



Farming Communities in Devon: A Health Needs Assessment



Author: Tina Henry, Head of Health Improvement (South and West)

Version: Final

Date: June 2012

Approved: July 2012

1. Executive Summary

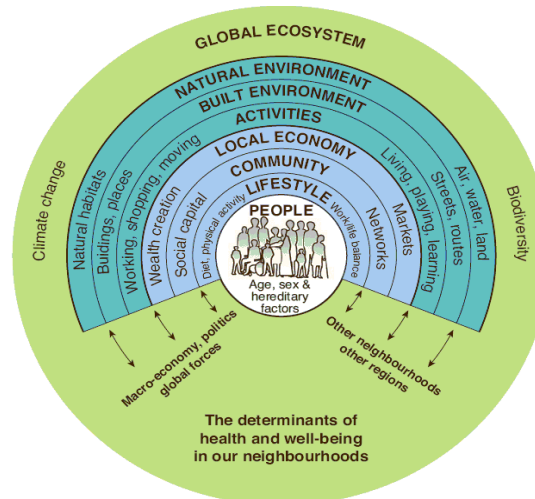
- 1.1 Agriculture is a vital part of Devon's economy and the wider community and farmland is part of our natural landscape and heritage. It provides a beautiful diverse landscape and local food produce. The farming landscape provides opportunities for physical activity and access to the outdoor environment with the emotional health and wellbeing benefits.
- 1.2 This report has been produced in response to comments from the public and professionals made during consultation on the Devon Rural Health and Wellbeing Strategy published in 2011. The rationale for the study was the lack of local evidence relating to the health needs of farmers and farming communities.
- 1.3 The health needs assessment has identified a lack of intelligence about Devon's farming communities. Accident statistics only relate to accidents which are reported to the Health and Safety Executive, hospital and other statistics are not recorded by occupation and locally there was no statistically significant variation in urban/rural accident rates and types. However, the risk of accidents, ill-health and zoonotic infections is high and agriculture remains a high risk occupation for suicide. A mix of quantitative measures and qualitative feedback from stakeholders (including support organisations) were used to inform the assessment.
- 1.4 The recommendations seek to raise awareness with providers and commissioners of a range of services to the unique profile of Devon's farming communities and the need to consider the culture and values of the communities when implementing preventative, early intervention and treatment and support services.

2. Introduction

- 2.1 The National Institute for Health and Clinical Excellence describes a health needs assessment as a "systematic method for reviewing the health needs of a particular population, leading to agreed priorities and resource allocation, which will lead to improved health and reduced health inequalities". (NICE 2005).
- 2.2 The Devon Rural Health Strategy (NHS Devon 2010) included a recommendation to carry out a health needs assessment of farming communities in Devon to identify unmet need and address inequalities in the provision of health care in this community. This report will focus on the health needs of the farming communities of Devon.
- 2.3 Farming communities are defined as those individuals and families involved in farming or farming related occupations through direct employment or family ties. The health needs assessment has not considered the specific health needs of migrant workers as these are subject to a separate health needs assessment (Tolley 2008).
- 2.4 The assessment of need considered Bradshaw's Taxonomy of Need (1974) and includes exploration of normative need, felt need, expressed need and comparative needs which have all been explored in the context of farming communities.(Bradshaw 1974).

- 2.5 Consideration was given to the wider determinants of health of importance to farming communities including housing. Figure 1 below shows a health map considering the person at the centre and the wider impacts that affect health and wellbeing.

Figure 1: A Health Map © Barton and Grant 2010 (based on a public health concept by Whitehead and Dahlgren.1991)



3. Background

- 3.1 Devon is one of the largest rural counties in England which provides challenges for health and social care. Improving access to healthcare for farming communities is a challenge in rural areas. It is important to understand the health need and the local context so services and interventions can be designed and delivered to meet health need. Some farms are isolated and inaccessible: there is research showing the deleterious impact of distance decay on the health outcomes of asthma, diabetic retinopathy, cancer, and myocardial infarction patients (Burnett 2001). Coupled with the health seeking behaviour of farmers, this raises many issues for service providers.
- 3.2 Healthy Lives Healthy People reinforces the importance of reducing health inequalities and the public health outcomes framework for England 2013-16 includes two overarching outcomes:
- increased healthy life expectancy taking account of the health quality as well as the length of life
 - reduced differences in life expectancy and healthy life expectancy between communities (through greater improvement in more disadvantaged communities)
- 3.3 Both are relevant in this context for the quality of life for older working farmers and potential for health inequalities in vulnerable populations. Marmot states that material deprivation, both individual and area, is associated with higher incidences of more aggressive diseases such as cancer as well as later presentation (Marmot 2010, Acheson 1998). Lederman, Ben-Shalom, Brennan and M Somerset (2004) suggest that, although the main determinant

of differences in disease mortality by area deprivation is risk of disease incidence, there may be an additional component due to socio-cultural differences in disease presentation and/or early management.

Local Strategies

- 3.4 The Way Ahead (NHS Devon's and Devon County Council's joint vision and plans for health and social care 2008-2013) states the importance of paying more attention to the impact of the rural nature of Devon. This is important to ensure access to health and social care but also to address health inequalities. The actions outlined in this needs assessment have significant and positive implications for farming communities in Devon.
- 3.5 The Devon Rural Health and Wellbeing Strategy 2010-13 raises a number of issues relating to farmers and farming communities, including: low wages and self-employment; isolation from mainstream services; access to health and social care services; high-risk group for musculoskeletal problems; cardiovascular disease and mental health conditions; the high incidence of suicide in rural Devon; age-related factors relating to succession and retirement; demographic changes in rural communities fracturing social support; regulation and inspection; diseases in cattle; late presentation with individuals from farming families with learning disabilities often present late to social care services (eg in their 50's when their parents die); problems associated with tied accommodation (ie accommodation that is provided as part of a person's job), in particular, job dismissal or retirement usually results in the farmer being evicted from their home.

Methodology

- 3.6 The health needs assessment was undertaken using a desk top approach. Direct contact with farming communities was considered but not included as experience gained from early enquiries highlighted a need to build trust with farming communities and a decision was made not to make a direct approach to farming communities about health needs. A process of interviews with individuals who work closely with farming communities was undertaken to test the findings of the evidence, early findings of the rural health strategy and findings as they emerged through discussions. Once themes were exhausted the assessment was concluded.

Literature Review

- 3.7 Due to the dispersed nature of Devon farming communities and a paucity of evidence relating to local health needs, a literature review was undertaken to identify studies of a similar nature to gather evidence relating to health need and evidence of effective interventions. Appendix 1 provides a summary of the literature review approach. The following sections identify important relevant research.
- 3.8 The Centre for Rural Research at the University of Exeter has undertaken a series of research relating to the changing world of farming and has an interest in succession and retirement planning on farms. The cultural values of the farming communities are important when planning services. A study of *Wider Social Impacts of Changes in the Structure of Agricultural Businesses* commissioned by Defra highlighted economic uncertainty, disease crises and increased paperwork having an impact on the health and wellbeing of farmers who are working longer hours and suffering greater isolation through working

alone. They found a growing divergence between those who are diversifying their income ('active adaptors') and those who are failing to adapt.

- 3.9 The Rural Stress Review (Lobley 2004) raised the issue that whilst farmers can experience high levels of stress, it remains important not to confuse 'rural' with 'farming'. This is particularly important in a Devon context with the diversity of agri-businesses and other rural businesses and communities. However, there are also important differences for farmers such as vagaries of the weather and an emotional attachment to key business assets (the land) which may have been carefully protected and passed down through generations. Those who are most psychologically distressed will arguably be the least well-placed to take advantage of new policy incentives and re-build or re-align their businesses. A more enduring change relates to the position of farmers in society. Castigated for their role in the 'theft of the countryside' in the 1970s and 1980s, farmers have also had to adjust to changing societal expectations and demographic changes in their own communities. The result is that farmers can feel that they are not understood, that they are undervalued or even unwanted. The evidence reviewed here suggests that these changes have contributed to farmers and their families being vulnerable to stress.
- 3.10 Syson-Nibbs (2006) reported findings of an agricultural community health needs assessment conducted as part of the 'Farm Out' health project (2001) which was a three year initiative in response to the economic decline in farming at that time. It was a participatory needs assessment and of particular interest was the comparative health survey at a local practice of agricultural families (n=248) and non-farming families (n=248). It concluded that the agricultural community has a poor health profile and one that is worse than that experienced by non-farmers. The study related to a hill farming population and concluded that this was the first study of its kind in the UK and recommended a larger wider epidemiological study of different farming groups.
- 3.11 The Farmers Health Project - *Improving Access to Healthcare* for farming communities in South Lakeland and North Lancashire was a project involving two nursing practitioners and support workers outreaching to farmers in an upland area of England. The project focussed on accidents, mental health and occupational health (Burnett 2001, Walsh 2000). The two year project sought to bridge the gap between health care need and service provision in farming communities which involved visiting auction marts, agricultural show, other gatherings and making farm visits. The research project reported significant unmet need which was demonstrated and addressed. The foot and mouth epidemic slowed progress of the project which reported success at targeting those most needing and under-using mainstream healthcare - men in the age-range 30-65.
- 3.12 There is a body of evidence and research relating to the mental health of farmers and the increased suicide risk. The Strategy for Action on Farmers Emotions (SAFE) suggests that until there is an increased understanding of farming life and culture the mental health needs of farmers will not be met (Hughes, Keady 1996). Gregoire (2002) supports the view that farmers are subject to a number of unique occupational stressors, many of which have been aggravated over recent years by changes in farming practice and by economic factors. Mental illness is poorly understood and stigmatised in farming communities despite the important link to suicide. Importantly, this affects health seeking behaviour which is also confounded by geographical isolation and inaccessibility of services in rural areas. The paper cites the

increased risk of suicide in farmers which is supported by a number of other studies (Boxer et al 1995, Hawton et al 1998 & 1999, Inskip et al 1996, Malmberg et al 1997). GPs need to be more aware of the suicide risk amongst male farmers who present with either chronic or episodic physical problems who are actually seeking psychological help.

- 3.13 Peck (2005) looked at lessons to be learnt from the foot and mouth crisis and identified that three systematic studies found elevated levels of psychological morbidity among farmers and rural workers. The study found most turned to family and friends (and veterinary surgeons) for support and relatively few approached health or social care services, mainly because they did not see their reactions as illness. This is a view supported by local interviews. The paper recommends mental health services take account of this and a preference for community support or anonymous support such as self-help materials or computer based treatment.
- 3.14 The Health Forum (2001) conducted a rapid health impact assessment of the foot and mouth outbreak in Devon and the most significant impacts identified related to mental health, social structure and community, services, economic, health and environmental health and lack of communication during the outbreak.
- 3.15 The Health and Safety Executive commissioned research on farmers, farm workers and work-related stress (2005): one of the areas of focus in the research was Devon. The report concluded that changes in farming have increased work-related stress in measurable ways from extrinsic dimensions of stress, such as price fluctuations, mounting paperwork demands, workload intensification and changes in agricultural regulation, which impacted on principal farmers. By contrast, family farm workers and labourers were affected by work load and lack of autonomy. Intrinsic characteristics, such as stock crisis, were a particular issue for farm women and stock workers. The report recommended that support services overcome the stigma attached to asking for help among farming communities and offer a range of responsive reactive services. Existing networks were deemed important.
- 3.16 A number of overseas studies in countries with large agricultural land use, including Canada and the United States, revealed similar issues relevant to a UK context. A systematic review of the effectiveness of farm safety interventions (DeRoo, Rautianen 2000) suggested that there is a need for more rigorous evaluation of farm safety interventions with an emphasis on improved study design and objective measurement of outcomes, such as behaviour change and injury incidence. The age of working farmers, when compared to the wider working population, is the subject of a number of studies and is reflected in the accident statistics produced by the Health and Safety Executive (HSE). Winter et al (2009) and Thelin et al (2010) raise the issue of farmers working after 'retirement' and the importance of considering this in interventions.
- 3.17 A study in Ireland, Hope et al (1999), on health and safety practices among farmers (n= 1938) revealed farmers and workers with less than 20 employees reported a significantly lower level of safety training. Male farmers had a particularly negative health profile with only 18% reporting regular dental checks, 28% practising skin protection and 29% taking regular exercise. Barriers to change included low perceived susceptibility and lack of time and resources. This view is reflected locally and lack of time was recounted by many stakeholders.

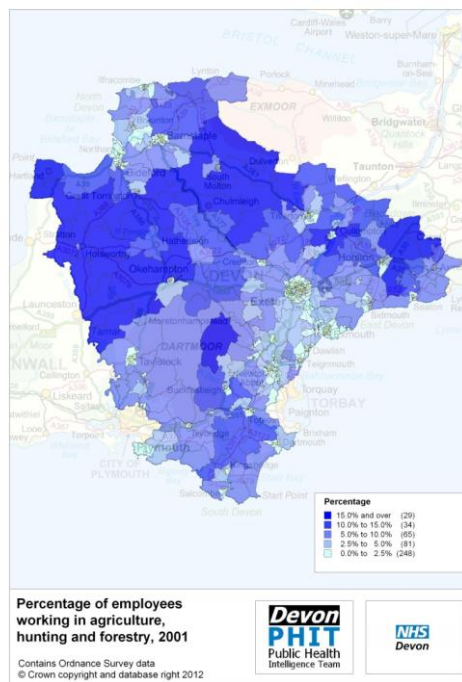
3.18 Unfortunately, to date, research has been ‘fractured’ between the different disciplines. Some social science research may suffer from a lack of medical rigour, while research from a medical perspective can be poorly informed in terms of understanding the nature of contemporary rural society, agricultural change and farm household behaviour (Lobley 2004). The studies support the view that the main issues affecting farming communities and farmers in particular are: mental health, suicide and occupational ill-health, and accidental injury within a context of a farming culture not wanting to contact health and social care services.

4. Demographics and Health Inequalities

4.1 Devon has a population of over 750,000. The economy of Devon has its own unique profile. The county has four times more agricultural activity than the national average and the area is characterised by many small businesses and many employees work on a part-time basis.

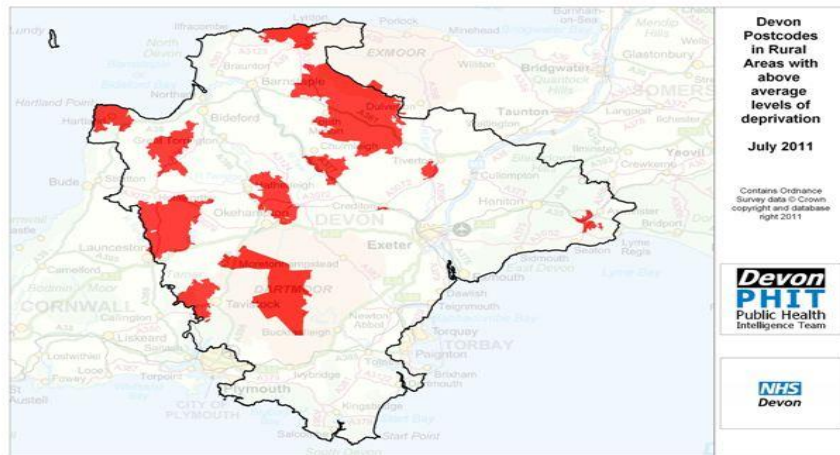
4.2 It is challenging to identify farming communities in Devon because agriculture is dispersed with tourism, second homes and small non-agricultural businesses. The census 2001 is now quite outdated and does not provide a reliable indication of farming areas. Figure 2 below shows the percentage of employees working in agriculture, forestry and fishing.

Figure 2: Percentage of workers in agriculture forestry and hunting in Devon – Census 2001



4.3 To consider relative deprivation of farming communities, the rural areas with above average deprivation have been mapped in Figure 3 below and show that many of the areas map over agricultural communities. Parts of Devon experience high levels of rural deprivation, when compared to England rural areas, but this varies across the county - it is particularly notable in northern Devon and parts of West Devon. Devon, Cornwall and Dorset are more rurally deprived, when compared to England and other South West Primary Care Trusts; they are notably agricultural areas.

Figure 3: Devon Map of Postcodes with high rural deprivation



4.4 The table and population pyramids in Figures 4 and 5 below show the population broken down by age and sex for the area. The age and gender of the population can have a significant impact on their health and social care needs. It demonstrates the small 20-39 working age population in villages and hamlets when compared to Devon and greater 45 and over. This will be an issue over the next decade and beyond of an increasing older population in rural areas.

Figure 4: Population Pyramid - Devon Villages versus overall Devon Population, 2011

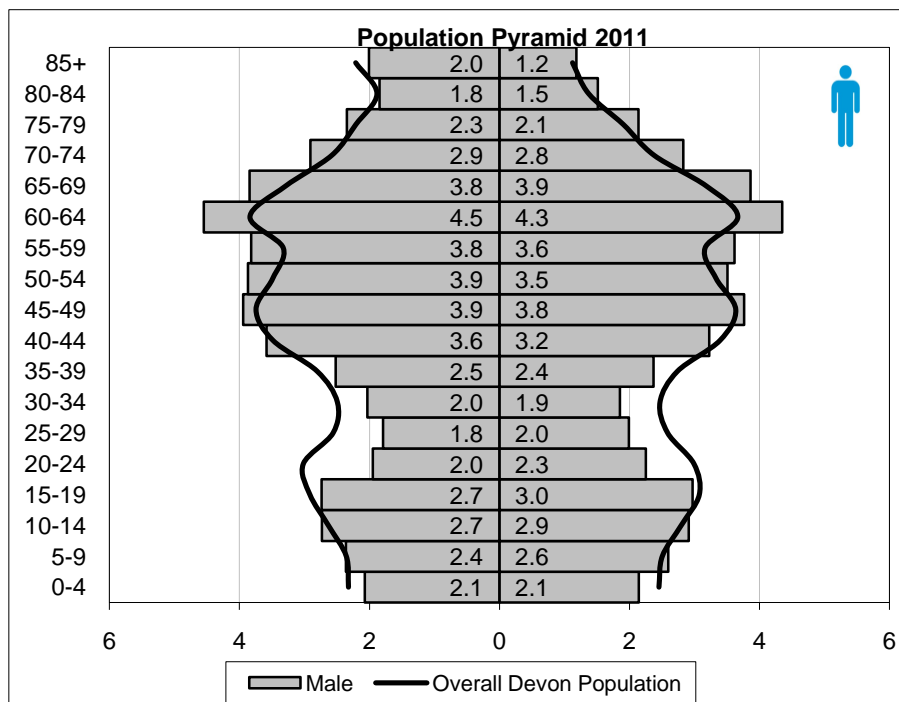
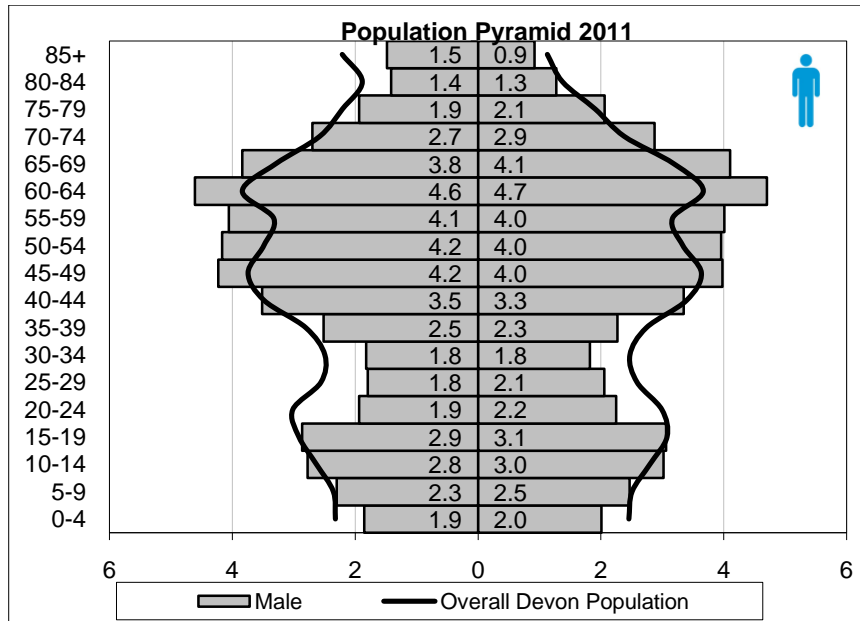


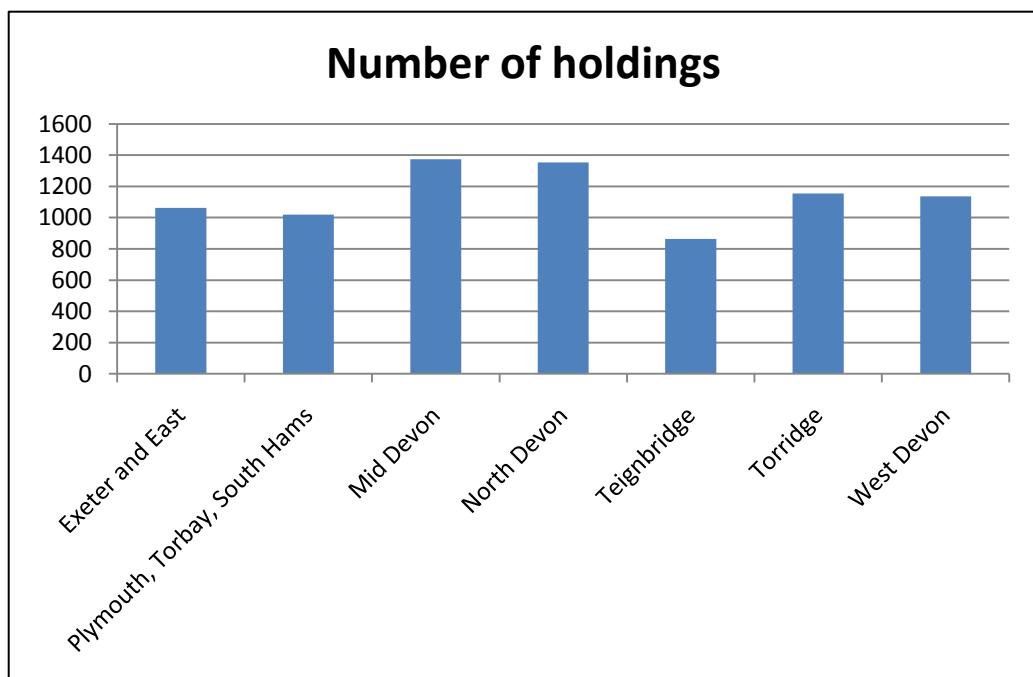
Figure 5: Population Pyramid - Devon Hamlets and Isolated Dwellings versus overall Devon Population, 2011



Employment

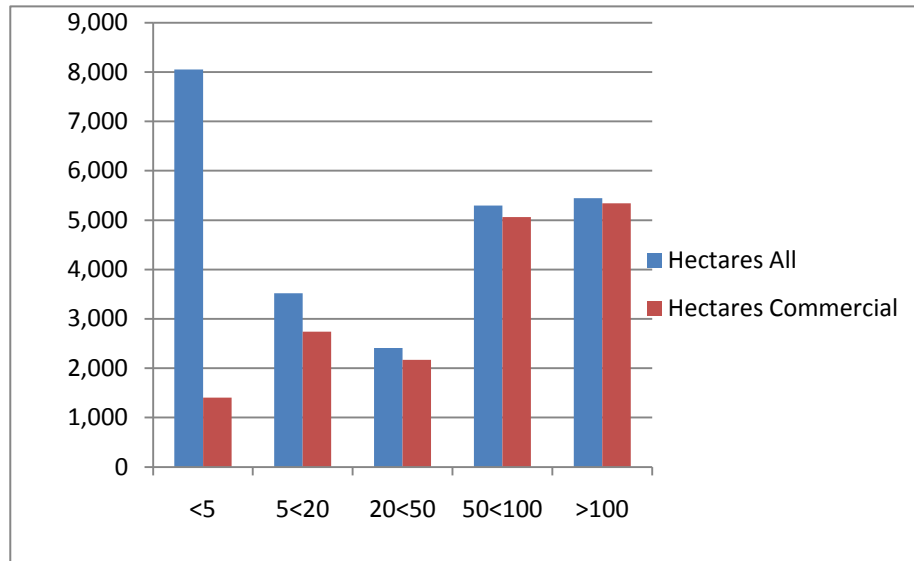
4.5 The number of holdings varies significantly by area. North Devon and Mid Devon have a larger number (Defra 2009) – see Figure 6 below. The type of holding also varies and 8000 are <5 hectares - see Figure 7 below. Not all holdings are commercial so there are a number of residents registering small scale non-commercial holdings. This has implications for the health and safety of those individuals and communities which may not access traditional farming support.

Figure 6: Map of the number of holdings by area in Devon



Source: DEFRA statistics Update 31/08/2011

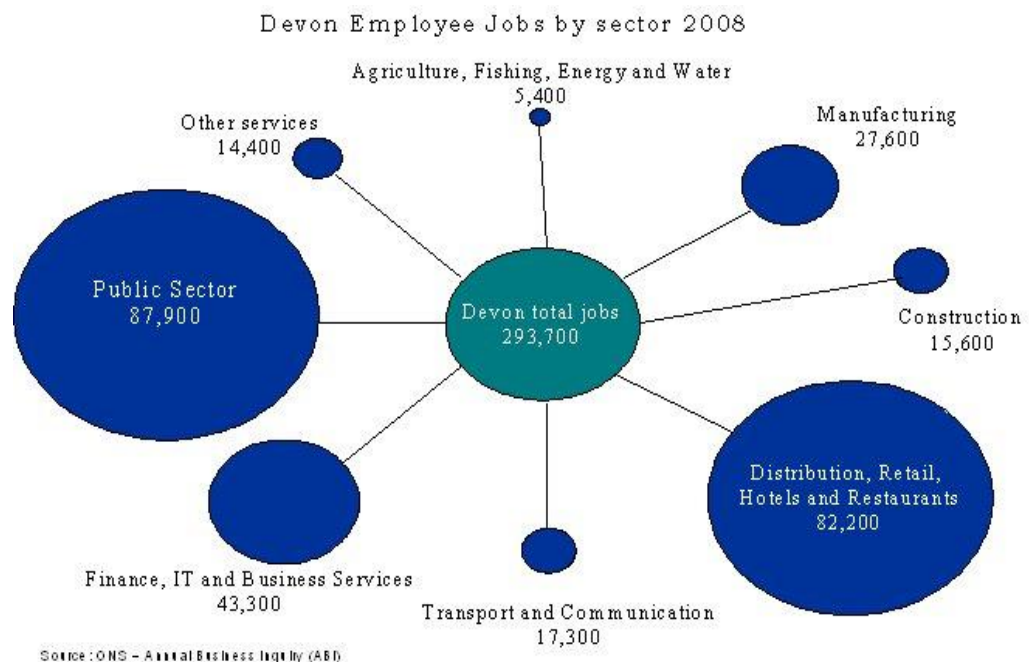
Figure 7: Size of commercial and non-commercial holdings in Devon



Source: DEFRA statistics Update 31/08/2011

4.6 The type of employment on holdings is predominantly farmers, partners, directors and spouses with almost equal full and part-time employment. There are few salaried managers, more male than female employees and slightly fewer casual employees. Defra statistics between 2007 and 2010 show a reducing workforce and reducing area of registered holdings. In 2010, 485,752 hectares were registered as holdings in Devon; 18,630 employees worked on commercial holdings and 23,623 on all holdings. The figure is significantly different to the Office of National Statistics (ONS) – see Figure 8 below - of Devon’s workforce suggesting an underestimate of employment in the sector in Devon.

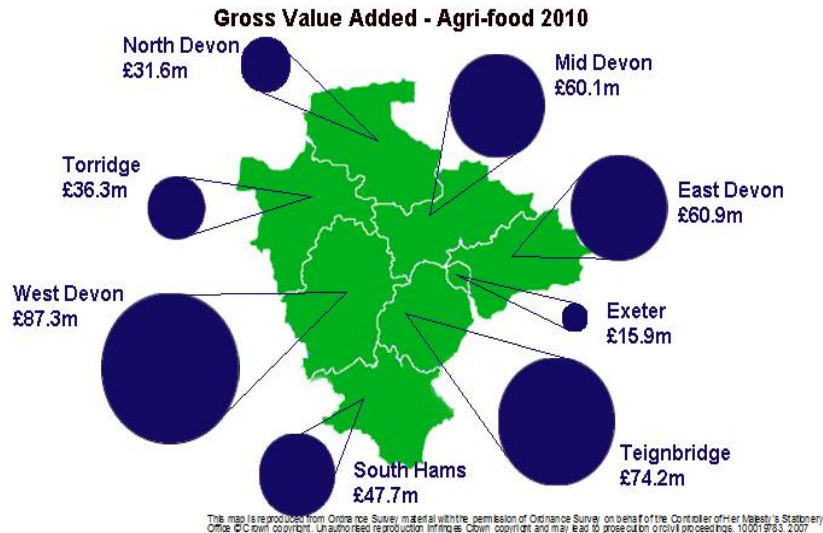
Figure 8: Devonomics: Devon Employees by Job Sector in Devon



Economy

- 4.7 Agriculture is important for Devon's economy and the agri-food industry adds significant value to the rural economy. Devonomics has mapped the added value to the economy (see Figure 9 below). This is significant in sparsely populated areas such as North and West Devon.

Figure 9: Devonomics: Gross Value Added from agri-food in Devon 2010



- 4.8 The Devon Strategic Partnership produced a Rural Health Action Plan (2007) which raised a number of issues for agriculture in Devon, including uncertainty of future incomes and predominance of dairy and cattle farms, creating barriers to change. It also raised new opportunities for energy crops and further diversification: this has further developed to include solar energy farms. There is a need for change, adjusting the crops to the unique Devon climate; the threat of Bovine Tuberculosis (TB) remains and the importance of agriculture for tourism and the natural environmental enhancements. Devon is uniquely placed to promote local food.
- 4.9 Devon County Council owns 75 holdings covering 3938.6 hectares (2012). A strategic review of the estate in 2010 provided endorsement of the importance of the estate to provide opportunities for new entrants to farming. This provides the only realistic option for many unable to purchase a farm and brings new skills to the sector. About three starter farms become available per annum in Devon. Housing, at the end of a tenancy, can cause issues in this sector as well as the wider sector. There are no succession rights for families in county-owned farms.
- 4.10 The farming communities are part of rural communities and cannot be considered in isolation; the sector provides significant economic benefit and provides income for the wider community. The community is subject to some of the same issues as the wider population; a growing older population and areas of rural deprivation.

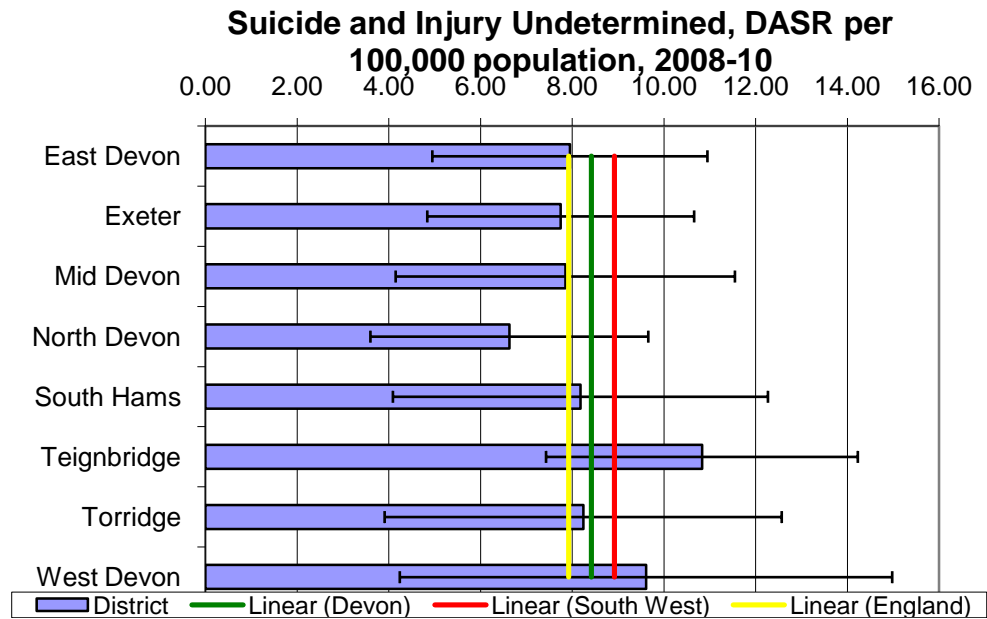
5. Prevalence, Epidemiology and the Burden of Disease and Ill-Health

- 5.1 The needs assessment has considered the health and wellbeing issues affecting farming communities in the context of disease prevalence and epidemiology, where known, with a focus on the priority issues of mental health and occupational ill-health and injuries. There is no information on the disease burden of farming communities so the national picture (where known) is used with a local context.

Suicide and Mental Health

- 5.2 The National Suicide Prevention Strategy for England (Department of Health 2002) identifies farmers and the agricultural industry as a high risk occupation and sets a target to reduce the number of suicides. The criteria for selecting high risk groups are: that the group has been shown to have a statistically increased risk of suicide; actual numbers of suicides in the group are known and evidence exists on which to base preventive measures, and there are ways of monitoring the impact of preventive measures. There has been a recent consultation on a Preventing Suicide in England strategy which is awaiting publication.
- 5.3 Action underway includes help lines are provided for farmers by the National Union of Farmers; the Rural Stress Information Network; the Farmers' Crisis Network; Rural Minds and the Samaritans. The National Institute of Mental Health Intelligence (NIMHE) will ask the Coroners' Review Group, as part of their consultation process, to consider routinely recording occupation to allow monitoring.
- 5.4 The Department of Health and NIMHE have supported the Rural Stress Action Plan, set up as part of the Prime Minister's Action Plan for Farming. This is a partnership between the Government, the Samaritans and Farm Crisis Network, as well as other mental health and agricultural organisations. NIMHE will continue this work, both nationally and via the regional development centres. The aims of the plan include delivering support to those suffering from stress in rural communities, developing regional support networks and developing a rural support initiative fund. Funding in these areas has and is reducing.
- 5.5 To reduce the availability and lethality of suicide methods, the plan seeks to reduce the number of suicides using firearms. In Devon, the rate of suicides is lower than the England and South West rates but varies by district council area with the rural areas having higher rates (see Figure 10 below).

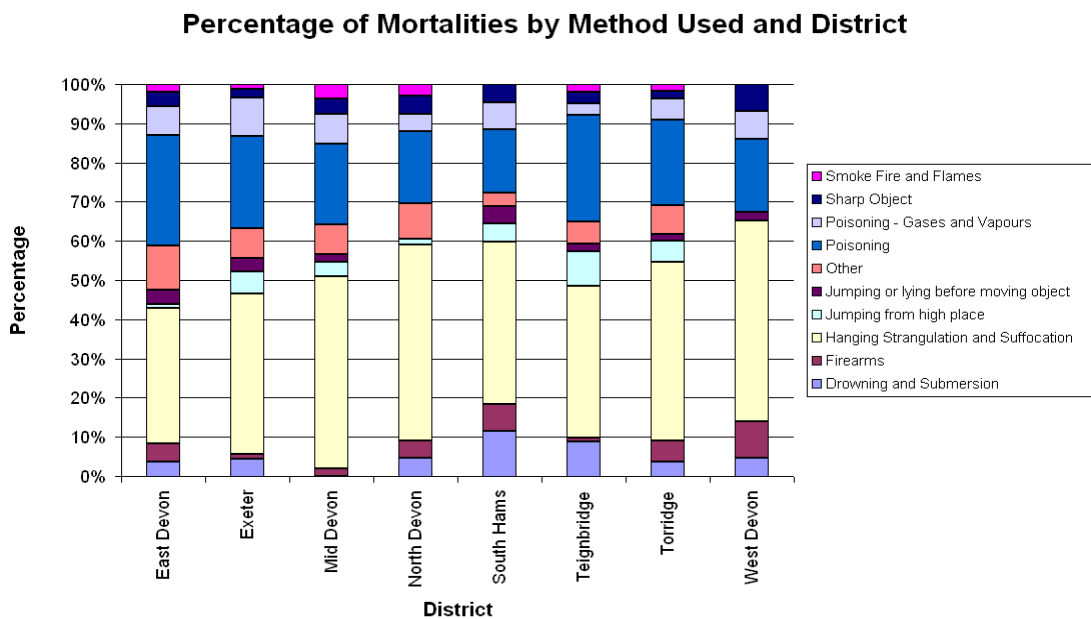
Figure 10: Devon Suicide and Injury Undetermined Direct Age Standardised Rate Per 100, 000 population, 2008-2010



Source: National Compendium of Clinical Indicators, Adapted from data from the Office for National Statistics licensed under the Open Government Licence v.1.0

5.6 Firearms are the method used in the more rural areas and would require access to firearms which is more common in agricultural areas. In Devon, there are around three suicides per annum from agricultural related occupations. The national and local evidence supports the high risk nature of the occupation and accessibility of weapons such as firearms, and support services need to consider this finding. Figure 11 below shows method by area. Stakeholders reported the impact and awareness of suicide amongst Devon farming communities.

Figure 11: Method Used in Suicide in Devon by District Council Area 2007-2009



Source: Public Health Mortality Files, Office for National Statistics, Adapted from data from the Office for National Statistics licensed under the Open Government Licence v.1.0

- 5.7 Malmberg et al (1997) studied suicide deaths in farmers and found that 46% of the farmers had definite mental illness, and a further 23% probable mental illness. Alcohol use and deliberate self harm was low; stress caused by financial, occupational and relationship issues was common; physical ill-health was also frequent, and farmers dying by suicide were more likely to live alone and have few close friends or confidants.
- 5.8 Research in Exeter (Booth 2000) that compared farmers and non-farmers who died by suicide found that farmers were more likely to use firearms (42% v 11%); 52% of farmers had evidence of mental illness, mainly depression; farmers were in contact with GP and mental health services as much as the control group; 31% of consultations in the last week before death were for purely physical symptoms. Further studies identified that farmers in England and Wales have a higher proportion of deaths from suicide than would be expected in comparison with men of the same age (Inskip et al 1996, Kelly and Bunting 1998). Geographical analysis highlighted that Devon had the highest rate of suicide in comparison to other counties (Hawton et al 1999).
- 5.9 NHS Devon's Suicide Prevention Strategy seeks to reduce the number of suicides by high risk occupation groups, identified through the multi-agency annual audit process, and to develop interventions based on the findings of the annual suicide audit process in relation to method of suicide and hot spots. This is challenging in an area with low numbers and fluctuations by geographical area. Analysis of local audits has identified a number of groups that are at a higher risk of suicide. These groups have been identified in the national strategy for priority action and include doctors, nurses, vets, pharmacists and farmers.

Work Related Accidents and Ill-health

- 5.10 Agriculture can be a high risk occupation which poses a number of health risks due to its physical nature, exposure to the weather, noise or vibration, contact with animals and exposure to chemicals or other hazardous substances (Health & Safety Executive (HSE) 2009).
- 5.11 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) places a legal duty on employers, self-employed people and people in control of premises to report: work-related deaths; major injuries or over three-day injuries; work-related diseases (including certain infections) and dangerous occurrences (near miss accidents). Reporting of accidents and ill-health in the industry are poor so a true understanding of the scale of work related ill-health is unknown. Discussions with the Health and Safety Executive (HSE) revealed that reporting is very low and they have investigated cases where work-related deaths have not been formally notified under RIDDOR and were seen as accidents in the home. The fatal injuries incidence rate (expressed per 100,000 workers) in agriculture was the highest amongst the traditional industry sector in Britain 2010/11. Fewer than one in a hundred employees work in agriculture but about one in ten fatal injuries to employees are in this sector. In 2010/11, there were 34 fatal injuries in England and Wales related to agriculture to workers and eight to members of the public; three of these were under 16 (HSE 2011).
- 5.12 The Labour Force Survey (LFS) does not show a statistically significant trend in prevalence rate for cases of work-related agricultural ill-health. The voluntary reporting of occupational disease by doctors (THOR and THOR-GP) for 2010/11 reports musculoskeletal disease in general practice and asthma and dermatitis by consultants. Between 2008 and 2010, the new

cases of work-related mental ill-health were less than a tenth of the rate for all industries and the lowest rate for all industry sections. From the LFS self reported, between 9,000 and 23,000 people suffered from an illness caused or made worse by work (included forestry and fishing). This was not statistically different from other industries (HSE 2011).

- 5.13 In Devon, the fatal accident rate is 13 per 100,000 workers, which is higher than the national rate of 9.9 per 100,000 workers (HSE 2012). Child deaths have related to use of machinery that should not be used and all terrain vehicles (ATV). Fatalities in Devon are more common in the older population, particularly aged 60 plus. Of the 34 South West agricultural workers' fatalities in 2010/2011, 29 were aged over 40, 21 over 55 and 8 over 65. Longer term trends for 2000-2001 to 2009-2010 shows that of the 387 workers killed, 21% were over 65.

Case Example 1: Fatal Accident: Southwest

An 87 year old self-employed farmer was run over by a tractor. He had been hay making in a field and had left the tractor moving. It would appear that the tractor wheel ran him over and he was struck by the tines of the trailed hay making machine. He died from crush injuries to his chest (HSE 2011).

- 5.14 A study by Gerard (1998) looked at whether farmers' health and safety needs are being met following a lack of evidence of farmers' views on the subject. It was highlighted that there is little research in this area. The study concluded that they were not. Musculoskeletal injuries are the most common form of injuries.
- 5.15 A review of accident and emergency and minor injury unit data in Devon for 2011 looked at accident data (where known) comparing hamlets and isolated dwellings, villages, town and fringe and urban (populations > 10,000) by accident type (percentage) and first diagnosis (percentage and rate per 1,000 population). No significant patterns emerged. Data is not available by occupational group.
- 5.16 Studies highlight other occupational risks relating to musculoskeletal issues, asthma and respiratory conditions (Croft 1992, Radon 2002).
- 5.17 A study by Bomel Ltd for the Health & Safety Executive examined farmers' attitudes and the underlying influences to identify how these might be changed to help improve safety in the industry. The main study examined the influences on farmers' attitudes based on interviews with farmers, either at their farm or at livestock markets in the South West and South East of England. The sample covered farmers on small and large farms. The study found that overall the farmers had positive attitudes and behaviours with respect to safety. However, negative attitudes and behaviours emerged in specific areas such as the use of guidance and health. Analysis revealed that farmers with negative attitudes to guidance and health are strongly influenced by other farmers and members of their family respectively. Farmers with positive attitudes and behaviours in all areas are likely to acknowledge a strong influence of HSE. Furthermore, many farmers are influenced by HSE in that they know they need to comply with regulations. This knowledge was gained primarily through the HSE's website and its agriculture Safety Awareness Days (SADs) (HSE 2009). There was a small sample size.

Zoonotic Infections

5.18 Under RIDDOR, there are a number of zoonotic infections which are reportable if arising out of, or in connection with, a work activity. There are occupationally-acquired reportable zoonotic infections which farmers and farming communities are exposed to:

- **Anthrax** (*Bacillus anthracis*) from work involving infected animals, handling infected animals, their products or packaging containing infected material or work on infected sites
- **Brucellosis** from work involving contact with animals or their carcasses (including any parts thereof) infected by *Brucella* spp. or the untreated products of the same
- **Chlamydiosis**
 - (a) Avian chlamydiosis: work involving contact with birds infected with *Chlamydia (Chlamydophila) psittaci*, or the remains or untreated products of such birds
 - (b) Ovine chlamydiosis: work involving contact with sheep infected with *Chlamydia (Chlamydophila) psittaci* or the remains or untreated products of such sheep
- **Leptospirosis:**
 - (a) work in places which are or are liable to be infested by rats, field mice, voles or other small mammals
 - (b) work at dog kennels or involving the care or handling of dogs; or
 - (c) work involving contact with bovine animals or their meat products or pigs or their meat products
- **Lyme disease:** Work involving exposure to ticks (including in particular work by forestry workers, rangers, dairy farmers, game keepers and other persons engaged in countryside management)
- **Q fever:** work involving contact with animals, their remains or their untreated products
- **Rabies:** work involving handling or contact with infected animals
- **Streptococcus suis:** work involving contact with pigs infected with *Streptococcus suis*, or with the carcasses, products or residues of pigs so affected
- **Tetanus:** work involving contact with soil likely to be contaminated by animals.
- **Tuberculosis:** work with persons, animals, human or animal remains or any other material which might be a source of infection
- **Other:** any infection reliably attributable to work

5.19 Notification of infectious diseases is also required under health protection legislation in England. The list of notifiable infectious diseases includes:

Anthrax; Brucellosis; Haemolytic uraemic syndrome (which may follow infection with E coli 0157); Rabies; Tetanus and Tuberculosis (including bovine TB). The legislation has been updated to give public authorities new powers and duties to prevent and control risks to human health from infection or contamination, including by chemicals and radiation. The revised measures are contained within the amended *Public Health (Control of Disease) Act 1984* and its accompanying regulations. The new legislation adopts an all hazards approach and, in addition to the specified list of infectious diseases, there is a requirement to notify cases of other infections or contamination which could present a significant risk to human health. Registered Medical Practitioners (RMPs) are no longer paid fees for notifications. RMPs are expected to provide information that is a requirement of legislation needed to protect public health as part of their professional duties.

- 5.20 Discussions with the HSE and the Health Protection Agency (HPA) revealed under-reporting, particularly under RIDDOR. The HPA undertook a local search for zoonotic infections, however, the data does not identify infections by occupation. The HPA ran a query through HP Zone with “farm” in their address which is only indicative of farming communities and not reliable. For 2011 and 2012 (to end May), *Campylobacter* was the leading causal organism, followed by *Cryptosporidium* and *Salmonella*. Such infections are most likely to arise indirectly with a connection to a farm activity.
- 5.21 The HPA report of animal associated infections in England and Wales quarterly report for weeks 1-13/2012 (provisional) reported one case of Brucellosis, eight cases of leptospirosis, 98 cases of Lyme disease (24% of cases were from the Southwest) (HPA 2012).
- 5.22 Cases of Bovine Spongiform Encephalopathy (BSE) fell in number from 37 in 2008 to 12 in 2009 – a drop of 68%. Despite this decline, modelling carried out by the Veterinary Laboratories Agency (VLA) during the year suggests that occasional cases will be detected for several years to come. (Countering BSE Defra 2009).
- 5.23 Provisional end-of-year statistics for the year show a 9.6 % decrease in the number of new incidents (herd breakdowns) of bovine TB in Great Britain (compared with 2008) with 79% of these occurring in the West of England and Wales (Defra 2009). This has implications for human transmission.
- 5.24 Kerstin et al (2009) found that a gap may exist in the delivery of zoonoses information and patient care, requiring better communication between healthcare providers, veterinarians and public health officials serving farmers. This view is supported locally and, in response, the Women’s Farming Union (WFU) in Devon produced an alert card for farmers which has been promoted in agricultural shows and farming literature for the past 10 years. The pocket-sized card aims to make GPs and farmers more aware of the threat to human health posed by zoonoses. It describes the typical routes of transmission and symptoms of some common zoonotic diseases such as orf, listeriosis, toxoplasmosis and salmonellosis. It was the expressed view of stakeholders that early identification of symptoms was an issue.

Learning and Physical Disability

- 5.25 Due to the diverse nature of Devon’s farming communities, it is not possible to identify whether there are issues regarding access to services. Expressed

views of stakeholders working with farming communities are that services are accessed late and support is not requested - this was raised by the Farm Crisis Network. The Royal Agricultural Benevolent Institute (RABI) provides support in a number of ways including financial assistance for individuals with a disability.

Carers

- 5.26 Due to the diverse nature of Devon's farming communities, it is not possible to identify whether there are issues regarding access to services. Expressed views of stakeholders working with farming communities are that services are accessed late and support is not requested. The normative view was that farming communities are self-contained and resilient. Support agencies were not aware of the services offered by Devon Carers.

Children

- 5.27 There are a number of issues affecting children and young people on farms. There is increased exposure to zoonotic infections and risks associated with the high risk nature of the working environment in which they live. In addition, there are issues relating to child employment and absenteeism from education whilst working on farms. Discussion with the education welfare officers revealed that very few permits for working on farms have been applied for or issued despite knowledge that the activity takes place. As farms are homes as well as workplaces children are often present and every year they are seriously hurt and even killed. The HSE has produced safety awareness posters, leaflets including 'Preventing Accidents to Children on Farms' (2008) - an approved code of practice on preventing accidents to children on farms (HSE 1999).

Alcohol and Drugs

- 5.28 Alcohol and drug treatment services are provided across Devon and available through self referral and referral from professionals. Discussion with stakeholders has suggested that alcohol rather than drug use is more common.

Screening and Immunisation

- 5.29 Evidence of uptake of screening and immunisation programmes and effectiveness of associated promotion and publicity cannot be evaluated as data is not collated by profession, although practice based data is available. The expressed view of health professionals was that there was low take-up of flu vaccinations in older farmers.

Housing Conditions and Wider Determinants of Health

- 5.30 Housing tenure in agriculture can be varied and complex, based on cultural and historical legacies. Some will be tenant farmers or have agricultural ties which will require the ongoing agricultural activity to maintain the home. If there are health problems, the work activity has to continue so, unless adequate capacity or support exists, this can exacerbate any health condition. Locally, the view was expressed that some farmers have a poor understanding of housing legislation and this presents in poor owner occupied housing standards, poor conditions of tenanted farms and poor rental accommodation. The issues often come to light through other routes such as

water sampling and empty homes enquiries. This was highlighted in the more rural areas of West Devon and is reflected in the House Condition Survey. The age of properties also has an impact on home energy conservation as many properties are single skin.

Case Example 2: Housing Conditions
South Hams Private Sector Housing Team

A farm labourer lived in a detached, part thatch, cob walled cottage for 16 years; the land-owner had not kept up with essential repairs and improvements to the property over the years and the bathroom and kitchen fittings dated back 30 – 40 years. The Rayburn in the kitchen no longer functioned, the bottled gas fire in the living-room had been condemned and the sole heating was an electric bar fire. Windows were rotten and falling out. The ground floor walls were damp and crumbling and the upstairs rooms were affected with black mould. The labourer retired from his employment with the land-owner and applied for social housing but he and his wife were reluctant to seek support because they did not want to be evicted. An Improvement Notice under the Housing Act was served on the land-owners once the tenants had been relocated to suitable accommodation.

- 5.31 Discussion with housing officers highlights the issue of tenanted and retiring farmers who are not likely to be a priority on the housing waiting list due to the prioritisation process.

Lifestyle Issues

- 5.32 Silk et al (2006) undertook a study looking at sun protecting behaviour of farmers and segmented the target audience and gave recommendations for each group: engaged heavily in sun protection; no sun protection and hat only behaviour, which is useful. The National Centre for Farmers' Health conducted research between psychological distress and obesity and developed interventions relevant in a rural/farming context (Brumby 2011). There is an absence of UK literature relating to lifestyles and farmers.

Early Diagnosis

- 5.33 Early diagnosis is important to ensure effective early treatment to improve prognosis, prevent complications and early mortality. Diagnosis will also allow access to annual reviews to improve management of long-term conditions.

Case Example 3: Primary Care Contact

A health practitioner shared the example of a farmer's wife who telephoned the practice on Christmas Eve seeking support. Her husband had been in bed for five days with a temperature and was delirious and incontinent. Reluctantly, medical attention was sought and the diagnosis was a treatable urinary tract infection which required antibiotics.

6. Expressed Health Need

- 6.1 To determine the relevance of national and local evidence and data, interviews were conducted with a number of stakeholders to gain insight into population health need and gaps in services. Some are included in the relevant sections above and some more detailed views are reported below.
- 6.2 Data for Devon for 2011 provided by the Farm Crisis Network (FCN) showed that 63% of calls were through the national helpline; 31% local calls and direct approach, and 1% through the Rural Stress Help line and other farming help charities. Problems presenting as new cases in 2011 were predominantly: finance and Defra; Rural Payments Agency and other agricultural regulatory issues. This was followed by: TB; family; general health and depression/mental health. Other presenting issues included: animal movements; legal bereavement; retirement and tenancy issues. There is seasonal variation in cases, with winter, July and August having a higher number of cases on their workload. Support tends to be directed at smaller and older farmers aged 58, on average. About six new cases a month are referred and, in 2012, the co-ordinator had approximately 600 ongoing cases. Some issues of importance include: reliance on internet (for VAT returns in particular); red tape but with low IT skills; some examples of the impact of suicide and fatalities on farm, including children, following a recent quad bike fatality. Seeking financial support is seen as failure. Undiagnosed learning disability is of concern and it was felt some were lost in post school transition. Self-treating is common and GP awareness of occupational diseases can be an issue. The FCN produced a report on the impact of inspections on farmers' stress in Wales (2007), which highlights the impact of inspection regimes and calls for agencies to make regulation and inspection a more positive and less stressful experience on farming communities.
- 6.3 Interviews with health professionals working in rural areas clarified some of the evidence from the literature. Health professionals in primary care and community services reported late presentation and self sufficiency and resilience in farming communities. This appeared to be a male issue in particular. No views were expressed regarding domestic or sexual violence and abuse as it was felt little was known.

Case Example 4: Community Nursing and Services

A district nurse lead in a rural area described farming communities as 'robust and self sufficient' and gave the example of a farmer, with a leaking wound from a 20 year old tractor accident, who, after a brief intervention, declined care and continued with self care of the wound. Another example was of a self repair of a catheter rather than seeking support.

- 6.4 To identify primary care views, the practices with their population in the most deprived rural ward were identified. Some of these practices are small; the two in the most deprived areas had practice populations of around 2,500. The issues discussed included: contact at crisis point; older working farmers; difficulty in ensuring attendance at annual reviews following disease diagnosis and influenza vaccination not wanted. Solutions are more difficult but dispensing practices, extended hours and outreach surgeries in Princetown, on Dartmoor, are examples of where access to services has improved.

- 6.5 The Community Council of Devon has undertaken projects 'Action for Women in Farming' and 'Voices of Rural Young People' in 2007 seeking views of rural communities. Due to past experience of difficulties engaging with farmers, it was felt that contact through women and young people may provide valuable insight. The project had difficulties reaching women in farming but learning from the pilot project included the greater social connections of women in farming and there is potential to work with women in farming communities and develop support systems. Lives are dominated by the farming calendar and priorities, reluctance to accept support, importance and relative cheapness of breaks, and peer support groups. Most importantly, it was felt that working with farming families can have a valuable impact but it requires an extended period of contact, developing relationships and trust.
- 6.6 Young people raised a number of issues and set a challenge to agencies to address concerns. These issues included: affordable housing; limited employment opportunities; low wages; rural transport barriers; increasing isolation; mental health issues; lack of free time; limited family time; the changing nature of rural communities; the family farm; lack of awareness of farming issues; government regulations and bureaucracy; handling of foot and mouth and TB; British farming and food production, and the future of farming for young people and future generations.
- 6.7 The Dartmoor Hill Farmers' Project reported population changes reflected in farming older with health conditions, including back, hip and knee problems. Some farmers are working to an old age and successors are not starting as owners until their 50's after many years of physical work. Some of the younger generation work away or attend college and return in their 20's and 30's. Training needs are identified late and no support is available for such training. Markets are important including: Newton Abbot, Exeter, Tavistock, Holsworthy and Hatherleigh. The project worker felt that farmers seek help when mobility is affected. Other issues include poor transport and rural fuel cost. It was stated that there had been two fatalities on Dartmoor in the past two years, both involving ATVs. Mental Health is a real issue and farming women tend to be forgotten with 24/7 businesses and some second jobs. The example of a number of suicide attempts and only telephone call support was reported.
- 6.8 The State of Farming on Dartmoor report found that about a quarter of the interviewees said they have staff training needs, with over half of the cases in relation to the use of computers. About a quarter of the interviewees said they require help with business management. Alongside use of computers, areas identified include managing diversified enterprises and marketing (University of Exeter 2002).
- 6.9 The National Federation of Young Farmers reported suicide and reference an average age of farmers over 55, and that 'grandad' still holds the chequebook. Other issues include loss of tenancy if not working. The organisation highlighted the importance of positive relationships and trust when conveying health messages, eg bowel and testicular cancer. It was advised to consider private sector machinery/tractor firms, relate to animals and use the National Farmers' Union (NFU) for messages. Young Farmers' membership and newsletters are useful to convey public health messages. Young farmers can be productive and progressive at an earlier age and should be encouraged and supported.

7. Current Service Provision and Evidence of Effectiveness

- 7.1 NHS Devon does not commission services directly for farming communities and they would access universal services. There are a number of charitable and voluntary sector organisations supporting farming communities, although funding in some areas has declined. Some funding was in response to the foot and mouth crisis.
- 7.2 Mainstream public health, health, mental health and social care services need to respond to the health needs of farming communities.
- 7.3 To ensure effective service planning, the Institute of Rural Health produced a toolkit: Rural Proofing for Health (2005) which is a guide to help and rural proof policy implementation in access to services/transport, primary care, community care, specialist care, hospital care, and patient and public involvement.

Mapping Exercise

- 7.4 Public sector organisations provide a range of support materials and have comprehensive web-based information and guidance. HSE, HPA and Defra have extensive resources to guide and inform businesses. There are a number of services which complement the public sector supporting agriculture across Devon:
- National Farmers' Union – the NFU provides a national and local network for support for agricultural communities.
 - Women's Farmers Union (Devon Branch) – the WFU provides social support, informative meetings which mix social and information for farming women who live in Devon. They developed a zoonoses alert card for farmers and medical practitioners.
 - Devon Young Farmers' Club – part of the National Federation of Young Farmers which is actively providing social and learning support and providing advice and guidance to young farmers.
 - Farm Crisis Network - the Farm Crisis Network is a partnership between the Arthur Rank Centre and Agricultural Christian Fellowship which has been operational since 1995. There is a national support line, 7am - 11pm daily, and a Devon co-ordinator. The service was well quoted and valued locally, as it has been one of the consistent services available to farming communities in Devon. Discussion with the co-ordinator reiterated the importance of agricultural markets as a communication channel. The Matford Centre, Exeter, and Holsworthy Market provide important meeting places, as well as Mole Valley and Mole Avon.
 - Royal Agricultural Benevolent Institution - RABI is a grant-making charity that supports members of the farming community facing need, hardship or distress. Founded in 1860, the organisation provides long-term care and emergency help. The help is provided for retired farmers, farm workers, working farmers and their families who find themselves in financial difficulties. Support is available for retired people who are struggling to get by on low incomes and those who are disabled, ranging from young children to people over 100 years old. Welfare and wellbeing welfare team trained in the complexities of the benefits

system, continuous care grants and awards and, in special situations, money for particular needs.

- Samaritans – the Samaritans provide a national support helpline which is of value to farming communities.
- Rural Stress Information Network – the RSIN has decreased capacity over the years and is linked to the Arthur Rank Centre and still provides a national helpline.
- HSE initiatives - Safety Health Awareness Days are undertaken with farmers and young farmers who work through a series of scenarios with health and safety messages.
- Dartmoor Hill Farm Project – the project provides local social support and training, including discussion groups for farming women.
- Pilot Projects: Pacesetters Farmer's Project - the South West Ambulance Service project worked through livestock markets in North Devon in 2008. The service undertook fortnightly visits seeing between 10 and 12 farmers to take blood pressure, check cholesterol and prescribe and administer antibiotics. The project has now ended.
- Devon Council for Voluntary Services – there is a current project involving 32 community contacts as part of the total support fund; the service could support farming communities. Community newsletters are produced and can be identified through the CVS, which has a database. Such newsletters are produced within some small communities, such as Winkworthy and Broadwood Kelly. No small rural farming community support organisations were identified other than the pan Devon services. The Ruby Country Partnership has an important but economic driver.
- Community Council for Devon - CCD works with rural communities and has a member forum which includes farmers. Farming matters are presented in newsletters. CCD supports a database of parish plans which identify local issues. The Farming Network has ceased.
- Livestock markets and commercial outlets provide a useful fora and venue for working with farming communities.
- Parish magazines and community and organisational newsletters provide a useful vehicle for information.
- One-off events - agricultural shows provide a useful vehicle for information.
- Land managers are important in risk communication, not just public health messages.

7.5 Evidence of effectiveness of the mapped services in a Devon context is not available. Some are support services valued by the farming community, others provide important social networking for which there is evidence of importance for emotional health and wellbeing.

- 7.6 Pilot and short term projects can be beneficial in the short to medium term but ensuring access to mainstream services is important for farming communities.

8. Conclusions

- 8.1 The evidence identifies areas of unmet need and a number of stakeholder interviews were undertaken to see if the themes are reflected locally and experienced by individuals working with farming communities in Devon.
- 8.2 Interviews with primary care and nursing services supported the view that farmers, in particular, do not prioritise healthcare appointments. Views were sought from the most rural practices which highlighted that farmers present late and, when a condition is diagnosed, there is difficulty getting attendance at annual reviews despite frequent reminders. Support organisations upheld this view, with 'time pressures' frequently quoted.
- 8.3 Women in rural areas are an 'at risk' group. In focusing on 'farmer' stress, the needs of women may have been neglected. Future initiatives should consider how to better identify and respond to the needs of women in rural areas.
- 8.4 Those involved in interventions should be sensitive to the context in which they work and take the time needed to develop trust based relationships in the community. Professionals cannot be simply 'parachuted in' and expect to achieve results (Lobley 2004).
- 8.5 The health needs assessment would benefit from local primary research using focus groups, or a representative, and controlled study to understand the barriers to accessing services with a view to identifying local solutions.

9. Recommendations

- 9.1 The recommendations are grouped under three themes: prevention, early intervention, and treatment and support.

Prevention

- 9.2 It is important to consider farming communities and potential barriers to health promoting behaviour in the design of preventative interventions. This is particularly important for:
- stop smoking support
 - weight management interventions
 - health check programmes
 - sexual health messages and programmes
 - alcohol and drug brief interventions
 - skin cancer prevention

- 9.3 Consideration should be given towards the communication channels and opportunities of importance to farming communities such as markets, shows, newsletters, social events and training.
- 9.4 Training providers and support agencies need to consider adequacy and opportunities for improved training and skills for young adults and older farmers.
- 9.5 Accident prevention initiatives need to reach the most vulnerable farming communities and be subject to robust evaluation.
- 9.6 Reducing the child and adult accident fatality rate related to agriculture needs to be a priority of all agencies and the sector.
- 9.7 The refresh of the suicide prevention strategy needs to consider direct interventions relating to the farming community.

Early Intervention

- 9.8 Health and social care providers and public health and clinical commissioners need to develop improved communication with farming communities to ensure access to services to identify conditions and health problems.
- 9.9 Campaigns for screening, immunisation and early diagnosis need to be relevant for farming communities and messages delivered through the correct channels.
- 9.10 Consideration of increasing practitioners' awareness of farming culture and barriers to accessing healthcare, through training or improved communication and awareness raising.
- 9.11 Carers' support needs to be promoted amongst farming communities through relevant channels.
- 9.12 Increased awareness of occupational risk of zoonotic diseases must be promoted amongst health professionals to ensure early diagnosis.

Treatment and Support

- 9.13 Health professionals need to be aware that farmers may present with physical problems which mask psychological issues.
- 9.14 Services need to be responsive to a crisis referral due to delays in seeking medical attention.
- 9.15 Community nursing teams, out of hours' services and complex care teams need to review equity of access to services for farming communities to change the culture of self-reliance and self-treating, and improve trust amongst farming communities.

General

- 9.16 All services and organisations need to ensure targeting and support for young farmers to enable a cultural shift towards accessing healthcare and support services.

10. Acknowledgements

10.1 The Public Health Directorate, NHS Devon, has led in the production of this health needs assessment.

10.2 The author of the report is indebted to a number of people, from a range of local organisations and stakeholders, who provided invaluable local insight to the health needs assessment. The final report and recommendations reflects their inputs:

Babcock - Education Welfare
Community Council of Devon
Dartmoor Hill Farm Project
Devon County Council
Devon Partnership Trust
Farm Crisis Network
Health and Safety Executive
Health Protection Agency
National Farmers' Union
National Federation of Young Farmers (DYFC)
NHS Devon Primary Care
NHS Devon Public Health Intelligence Team
North and West Devon Council for Voluntary Service
Royal Agricultural Benevolent Institute
South Hams District Council - Private Sector Housing
Torbay and Southern Devon NHS Health and Care Trust
Women's Farmers Union –Devon Branch
University of Exeter - Centre for Rural Research

10.3 A list of organisation contact details can be found at appendix 2.

Tina Henry
HEAD OF HEALTH OF HEALTH IMPROVEMENT
(SOUTH AND WEST DEVON)

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APPENDIX 1

A Literature Review of Farmers and Farming Communities and Health Needs

Introduction

This literature review on the health needs of farming communities in a larger rural area was conducted to inform a health needs assessment of farming communities in Devon. The review has drawn together headline findings from relevant secondary literature sources to summarise published health needs.

In relation to farmers' health needs, NHS Evidence, PubMed, EMBASE, MEDLINE, PsychINFO, CINAHL, health business elite were searched using the following terms: 'farmers', 'health', 'health needs', 'deprivation' and 'farming communities' combined with Boolean operators AND/OR, as appropriate.

Abstracts were reviewed to discern relevance to this needs assessment and health and healthcare needs that would be relevant to the local population. Studies concerning more generalised topics relating to farming practice have not been considered in this review. Consideration was made of the relevance of studies to the UK and Devon context.

The HSE and Defra websites were considered to identify other relevant publications and documents for the literature review.

Summary

A number of studies were identified from America, Canada and New Zealand. There are a number of American studies relating to the ageing farming population. The themes remain consistent regarding accessing services and mental health issues.

A review of the literature highlights the paucity of robust medical studies that consider the health and wellbeing needs of farming communities. There is robust evidence regarding suicide risk in farmers but the cumulative health impacts are not considered in detailed studies. This made local needs assessment challenging for two reasons: 1) the lack of local data and 2) lack of relevant studies. The fracture between the medical and social science literature (referenced in 3.18) is evident and the context of farming life is essential in developing gaps in services and interventions.

A summary of the literature reviewed has been produced but not appended to this document.

APPENDIX 2

Contacts

- Dartmoor Hill Farm Project, High Moorland Centre, Princetown, Yelverton, Devon, PL20 6QF. Tel; 01626 836013
- Farm Crisis Network: www.fcn.org.uk 0845 3679990
- National Federation of Young Farmers, Devon YFC Centre, Retail Park Close, Marsh Barton Road, Exeter, EX2 8LG. 01392 272189
- National Farmers Union: www.nfuonline.com/
- Royal Agricultural Benevolent Institute: www.rabi.org.uk/
- Rural Stress Information Network, Rural Stress Information Network, Arthur Rank Centre, Stoneleigh Park, Warwickshire, CV8 2LZ. Tel: 024 7641 2916 www.rsin.org.uk
- Women's Farmers Union: www.wfu.org.uk/

(Accessed September 2012)