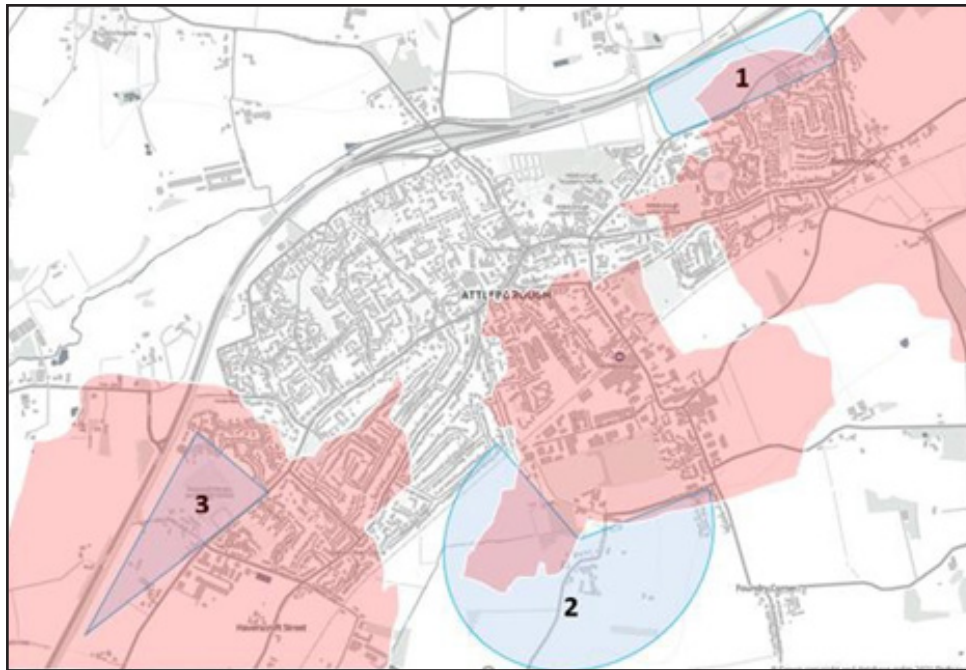


Figure 8: Urban Extension New Housing Lots & Areas of Deprivation In and Around Attleborough

Expanding the comparison of the deprivation of these areas to the national wide data Table 3 puts this into a much wider perspective.

Table 3: Attleborough deprivation Domains Position in Comparison to National Data

Area	Comparison to National Wide Data	Index of Multiple Deprivation (IMD) Rank	Income Rank	Employment Rank	Education, Skills & Training Rank	Health Deprivation & Disability Rank	Crime Rank	Barriers to Housing & Services Rank	Living Environment Rank
E01026448 Breckland 013C	Upper Decile	✓	✓	✓		✓	✓		✓
	Midpoint				✓				
	Lower Decile							✓	
E01026423 Breckland 011B	Upper Decile						✓		
	Midpoint	✓	✓	✓		✓		✓	✓
	Lower Decile				✓				
E01026422 Breckland 011A	Upper Decile	✓	✓	✓		✓	✓		✓
	Midpoint				✓				
	Lower Decile							✓	

Health Profile - GP Population

Based on available data from National Health Service (NHS) Digital's Quality and Outcomes Framework (QOF), the chart below (Figure 3) shows the prevalence of health conditions remunerated in this way of those registered with the Attleborough Surgery. QOF points are achieved based on the proportion of patients on the defined practice register who receive such treatment. It should be noted that each statistic is representative of the total number of patients within specific age groups for which each health condition pertains (i.e. adults, children or both). Based on 2019-2020 figures, the highest QOF recorded prevalence rates are for hypertension (15.34%), obesity (11.75%) and depression (10.54%). Prevalence of asthma too appears to be significant and on the increase recently.

All these conditions either individually or when combined in two or more combinations, have the potential to impact negatively on overall health status and increase utilisation of health services. Multi-morbidity and depression in particular have been found to be associated with increased total costs, hospital costs and GP utilisation (Soley-Bori et al, 2021).

The three conditions with the greatest change in QOF score from 2015-2016 to 2019-2020 are depression, diabetes mellitus and cancer with a percentage increase of 2.1, 0.9 and 0.73 respectively. In comparison to national prevalence rates, hypertension, depression and obesity are the health conditions with highest prevalence with percentage rate of 14.1, 11.6 and 10.5 respectively.

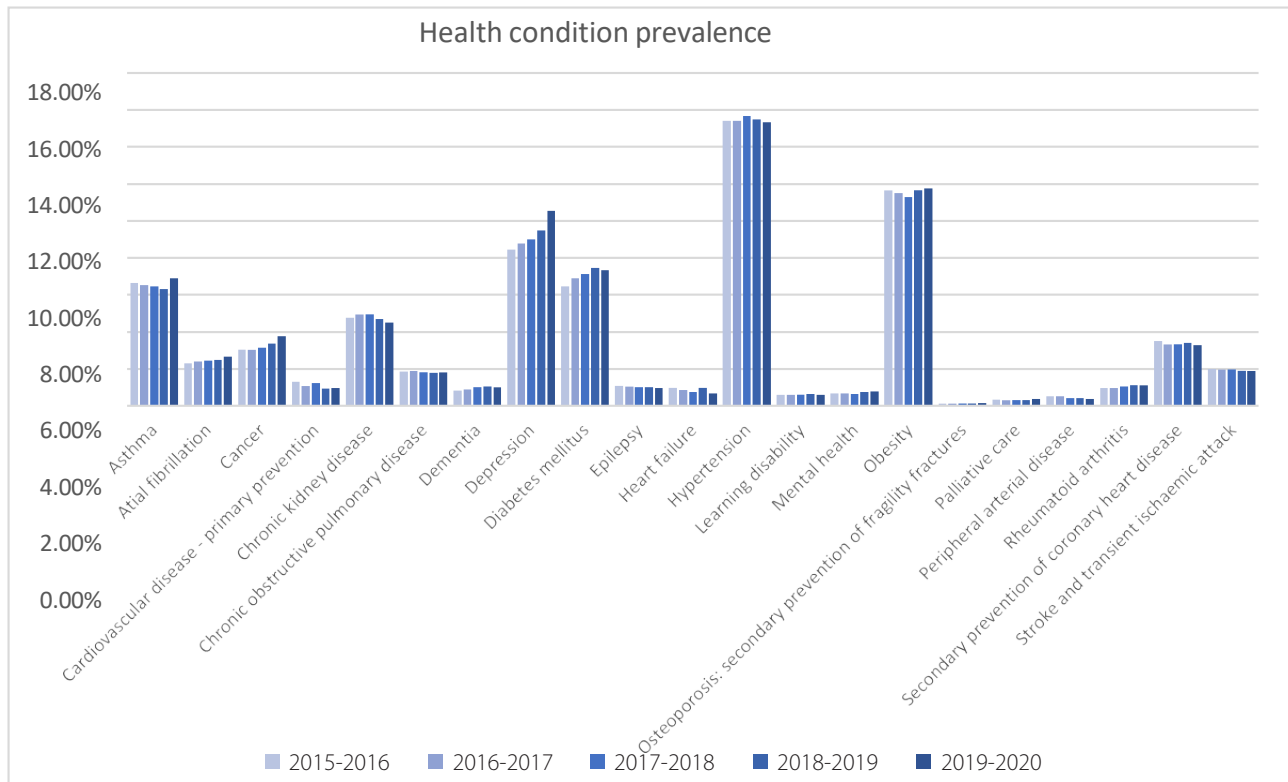


Figure 9: Attleborough Surgery Health Condition Prevalence (Source: NHS Digital)

Health Profile - Local Health Statistics

Behavioural Risk Factors and Child Health

The World Health Organisation (WHO) highlights common modifiable risk factors for chronic diseases as unhealthy diet, physical inactivity and tobacco use. According to Attleborough surgery data (above), the most prevalent health conditions in adult population were hypertension, obesity, and diabetes. The roots of these are generally modifiable behavioural risk factors that begin from an early young age. Sedentary life-styles affect many adults increasingly, with limited opportunities to take recommended daily exercise, healthy diets. Smoking also has a strong social gradient and more than three times as many people in the lowest socio-economic group die prematurely compared to the highest socio-economic group (Age-standardised mortality rates in England, 2017).

The Norwich Institute of Healthy Ageing (NIHA) highlights that by optimising healthy behaviours such as weight management, nutrition, reduced alcohol consumption and drug misuse, more social interaction, sleep, physical activities as well as smoking cessation all improve physical and mental wellbeing. This produces more healthy life years within longer survival.

Local health behavioural risk factors and child health have a significant problem with smoking among teenagers (Tables 4 & 5) and Attleborough and its surrounding areas are in the worst quintile compared to national data according to Public Health England (PHE). Approximately 1 out of 10 teenagers is a regular smoker and this percentage increases above 12% when occasional smokers are included.

Attleborough and nearby areas present significantly better or the same average as the rest of England in terms of being overweight and obese children between 4 and 11 years old. 12.5% of children between 4-5 years old are obese and 31.25% are overweight in south Attleborough area. The situation appears better in the north Attleborough area in terms of children between 4-5 years old being obese at 6.38%.

Table 4: Local Health Behavioural Risk Factors and Child Health (Source: NHS Digital, National Child Measurements Programme)

	Attleborough Burgh & Haverscroft	Attleborough Queens & Besthorpe	Age Group (in Years)	Data Collection Year
Smoking prevalence at age 15 - regular smokers (modelled estimates)	9.66%	9.05%	15	2014
Smoking prevalence at age 15 - regular or occasional smokers (modelled estimates)	13.18%	12.38%	15	2014
Reception: Prevalence of obesity (including severe obesity), 3-years data combined	12.50%	6.38%	4-5	2017/18 - 19/20
Reception: Prevalence of overweight (including obesity), 3-years data combined	31.25%	21.28%	4-5	2017/18 - 19/20
Year 6: Prevalence of obesity (including severe obesity), 3-years data combined	10.34%	13.33%	10-11	2017/18 - 19/20
Year 6: Prevalence of overweight (including obesity), 3-years data combined	27.59%	24.44%	10-11	2017/18 - 19/20

Table 5: Attleborough Health Behavioural Risk Factors and Child Health (Source: NHS Digital, National Child Measurements Programme)

	Attleborough Burgh & Haverscroft	Attleborough Queens & Besthorpe	Age Group (in Years)	Data Collection Year
Smoking prevalence at age 15 - regular smokers (modelled estimates)	9.66%	9.05%	15	2014
Smoking prevalence at age 15 - regular or occasional smokers (modelled estimates)	13.18%	12.38%	15	2014
Reception: Prevalence of obesity (including severe obesity), 3-years data combined	12.50%	6.38%	4-5	2017/18 - 19/20
Reception: Prevalence of overweight (including obesity), 3-years data combined	31.25%	21.28%	4-5	2017/18 - 19/20
Year 6: Prevalence of obesity (including severe obesity), 3-years data combined	10.34%	13.33%	10-11	2017/18 - 19/20
Year 6: Prevalence of overweight (including obesity), 3-years data combined	27.59%	24.44%	10-11	2017/18 - 19/20

Life Expectancy and Causes of Death

Between 2015-2019, life expectancy in Attleborough and Norfolk is consistent with the average life expectancy in England. Death from 'all causes' for all ages using standardised mortality ratio (SMR) in the north Attleborough area is in the worst 95% across England, while death from respiratory diseases for all ages in the same area was better than 95% across England.

In Attleborough, deaths from all cancer, circulatory disease, coronary heart disease, stroke and respiratory disease for all ages were similar when compared with England. Deaths considered preventable from 'all causes' for ages under 75 years was equally similar compared to England. It would not appear increased rates of morbidity are affecting life-expectancy any differently in Attleborough than in the UK.

Table 6: Attleborough Life Expectancy and Causes of Death

Indicator (Period 2015 - 2019)	England	Norfolk	Attleborough	
			Burgh & Haverscroft	Queens & Besthorpe
Life Expectancy				
Life expectancy at birth, (upper age band 90+) (Male)	79.7	80.1	81.9	78.9
Life expectancy at birth, (upper age band 90+) (Female)	83.2	83.9	83.3	82.3
Mortality				
Deaths from all causes, all ages, SMR	100	95.2	95.1	113.6
Deaths from all causes, under 75 years, SMR	100	92.3	92	99.8
Deaths from all cancer, all ages, SMR	100	95.4	117	120.2
Deaths from all cancer, under 75 years, SMR	100	94.9	131.4	113.7
Deaths from circulatory disease, all ages, SMR	100	97.2	95.2	106.7
Deaths from circulatory disease, under 75 years, SMR	100	89.7	87.9	80.1
Deaths from coronary heart disease, all ages, SMR	100	95.6	81.1	123
Deaths from stroke, all ages, SMR	100	100.1	115.5	114.2
Deaths from respiratory diseases, all ages, SMR	100	88.8	78.9	62.0
Deaths from causes considered preventable, under 75 years, SMR	100	91.1	80.2	100.3

Diseases and Poor Health

Using standardised admission ratio (SAR), the incidence of all cancers including breast, colorectal, lung and prostate cancer in Attleborough between the period of 2014 – 2018 was similar when compared to the rest of England. The incidence for emergency hospital admission for coronary heart disease, chronic obstructive pulmonary disease and all causes was better than 95% while emergency admission for stroke was similar compared to England between 2015-2020. There were significantly less emergency hospital admissions for myocardial infarction from the south Attleborough region, while admission for hip fracture for 65 years and above for the north Attleborough region is within the worst 95% across England. This is unexplained.

Table 7: Emergency Hospital Admissions

Indicator	Period	England	Norfolk	Attleborough	
				Burgh & Haverscroft	Queens & Besthorpe
Emergency hospital admissions for all causes, all ages, SAR	2015/16 - 19/20	100	89.8	79.1	83.3
Emergency hospital admissions for coronary heart disease, SAR	2015/16 - 19/20	100	94	45.3	64.1
Emergency hospital admissions for stroke, SAR	2015/16 - 19/20	100	109	99.6	99.6
Emergency hospital admissions for Myocardial Infarction (heart attack), SAR	2015/16 - 19/20	100	107.8	51.6	95.8
Emergency hospital admissions for Chronic Obstructive Pulmonary Disease (COPD), SAR	2015/16 - 19/20	100	78.2	47.2	76.8
Emergency hospital admissions for hip fracture in persons 65 years and over, SAR	2015/16 - 19/20	100	98.8	80.6	149.2
Incidence of all cancers, SAR	2014 - 18	100	99	102.2	100.9
Incidence of breast cancer, standardised incidence ratio	2014 - 18	100	100.6	101.6	103.8
Incidence of colorectal cancer, standardised incidence ratio	2014 - 18	100	98.9	102.7	91.6
Incidence of lung cancer, standardised incidence ratio	2014 - 18	100	86.8	102.5	109.4
Incidence of prostate cancer, standardised incidence ratio	2014 - 18	100	107.9	76.1	72

Health Services

Current Health Services Available

Attleborough Surgeries: as of July 2021, the GP Attleborough surgeries have 18,525 registered patients with a total of 9,312 male and 9,213 female patients. Life-expectancy is slightly better than for England as a whole, being 80.0 and 83.3 for males and females respectively compared to 79.5 and 83.1 across England (2013-2017). The patient age distribution in Attleborough is consistent with the distribution across Norfolk.

Compared to England, Attleborough has a higher proportion of registered patients between ages 50- 90+ and significantly lower proportion of patients between ages 20-49 both for male and female (Figure 10).



Figure 10: Attleborough Population Age Profile Population (Source: NHS Digital, Patients Registered at a GP Practice)

The estimated 2019 population (12,448) for Attleborough is significantly lower than the number of patients on the GP register. This could imply that the population is growing faster than estimated and that a significant proportion of people from neighbouring towns are registered with the surgery. This is reflected (Figure 10) below, the orange outline on the map represents the catchment area submitted by the practice and the purple outlines shows registered patients' location. The map seems to reflect that it has patients registered from outside the official catchment area. This may be for reasons of patient preference, family custom and habit etc. but it is unclear.

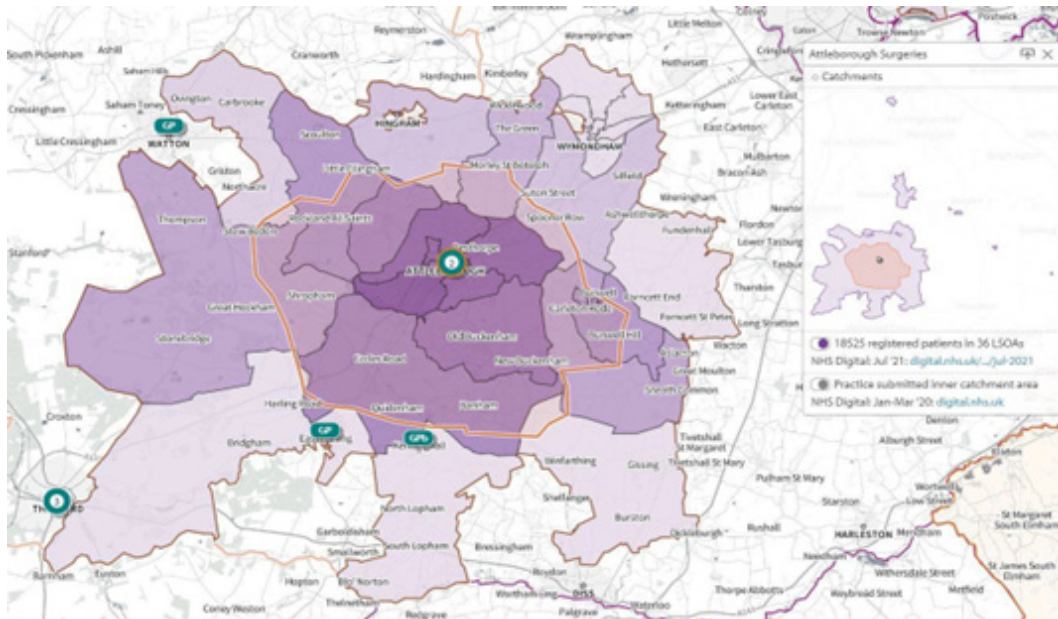


Figure 11: Areas Covered by Attleborough Surgeries (Source: ShapeAtlas.net)

The **Attleborough Health Clinic** is a part of Norfolk Community Health & Care NHS Trust offering services (District nurses, Podiatry/Chiropody, Physiotherapy, Dental, Dietetics, Midwives, Leg-ulcer and Continence clinics) to all groups, based on referral from GPs and other health professionals. The clinic also provides home visits within the community. The clinic whilst based in Attleborough also serves neighbouring towns as well. Conversely, at present pregnant women must still travel to Wymondham for antenatal care. (NB. Further information is being sought but was unavailable at the time of writing this report). Other health services include two Mental health hospitals, residential care homes, a nursing home, dental practices and pharmacies as presented in Table 8.

Table 8: Other Health Services

Health Service	Name	Admission Info	Capacity
Mental Health Hospitals	Lombard House Priory Hospital Norwich	Male Only Ages 60+	6 Beds 38 Service Users
Residential Care Homes	St Edmunds Fairland House Oak Trees The Laurels Care Home 8 Acres The Willows St Elmo's	Ages 65+ Ages 50+ Adults Ages 65+ Ages <65 Ages <65 Ages <65	40 Service Users 34 Service Users 4 Service Users 52 Service Users 18 Service Users 19 Service Users 8 Service Users
Nursing Homes	Brooklyn House Nursing Home	Ages 60+	38 Service Users
Dental Practice	Zandielle Dental Practice Church Street Dental Practice Rookwood Dental Practice	All Ages	
Homecare Agencies	Personal and Community Support Services Personal Assistant Services South Riseup Healthcare Ltd Pride Home Care		
Pharmacy	Lloyds Pharmacy (2)	All Ages	

Health Care Capacity

Based on information from Shape Atlas, there are 8 local authorities under Norfolk and Waveney Health and Care Partnership (viz. Breckland, Broadland, Great Yarmouth, King’s Lynn and West Norfolk, North Norfolk, Norwich, South Norfolk and Waveney). The details show 22 GP practices within the Breckland local authority and 6 of these are GP branch surgeries.

The health services in Attleborough currently cover the health needs of the Attleborough area population but with some measurable strain consistent with the rest of England. According to the British Medical Association, the average number of full-time equivalent (FTE) general practitioners (GPs) per 1,000 patients is 0.46, whilst Attleborough’s GP FTE falls slightly below average at approximately 0.42. Nationally there is 1 GP FTE: 2,174 patients, whilst in Attleborough there is an average of one full-time GP per 2,406 patients. The practice currently has approximately 7.7 FTE GPs.

Figure 12 below shows the average number of patients registered across England, Norfolk & Waveney CCG and Breckland. The national average is consistent with that of Breckland, while the average across Norfolk is slightly higher. 38% of practice across Breckland have a higher-than-average practice list size. The figure below shows that Attleborough has the largest registered patient list size within the Breckland local authority.

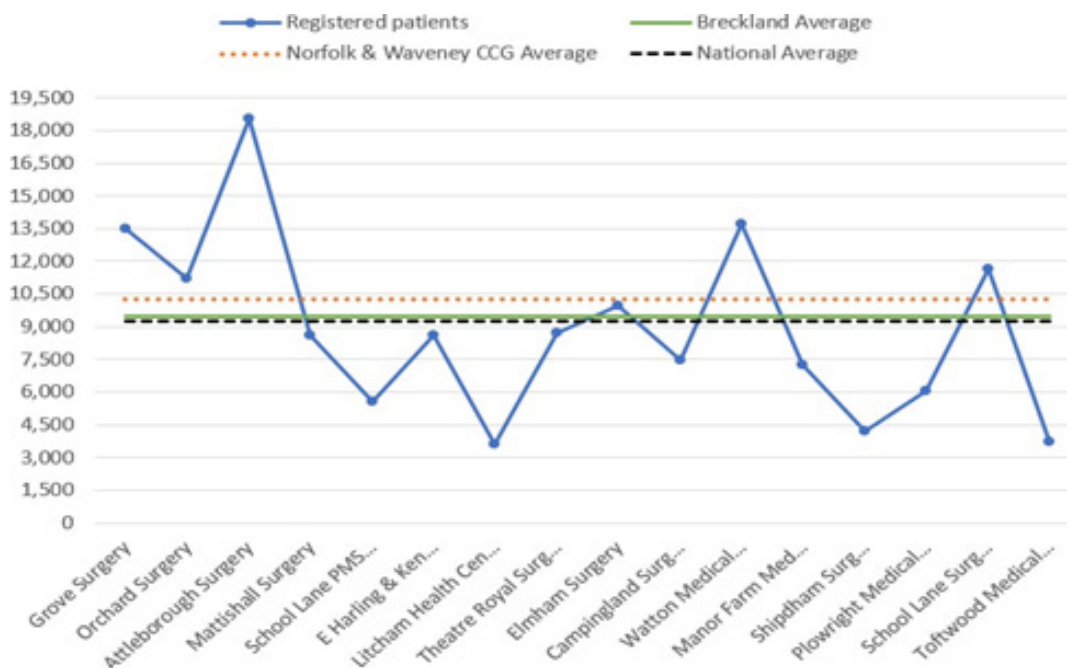


Figure 12: Practice List Sizes Comparison between Breckland, Norfolk and Waveney CCG and National Average List Size

As the population of Attleborough increases, the number of registered patients is expected to increase, and more GPs will be required. However, discussion with GP practice managers in Attleborough has revealed that currently the ongoing increase in population has not yet translated into a significant rise in demand for registration of patients. But nevertheless, changes to the GP’s practice work system considering the pandemic and an increase in digital access to the surgery etc. has brought on increased traffic and a much bigger patient contact.

Community and Informal Care

According to Attleborough’s surgery Quality Outcomes Framework (QOF) statistics, the most widely encountered health conditions are hypertension, obesity, diabetes, dementia, and asthma. These conditions increase the risks for other chronic diseases which all share common risk factors, or which are present simultaneously and hence create more complex cases. Community and informal care as well as social interaction groups can help shape and improve health related behaviours, physical and mental health. Following the NIHA healthy behaviours interrelationship (Figure 13). HEC has investigated the existence of community services that address these behaviours. These services can be recommended by GPs, act independently to attract participants to improve their health behaviours, or provide solutions to health-related problems when formal care is stretched or unavailable.



Figure 13: NIHA Optimising Healthy Behaviour for Well-being

The Attleborough surgery has recommendations on its website for where to get help for drugs and alcohol, weight and nutrition, smoking, social interaction amongst other services. Most of these services are available online or in neighbouring towns, however few services have local centres specifically in Attleborough.

Table 9: Attleborough Surgery Healthy Behaviour Services Recommendation

Service(s)	Surgery Recommended Online Resources	Local Centres in Attleborough	Centres Outside Attleborough
Drugs and Alcohol	Yes	No	Yes (Thetford, Norwich, Diss, Wymondham)
Weight and Nutrition	Yes	Yes	Yes (Wymondham, Diss)
Smoking	Yes	No	Yes (National)
Exercise	-	Yes	-
Sleep	-	-	-
Social	Yes	Yes	Yes

Additional informal community services include:

Mental Health Support	Physical Activity	Social Groups	Others
1. Tracy Turner Limited (Occupational Health and Wellbeing Services)	1. Attleborough Sports Hall/Leisure Center 2. Attleborough Amateur Boxing Club 3. Athletics Group 4. Junior Football Club Parks	1. Meet Up Mondays 2. Breckland S.O.D.A. (Society for Disabled Artists) 3. Attleborough Women's Institute 4. Civil Service Retirement Fellowship 5. Attleborough Writers Group	1. Lighthouse Church community groups 2. St Mary's Church community groups 3. Attleborough Coronavirus Helpline 4. Attleborough Heritage Group 5. Attleborough & District Horticultural Society

Research has shown that both qualitative and quantitative social relationships affect mental health, health behaviour, physical health, and mortality risks (Umberson et al., 2010). Social isolation has been associated with higher rates of mortality and morbidity has been linked to health problems such as depression, anxiety, high blood pressure, obesity, and dementia amongst others. Social isolation and loneliness are often discussed together and often used interchangeably but can mean different things (Davidson et al., 2015). Strategies known to improve social isolation include engaging in physical activity, group activities, volunteering, peer support groups etc. To effectively address and foster social relationships within Attleborough, a variety of informal community services should be available for both young and old. We shall look at these further in our next report.

The figure below shows the relative risk of loneliness in Attleborough. The risk of loneliness has been generated based on 2011 census figures for factors such as: marital status; self-reported health status; age; and household size. These factors are said to predict around 20% of the loneliness observed among older people aged 65 and over as represented in the English Longitudinal Study of Ageing (ELSA).

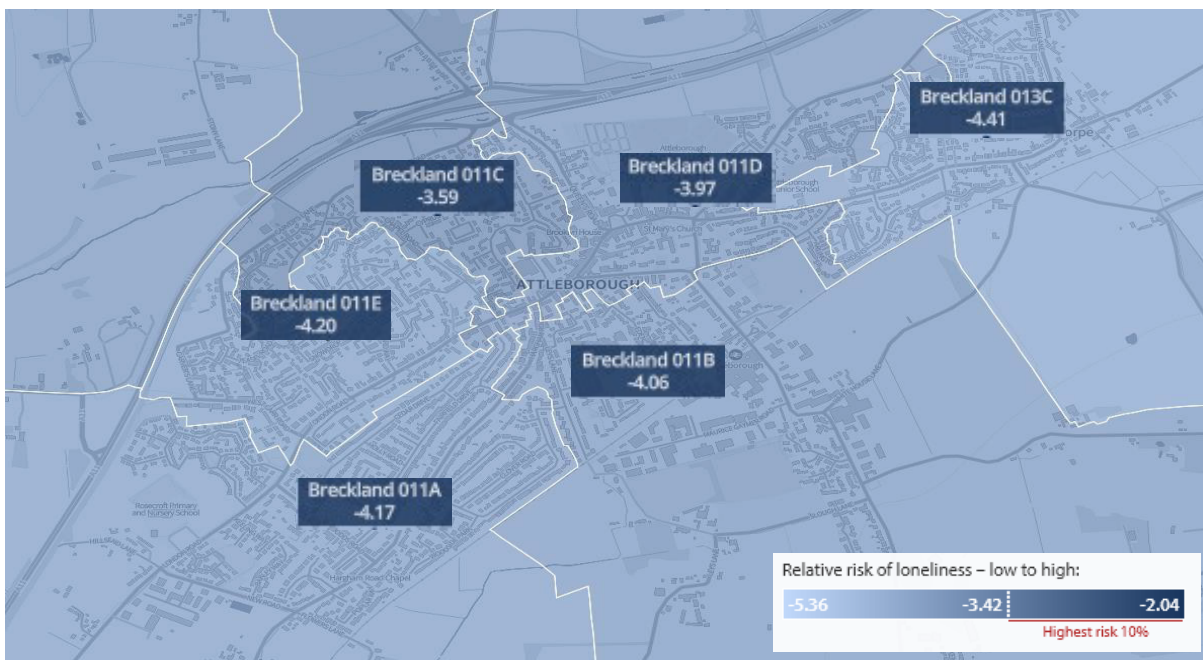


Figure 14: Relative Risk of Loneliness (Source: ShapeAtlas.net)

Attleborough is in the midpoint of the loneliness risk scale with north Attleborough areas (Breckland 011C and 011D) to be in the highest 10% of risk areas. It would seem that loneliness needs to be watched presently for possible changes.

Sample Scenario

ShapeAtlas.net (Figure 15) data suggest that Attleborough is a market town requiring no more than 20 min of walking around key community landmarks like Primary/ Secondary care units, Pharmacies and schools.

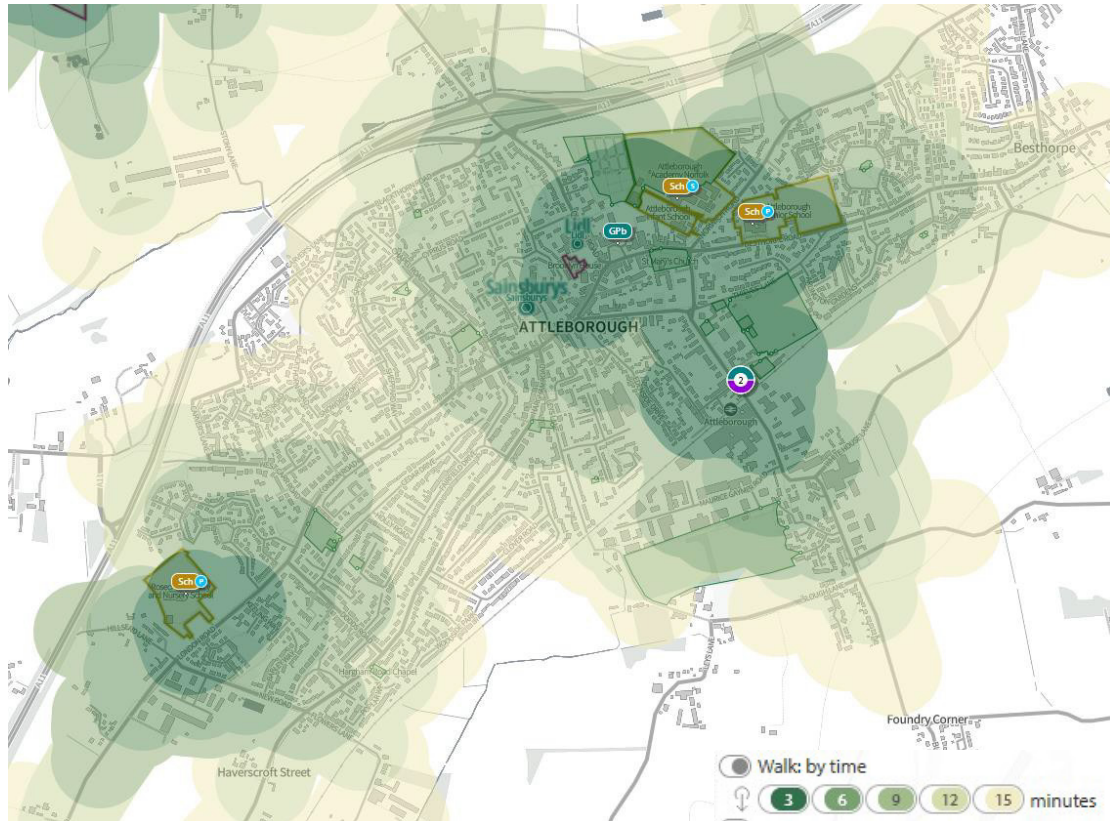


Figure 15: Walking Distance Around Primary / Secondary Care Units, Pharmacies and Education Units (Source: ShapeAtlas.net)

Exploring the effects of physical activity on health, we created a hypothetical scenario assuming 60% of Attleborough’s population within the ages of 46-60 exercised (walking) 5 days a week for a duration of 15, 30, 45, and 60 minutes. We also factored in a hypothetical 70% of completion rate by participants over a 5-year period with an annual drop-off rate of 6.7%.

Table 10: Physical activity Sample Scenario Using MOVES Mode (HEC 2015)

Time Duration	15 Minutes		30 Minutes		45 Minutes		60 Minutes	
	1 Year	5 Years	1 Year	5 Years	1 Year	5 Years	1 Year	5 Years
Disease (Cases Avoided)	2	13	4	26	6	36	7	41
Type 2 Diabetes	0	1	0	2	1	3	1	4
Coronary Heart Disease	0	1	0	3	0	4	1	5
Cerebrovascular Disease (Stroke)	0	0	0	1	0	1	0	1
Breast Cancer	0	0	0	0	0	0	0	1
Colorectal Cancer	0	0	0	0	0	1	0	0
Dementia	0	2	1	5	1	7	1	9
Depression	0	2	1	3	1	5	1	5
Hip Fracture	1	7	2	12	3	15	3	16

Table 10 shows the number of diseases that could be avoided due to physical activity increases given the scenario above. The result has been generated using the MOVES model developed by UEA. MOVES is a fully tested and validated statistical model for evaluating the economic benefits of programs specifically identified to improve physical activity in community settings. The model also calculated quality of life gained by reason of the physical activity as well as associated cost savings to the health care system. Further modelling could be carried out on various local infrastructures but PLEASE NOTE was included here for illustration purposes of the potential health gains generally.

Discussion

Our approach to the health needs of the population has been to try and strike a balance between what we see as demands on formal health services and also the potential for keeping people healthy and giving them maximum opportunities for improving their current health status. The aim should be for healthy aging to start at all ages. The population of Attleborough is set to expand which is exciting and could mean healthier, younger adults, more mobile individuals and younger families. But it could bring with it the potential for exacerbating social deprivation and worsen inequalities without consideration of location of housing, clusters of communities, build-types, infrastructure, amenities, balancing work, lifestyle and physical activity opportunities. The population will also include those who are currently residents and who may probably age in place. This group may also have far fewer opportunities as new high-tech companies move in and they could feel crowded out of local services, including health. Opportunities for retraining and repurposing of old or redundant skills, social connectivity and transfer of experience will also become necessary.

According to WHO, healthy aging is about creating the environments and opportunities that enable people to be and do what they value throughout their lives. Health generally is defined by the WHO as 'the complete state of physical, mental well-being and not merely the absence of disease'. This should apply to all ages in Attleborough and there needs to be opportunities for staying physically, mentally and socially fit into mid-life an old age if desired.

Any increase in local and community services should be in line with one of the goals of an 'integrated health care system' (ICS) which is there to foster closer working relationship with local communities and key partners in shaping services, improving population health and promoting wellbeing. This will consequently increase the availability options for social prescribing etc.

Healthy aging does not always imply the absence of disease unfortunately but rather the earliest identification and most appropriate management of health conditions, in order to deal with them as early and effectively as possible and at the least cost. However, 'healthy aging' means that keeping people healthy is not solely the job of a healthcare system. In fact, with the help of other sectors it can be a very cost-effective way of managing these demands as well as improving individuals' healthy life years. There is a need for action across multiple sectors to enable older people to remain engaged independent citizens and also to act as resources for their families, communities and economies if they so wish.

Concluding Remarks

The health service needs are currently being met with some strain on the local practice and although Attleborough is not significantly worse off than the rest of Norfolk, nor indeed other parts of England. But it is similarly at risk from under-achieving on its health status and a lack of vibrancy in its lifestyle options. The proposed housing expansion could bring about a huge opportunities for infrastructure and population improvement but it also could bring strains on health and social care resources. Its surgeries and the health centre etc are old and already catering for above average caseloads, including to surrounding areas beyond its boundaries.

In our next report we will look further at these trends and develop forecasts of demand and local need. We will also look at its needs regarding locally-based community and social services, voluntary groups and other infrastructure e.g. transport and amenities. This could promote better health and healthy ageing through more active physical and mental engagement in the community, better social and economic connectivity, improved environment, less pollution and a more sustainable quality of life.

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