## Appendix 1 – Clustering of risk factors

As part of the current set of public health commissioned services, behaviours and issues that can affect health are tackled separately. If an individual smokes and is overweight and wants support to change, then at present he or she has to use two different services provided by two different organisations. If a person smokes, is overweight and wants to drink less alcohol, then she or he has to contact three organisations. Furthermore this model involves more than one organisation maintaining outreach into settings where these potential service users can be reached. Almost two-thirds of the adult population of Nottinghamshire are overweight, 1 in 7 at any one time experience common mental ill health disorders such as anxiety or depression and there are almost 98,000 adults who smoke in the county.

We know a lot about different populations within Nottinghamshire and how (considered separately) rates of smoking, obesity, excessive alcohol use and common mental health vary for these groups. In terms of improving health, some important groups of people in Nottinghamshire are those who have several risk factors. We know a lot less about how these 'clusters' of poor health behaviours are spread across the county. To better understand this issue, Public Health has utilised the Experian Mosaic® dataset, which gathers households and postcodes into similar groups, based on anonymised census, national survey, and other commercial data sets. Some of the questions used to establish these groups include lifestyle behaviours; typically Mosaic suggests that individuals in the same group are more or less likely to smoke, be overweight or feel anxious than people in other groups. This has allowed us to identify population groups where more than one lifestyle risks are likely to cluster. Individuals living in these groups may well need targeted, direct support to tackle several issues. On the other hand, groups where only one lifestyle factor might be an issue might need a lower level of input. Appropriate targeting of resources will lead not only to more efficient and cost-effective services, but will also deliver better health gains for Nottinghamshire residents. There are an estimated 39,500 people across the county who have several of these risk factors