NHS Lanarkshire

Public Health 2017/18

The Annual Report of the Director of Public Health

Acknowledgements

I am grateful to the staff within the Department of Public Health for all their work over the year. I am also grateful for their continued commitment, and the commitment of NHS Lanarkshire and staff in other organisations, to public health in Lanarkshire.

I would like to thank all the contributors to this report and the members of the Editorial Committee: Anne Alexander, Lee Baird, Rebecca Campbell, Heather Craig, David Cromie, Jennifer Darnborough, Ashley Goodfellow, John Logan, Karen Lorenzetti, Mary Louden, Ruth Mellor, Anne Moore, Kevin O'Neill, Femi Oshin, Josephine Pravinkumar, Tasmin Sommerfield, Caroline Thomson, Albert Yeung and Derek York. My particular thanks to Derek for designing the report.

Finally, I would like to extend my thanks to all the organisations who work with NHS Lanarkshire to protect, maintain and improve the health of the public. This includes North Lanarkshire Council, South Lanarkshire Council, North Lanarkshire Health and Social Care Partnership and South Lanarkshire Health and Social Care Partnership.

You can contact us by emailing publichealthannualreport@lanarkshire.scot.nhs.uk or calling 01698 858241 to request a printed copy of the Director of Public Health's Annual Report or Key Issues summary version, or to request either document in another language or format.

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Foreword

It is an honour and privilege to produce the Annual Report of the Director of Public Health 2017/18.

The main messages in this report are similar to that of last year. People are living longer which is fantastic. Over the next 20 years it is estimated that the population aged 75 years and over will increase by almost 64%. This will mean that there will be just over 83,000 people aged 75 years or more living in Lanarkshire. We need everyone to embrace the concept of self-management whenever possible and to make every effort to promote and look after their own health. To use a phrase "There is only one you so look after yourself".

The report describes a number of excellent initiatives and I take the opportunity to highlight the chapter on mental health and the work of Clyde United Community Football Team. It describes how the programme promotes self-esteem, social interaction and a range of other positive benefits for participants. Community led programmes such as this have a massive potential to promote health and wellbeing and prevent the need for accessing clinical services. Mental health has been identified as one of six national public health priorities and this is extremely welcome. Public Health Reform is in its final stages. It aims to challenge our current ways of working, put more decisions directly in the hands of citizens and provide support to local communities to develop their own approaches and solutions to local population health challenges. National Public Health priorities have been agreed and a new national agency will come into being in late 2019. This is extremely welcomed and in next year's report I will look at the implications of the reform for the people of Lanarkshire.

In my report last year I provided an introduction to the impact of Adverse Childhood Experiences (ACEs) on health and wellbeing. I am pleased to report on progress in this arena particularly around raising awareness and understanding of the issue. Addressing ACEs is a major challenge for us all and I look forward to reporting on the outcomes of our actions in due course.

It is also pleasing to report on work with people who need our help the most. The chapter on Keep Well and the Criminal Justice System is an excellent example of this.

I have also taken the opportunity to focus on a "macro issue" in the form of climate change, making the case for tackling this as a health issue. Sometimes it is difficult for us to grasp the enormity of the challenge we face, however the chapter suggests some small changes we all could consider in light of our life circumstances. There is a major opportunity for NHS Lanarkshire to demonstrate its commitment to addressing climate change if the case for building a new hospital is accepted and approval given. I am heartened, even at this early stage in the process, to hear of the organisation's commitment to prioritise this issue.

Once again, I have included a chapter on dilemmas and challenges. The purpose of this is to stimulate debate on key issues and challenges that we face in improving the health of the population.

I was delighted that both North and South Lanarkshire Community Planning Partnerships embraced last year's report and afforded me the opportunity to challenge them to respond to the recommendations made in the report. I am delighted that work is underway to

support the sustained positive destinations of care experienced young people. I offer my thanks to Councillor Maureen Chalmers, Chair of South Lanarkshire Community Planning Partnership Board and Mr Paul Devlin, Chair of North Lanarkshire Community Partnership Board (May 2018) for facilitating this process.

I also take this opportunity to welcome the decision by the Board of NHS Lanarkshire to introduce the Population Health & Primary and Community Services Governance Committee. This gives a renewed focus and emphasis on population health.

In next year's annual report the intention is to review the recommendations from the 2016/17 report to ascertain what progress has been made.

Finally I would like to thank my editorial team for all their hard work in helping to produce this report.

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Dilemmas and Challenges

Last year I discussed a number of dilemmas and challenges and I take this opportunity to reinforce some of the key messages.

Quite simply, we need to invest more in prevention and anticipatory care if we are going to reduce demand upon our clinical and social care services. To realise the ambition of shifting the balance of care whilst still responding to the ever-increasing demand upon acute services, additional resources are required to enable both of our Health and Social Care Partnerships to build up the services including those of prevention in the community. One of the key recommendations in the Audit Scotland report *Health and Social Integration - Update on Progress*[1] was for Scottish Government commitment to continued additional pump-priming funds to facilitate local priorities and new ways of working. This will progress integration and I support and endorse this recommendation. The challenge for those working in this arena is to demonstrate the impact and effectiveness of interventions in order to convince budget holders to invest more.

Last year the Scottish Government and NHS Education for Scotland (NES) *Transforming Psychological Trauma: A Skills and Knowledge Framework for The Scottish Workforce*[2] was launched. From this, NES produced a new training resource *Opening Doors: Trauma Informed Practice for the Workforce*.[3] This aims to support staff to know how to adapt the way they work to make a positive difference to people affected by this. Trauma is everybody's business. The negative impact of trauma and adversity on a person's health and wellbeing and in some cases behaviour, is well documented and was explored in last year's annual report. The challenge of achieving the ambition of a workforce delivering trauma-informed care is massive. It is imperative that NHS Lanarkshire and both Health and Social Care Partnerships embrace the new resource and develop plans to deliver the training across the workforce. Training is the first step in this journey as practice will have to change to accommodate the needs of those who have experienced trauma. Examples of this could include longer appointment times and flexibility around missed appointments.

Poverty stubbornly remains the biggest obstacle to improving the health of the population. The negative impact of both austerity measures and the reform of our welfare system is well documented. This was further reinforced by the *Statement on Visit to the United Kingdom*[4], by Professor Alston, United Nations Special Rapporteur on Extreme Poverty and Human Rights'. Health and Social Care Partnership and NHS Lanarkshire can take practical steps such as promoting routine enquiry for financial inclusion, maximising their roles as employers and addressing the needs of populations including the homeless to lessen the impact of poverty.

The Faculty of Public Health published *Healthier Lives Fairer Futures*[5] that advocates steps to be taken so that everyone in Scotland can have an equal chance of a long and healthy life. The following priorities were highlighted:

Health in all policies: Include health in all policies for Scotland

Inequalities: Make taxation more progressive, including income tax, to reduce inequalities; mitigate the adverse impacts of welfare reform on our most vulnerable and introduce a minimum wage for healthy living.

Improve Health for Future Generations: Reduce child poverty and mitigate its adverse impacts and prevent Adverse Childhood Experiences.

Create Healthy Places: Use the Community Empowerment Act to improve population mental health; increase investment in integrated public transport and active travel and prioritise walking and cycling in the built environment.

This Advocacy Statement was produced utilising the best available evidence. It is thought provoking.

References

1 Audit Scotland. Health and Social Care Integration: Update on Progress, Scotland: Audit Scotland, November 2018.

2 Scottish Government and NES Education for Scotland. Transforming psychological trauma: A skills and knowledge framework for the Scottish workforce. Scotland: Scottish Government and NES Education for Scotland, May 2017.

3 NES Education for Scotland. Opening doors: Trauma informed practice for the workforce. www.nes.scot.nhs.uk/education-and-training/by-discipline/psychology/multiprofessional-psychology/national-trauma-training-framework.aspx (accessed 7 December 2018).

4 Alston, P. Prof. Statement on Visit to the United Kingdom, London: United Nations Special Rapporteur on extreme poverty and human rights, November 2018. Available from: www.ohchr.org/Documents/Issues/Poverty/EOM_GB_16Nov2018.pdf.

5 Faculty of Public Health in Scotland. Advocacy Statement – Healthier lives, fairer futures. Scotland: A call to action from the Faculty of Public Health in Scotland, 2018. Available from: www.fph.org.uk/media/1168/healthy-lives-fairer-futures-final.pdf.

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1.1 Health Intelligence

Introduction

Data, information and intelligence are critical to public health practice, and appropriate decision-making requires reliable health intelligence. According to Lee (2003) "Health information is the glue that holds a health system together." Pencheon et al. (2006) highlighted that if public health is the science and art of improving the health of populations, then measuring health status and assessing health needs of populations are the universal starting points for most of its activities. Health intelligence based on data drawn from multiple sources can help assess and examine the healthcare needs of the population to offer appropriate and high quality services and also lead to continuous improvement.

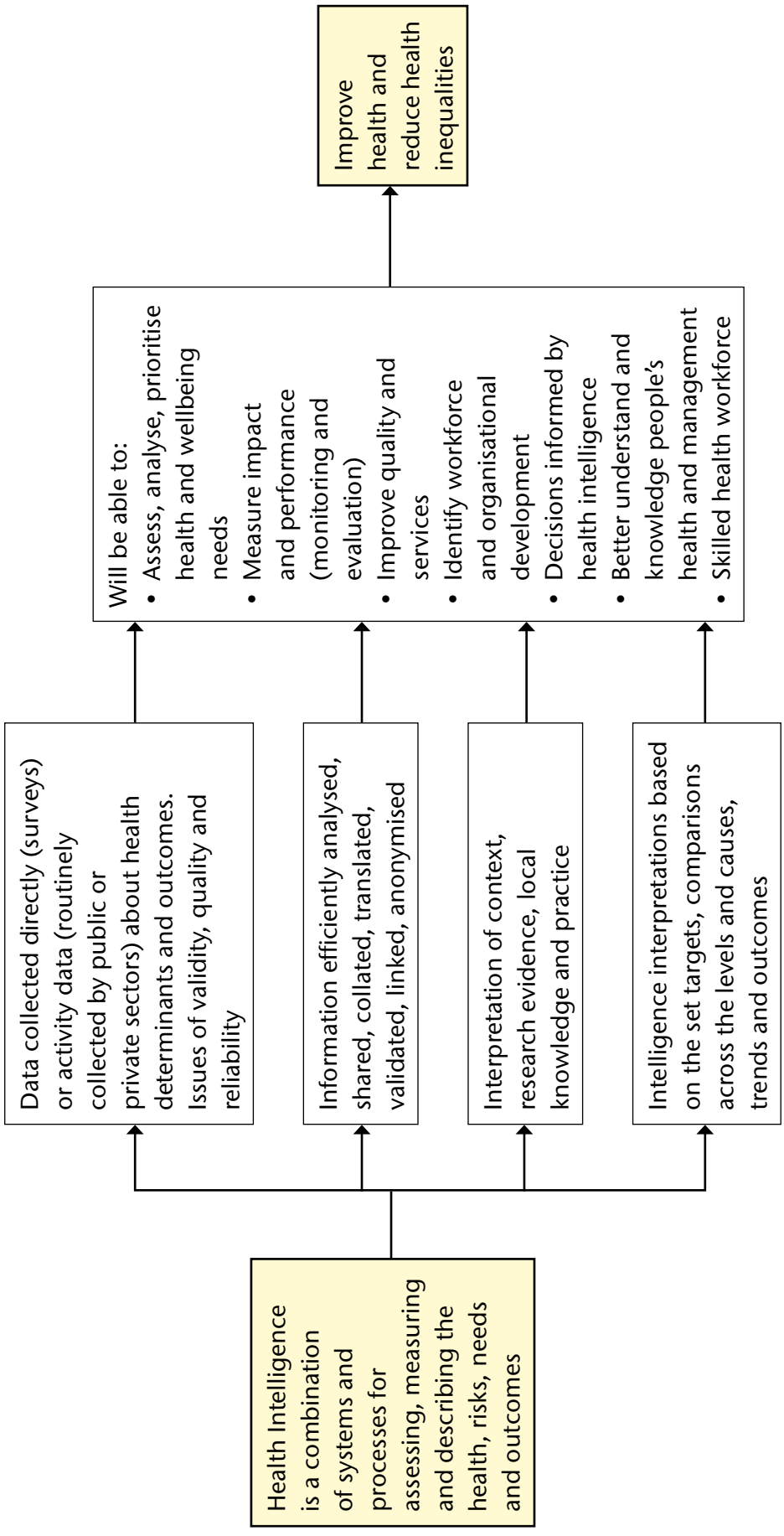
This section will discuss what health intelligence (HI) including public health intelligence (PHI) is, their importance, the processes involved in generating, analysing and using HI, the structures in place in NHSL to deliver the HI function, and present a recent example of work to highlight its various aspects.

Background

A World Health Organisation guide on providing health intelligence (information, data, knowledge, evidence and analysis) to meet local needs stresses its importance in enhancing the health and wellbeing status of the population.

HI is considered to be an "inputs-outputs" configuration, relating to the outputs emerging from analysing, interpreting and reporting information relating to health. A number of inputs i.e. sources of data are used to develop intelligence and these range from national datasets, local databases, research, surveys which are either routinely collected or collated on an ad hoc basis to answer specific questions. (NHS Dumfries and Galloway, 2012) The main purpose, however, is to use the emerging outputs to support strategic and evidence-based decisions in healthcare service planning and development. PHI enhances the decision making process as it operates along the entire data-information-action intelligence pathway and provides critical support to the interpretation of data leading to relevant actions.

Figure 1: Data – Information – Action Continuum



(Source: Krishna Regmi and Ivan Gee, Public Health Intelligence – Issues of Measure and Method)

Who is currently involved in Health Intelligence in NHS Lanarkshire?

A considerable number of departments and individuals have Health Intelligence responsibilities:

- Information Management
- Quality Improvement
- Planning & Development
- Performance Monitoring
- Public Health and Health Improvement
- Pharmacy
- Primary Care Services
- Anyone conducting evaluation

A Short Life Working Group (SLWG) has been configured and will direct the implementation of a proposed virtual HI function in NHS Lanarkshire and will aim to facilitate the following key actions:

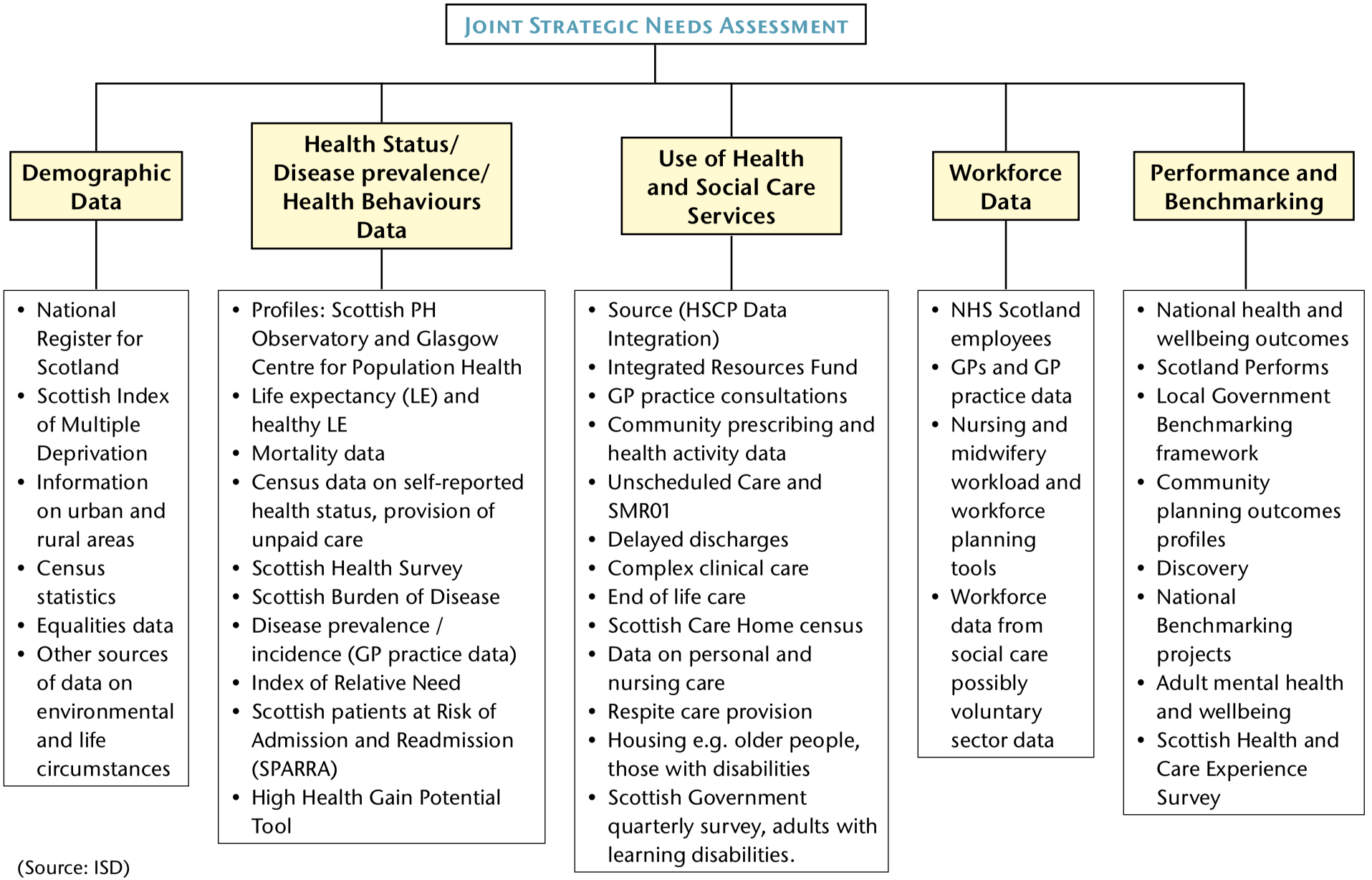
- Availability of robust data for planning, service development and quality improvement
- Co-ordination of existing HI resources to reduce duplication and ensure a greater focus on priorities
- Identification of areas for maximum benefits realization.

As a first step, the SLWG has undertaken an overview of what HI involves. This process has helped identify the people, processes and technology in context of the strategic vision for HI in NHS Lanarkshire. It is anticipated that a number of valuable outputs could emerge from this work stream to support the achievement of triple aim and value i.e. better health, better care and better value. HI helps with the understanding of the wider population needs and explores the unmet needs of specific population groups e.g. needs of vulnerable groups such as looked after children, homeless etc. It also helps appreciate the impact of various factors on demand for services and the availability or provision of services at various levels including community, primary and secondary care.

The SLWG recognises some of the problems or issues that can influence HI. One key issue is the lack of coordination with regards to the collection, analysis and reporting of data. This leads to duplication of efforts at times between departments which means there is less efficient use of limited resources. There are also issues with the quality of data available and problems of data sharing across the various partner organisations and key stakeholders. It is imperative that HI has a positive impact on the planning of services, their development and leads to improvement in the overall quality of services provided.

Joint Strategic Needs Assessment (JSNA)

A clear understanding of the health and social care needs of the population should be taken into account to help health and social care partnerships (HSCPs) to commission and deliver services that are appropriate to the needs of the local population. Therefore JSNAs would also need to take into account the wider social determinants of health such as deprivation, employment, housing and environment. (ISD, 2018). The following data sources summarise the range and types of data that are available to inform the needs of the local population. Figure 2 provides an overview of the data sources and types of data used for undertaking joint strategic needs assessments.



(Source: ISD)

Figure 2: List of Sources of Data for Undertaking a Joint Strategic Needs Assessment

Long Term Conditions (LTCs) Project

In depth analysis of LTCs was carried out to support the NHS Lanarkshire Achieving Excellence strategy by providing evidence on the potential future demand for healthcare contacts to NHS Lanarkshire. The analysis was undertaken by the Local Intelligence Support Team (LIST) of Information Services Division (ISD) in conjunction with NHS Lanarkshire Public Health Department.

The main aim of the work was to provide a high level summary of the analysis including prevalence information, number of multi-morbidities and co-morbidities. A list of 22 LTCs were considered as part of this work and comparison was undertaken with other studies (e.g. Quality and Outcomes Framework, Burden of Disease). Some key points are summarised below:

- 29% of Lanarkshire residents had two or more LTCs, this figure is the same in both North and South Lanarkshire.
- 59.4% of Lanarkshire residents over the age of 65 have two or more LTCs. This figure is 60.4% in North Lanarkshire and 58.3% in South Lanarkshire.
- Anxiety/Depression and COPD/Asthma are the most prevalent long term conditions in NHS Lanarkshire based on data reviewed (all ages), but this differs by age group.
- Heart failure and Hypertension (85%), Psychosis and Anxiety/Depression (86%) and Renal Disease and Hypertension (73%) have the highest rates of co-morbidity in Lanarkshire.
- Based on available data and statistical analysis, 19 of the 22 conditions are projected to see an increase in overall prevalence over the next five years. The three conditions that are projected to decrease are coronary heart disease, epilepsy and heart failure.

Atlas of Variation

The Scottish Atlas of Variation is another tool that has been developed by ISD to highlight geographical variation in the provision of health services and associated health outcomes. The tool will help identify the possible over-use and under-use of different aspects of healthcare and will play a significant part in achieving the principles of Realistic Medicine such as reducing unwarranted variation, harm and waste.
The initial outputs from the atlas presents activity data for three surgical procedures: elective primary hip replacement, elective primary knee replacement, and cataract surgery for 65 years and over reported at health board of residence and local authority level.
It is anticipated that further topic areas would be reviewed in due course and provide opportunities to explore and support the discussions around shifting resources to high value procedures or activities and disinvesting in others.

A link to the ISD site where the Scottish Atlas of Variation can be accessed:
www.isdscotland.org/products-and-services/scottish-atlas-of-variation/

Key Points

- Data, information and intelligence are critical to public health practice, and appropriate decision-making requires reliable health intelligence.
- PHI enhances the decision making process as it provides critical support to the interpretation of data leading to relevant actions.
- A SLWG has been configured and will direct the implementation of a proposed virtual HI function in NHS Lanarkshire and will aim to facilitate a number of key actions including coordination of resources with a greater focus on priorities and maximize benefits.

Priorities for Action

- It is essential that policy and practice in relation to healthcare is effectively informed by HI e.g. potential for the Scottish Atlas of Variation to lead to substantial improvement in the planning and delivery of services.
- The SLWG should identify key areas of work to maximize the efficiency of the production of HI and build on existing good practice.
- The work of the SLWG should be aligned with work undertaken nationally as part of the PHI commission of the PH reform.

References

1 Regmi K and Gee I. Public Health Intelligence: Issues of Measure and Method. Springer 2015.

2 Dumfries and Galloway Health Intelligence Unit Operational Plan, Nov 2012.

3 A Guide to Data to Support Health & Social Care Partnerships in Joint Strategic Commissioning and Joint Strategic Needs Assessment. ISD Scotland, April 2018. www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/docs/Guide-to-Data-to-Support-HSCPs.pdf

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1.2 Population Profile

This section describes the population of NHS Lanarkshire, and how it is projected to change over the next 20 years. The number of births and deaths registered in 2017, and data on life expectancy are reported. Mortality information for specific diseases that cause the most deaths are presented. Detailed information on each area is included in the relevant section of the Statistical Appendix which users are referred to.

Population estimates and projections

The estimated population of the NHS Lanarkshire area on 30th June 2017 was 658,130. This is an increase of 0.25% (1,640) from the previous year's estimates by National Records of Scotland (NRS).

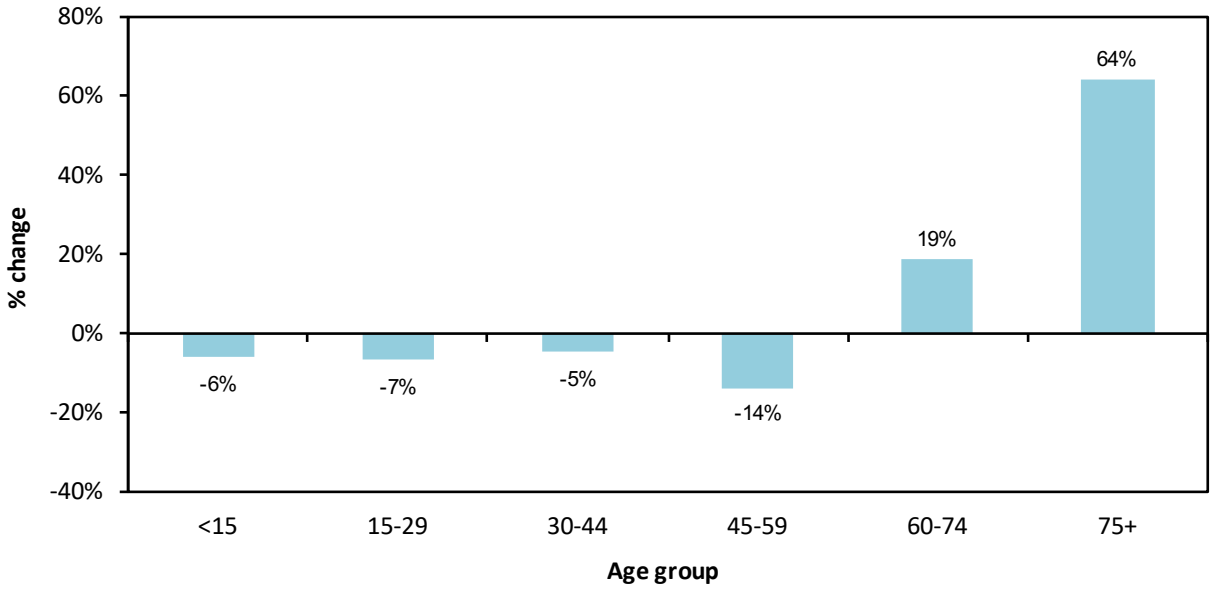
The median age of the population was 42, the same as for Scotland as a whole. Eighteen percent of Lanarkshire residents were aged less than 16, 64% were of working age, and 18% were of pensionable age. This was again similar to the Scotland average. There were 21,582 (6.8%) more women than men.

The latest projections of Lanarkshire's future population are based on estimates for 2016, and show that the population will rise about 1.5% in the next 10 years. The population is expected to rise by 1.8% overall in the 20 years from 2017. The projected change in the age structure of Lanarkshire's population between 2017 and 2037 is shown in Figure 1.

Key components in the changing Lanarkshire population are as follows:

- An increase of 26.9% in the population aged 75 and over is projected by 2027 from 2017, and a further increase of 29.2% by 2037. Overall this means a projected increase of 63.9% over the next twenty years, resulting in 32,389 more people aged 75 and over.
- The largest fall in population will be in age range 50-54, with projected decrease of 17.9% by 2037. There is estimated to be 9,310 less people aged 50-54 in the next twenty years.

Figure 1
Projected percentage change in the age structure of Lanarkshire's population, 2017–2037



More details on population estimates and projections for Lanarkshire are provided in tables A2 and A3 in the Statistical Appendix.

Births

There were 6,763 live births registered among NHS Lanarkshire residents in 2017, a decrease of 0.9% from 2016. The number of stillbirths decreased slightly from 29 in 2016 to 27 in 2017. The overall live birth rate per 1,000 women aged 15–44 was 56.0 for Lanarkshire, higher than the Scottish rate of 51.3.

Over the three-year period 2015-2017, 99.7% of all babies born alive in Lanarkshire survived their first year. There was an average of 18 deaths per year, excluding stillborn babies. These deaths were similar to the level in Lanarkshire reported previously for the period 2014–2016. The infant death rate (deaths during the first year of life) in Lanarkshire was 2.6 per 1,000 live births slightly less than the Scottish rate of 3.3 per 1,000 live births. Due to the small numbers involved, death figures among children aged one year or younger fluctuate from one year to the next.

Further information on births is shown in tables A4 and A5 in the Statistical Appendix.

Life expectancy

Life expectancy at birth for a man born between 2014 and 2016 in Lanarkshire is 76.1 years, for a woman this is 80.1 years. Historical estimates for Lanarkshire as a whole are currently not directly comparable to 2014-2016 estimates due to a difference in method of calculation, however they are available at Health and Social Care Partnership (HSCP) level.

For both North and South Lanarkshire HSCPs, life expectancy has increased in the 10 years between 2004-2006 and 2014-2016, although recent trends for Scotland and the UK as a whole indicate the increase in life expectancy has slowed. In North Lanarkshire, average life expectancy increased by 2.4 years for males (from 73.0 years to 75.4 years), and by 1.4 years (from 78.2 years to 79.6 years) for females. In South Lanarkshire, the increase for men was 2.4 years (from 74.4 years to 76.8 years) and for women this was 1.4 years (from 79.3 years to 80.7 years).

Women in Lanarkshire live on average 4.0 years longer than men. This gap between male and female life expectancy is similar to that for Scotland (4.0 years) and the UK as a whole (3.7 years).

Life expectancy is still below national levels; people in Lanarkshire live on average a year less than others in Scotland (both men and women 1.0 years less). Compared to the UK as a whole, men in Lanarkshire die 3.1 years earlier and women 2.7 years earlier. Within Lanarkshire, life expectancy in South Lanarkshire is higher than in North Lanarkshire; in the South men live 1.4 years longer and women 1.1 years longer on average than those in the North.

Further information on life expectancy is shown in table A12 of the Statistical Appendix.

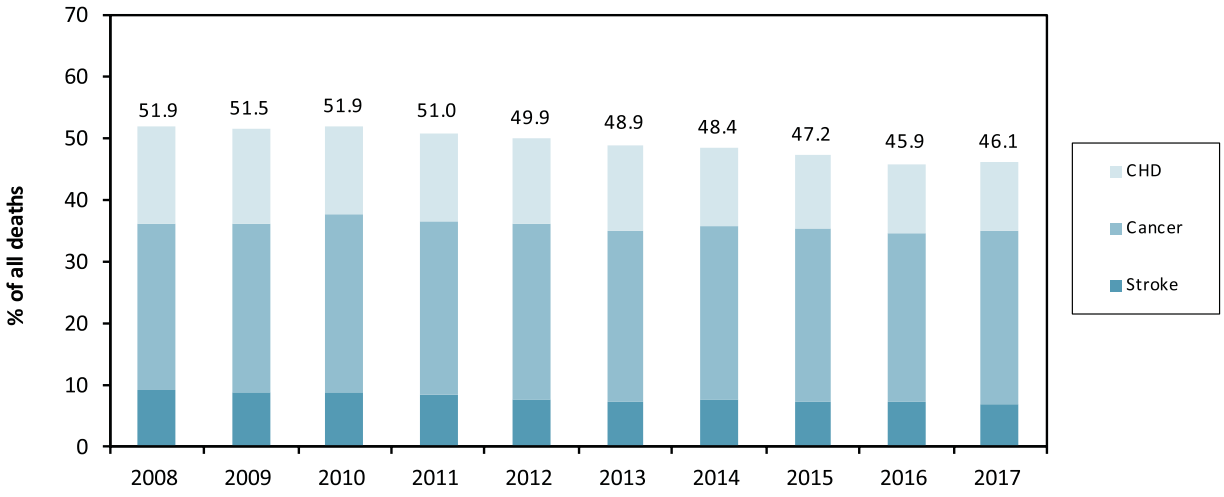
Deaths

There were 7,187 deaths in Lanarkshire in 2017, a small increase of 90 (1.3%) compared to 2016. Overall standardised mortality ratios (SMRs) in Lanarkshire remain above the Scottish average for men and women and for those under 75 years and 75 years and over. Over the last 10 years, Lanarkshire's SMR has ranged from 7.8% (in 2009) to 11.2% (in 2012) above the Scottish rate, and in 2017 was 9.3% above. The relative difference between Lanarkshire and Scotland continues.

There is wide variation in SMRs between the different localities in Lanarkshire, which reflects differences in deprivation levels. From one locality with an SMR 17.5% below the Scottish rate for females aged less than 75 years, to another locality with an SMR 40.5% above the Scottish rate for females aged less than 75 years.

There is a continuing reduction in the combined proportion of all deaths due to the so-called 'big killer' diseases of cancer, coronary heart disease (CHD) and stroke as shown in Figure 2. Since 2012, they have accounted for less than 50% of all deaths and in 2017, the proportion was 46.1%. This is mostly due to a continuous decrease in deaths from coronary heart disease and stroke, although stroke is decreasing at a slower rate. There has not been any significant change in the proportion of cancer deaths over the last 10 years. In 2017, the 'big killer' diseases accounted for 3,311 deaths: individually cancer, CHD and stroke were responsible for 28.0%, 11.2% and 6.9% respectively of all deaths in Lanarkshire. Respiratory disease was also a significant cause of mortality in 2017, with 12.6% of all deaths.

Figure 2
Proportion of deaths caused by the 'big killer' diseases in Lanarkshire, 2008–2017



Source: National Records of Scotland

More detailed information on mortality is provided in the tables and charts in A6–A11 of the Statistical Appendix.

Key Points

- Lanarkshire's population increased from 2016 to 2017, and is projected to rise further in future years. Population projections for Lanarkshire indicate that there could be 32,389 more people aged 75 and over by 2037, an increase of 63.9%.
- There were 7,187 deaths in Lanarkshire in 2017. Deaths rates in Lanarkshire remain above the Scottish average.
- In 2017, less than half of all deaths in Lanarkshire were due to the so-called 'big killer' diseases of cancer (28.0% of all deaths), coronary heart disease (CHD) (11.2%) and stroke (6.9%). The proportion for cancer however has not changed in the last 10 years.

Priorities for Action

- Preparations need to be made for the predicted increase in population of those aged 75 years and over in the next 20 years.
- It is important to maintain the declining trend noted in deaths from the big killer diseases.

The statistics in this section were obtained from local analysis of data supplied by National Records of Scotland (NRS) or directly from NRS published online at www.nrscotland.gov.uk/statistics-and-data and SIMD16 published online at www.gov.scot/Topics/Statistics/SIMD.

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2.1 Investigating and Preventing Cases and Outbreaks Of Infections and Illnesses

Community Infection Control and Management of Outbreak Situations

The Health Protection Team (HPT) remit covers multiple roles including; communicable disease management, environmental health/hazards, and emergency planning. Along with proactive preventative work, the HPT will respond to situations as they arise which require management such as Community Infection control and outbreaks. These community settings include all Lanarkshire schools, nurseries, hospice and care homes.

The HPT role includes supporting and advising care home staff on Infection Control Policy, this is heightened during periods of infection outbreaks. There is a seasonal increase in the number of gastrointestinal and respiratory outbreaks reported and managed by the HPT over the winter months. This was particularly evident in January 2018 where the number of outbreaks in care homes totalled 18 in comparison to 6 the previous year and less than 5 in 2016. Pressures were felt across all healthcare settings within NHS Boards across Scotland during the winter period 2017–18, due to increasing demand on services from the public. This also had an impact on community care facilities including residential care homes. To ensure the HPT are proactive in their planning for the next winter period, changes and improvements were made in the way the HPT supports care homes, to facilitate efficient and effective steps to manage outbreak situations.

Care home outbreaks reported to the HPT in NHS Lanarkshire 2015/16–2017/18

Month	2015/16	2016/17	2017/18
October	5	9	8
November	<5	5	8
December	5	8	5
January	<5	6	18
February	5	<5	<5

Across the three acute hospital sites of University Hospital Wishaw, University Hospital Hairmyres and University Hospital Monklands there are 1,653 inpatient beds. Due to the ageing population, this has seen a rise in the number of people requiring accommodation within residential care homes. Health Protection Scotland (HPS) report that there are 1,616 Scottish care homes offering 44,887 places by 580 different service providers. Within Lanarkshire there are 92 care homes with 4,360 resident places.

Regardless of the size, if a care home population has a situation whereby two or more residents develop symptoms which could be from a source of infection they must report this to their Public Health Department/HPT and the Care Commission. On receiving this information from the care home, the HPT will commence a risk assessment of the situation in line with outbreak management policy and standard infection control guidance[1]. From notification of the outbreak, the HPT will liaise daily with the care home staff until the outbreak is concluded.

This daily contact will include; monitoring the spread of infection and assessing the situation should further residents become symptomatic from the initial onset date. Advising on collection of individual samples from symptomatic residents for testing through the local or regional laboratories to detect the cause of infection and obtain a diagnosis of the symptoms; ensuring appropriate infection control measures are being applied to minimise potential spread; advising on terminal and deep cleaning[2,3,4,5,6,7]. In addition to the advice given, the team may also arrange to make a visit to the care home to meet the care home manager to assess and discuss the care home's individual and personal circumstances and premises. The HPT will advocate implementation of national infection control standards and provide appropriate materials to support and guide care home staff[1,8].

Winter Planning

Multi agency coordination and communication during winter pressures between the HPT, acute services, primary care, social care and council staff is paramount in ensuring efficient management, containment and conclusion of outbreak situations. At the outset and end of a notified outbreak, the HPT provides a written report for circulation to relevant NHS Lanarkshire (NHSL) multi-disciplinary professionals outlining the details and management intervention of the situation. In addition to this the HPT provides a daily update on restrictions or open outbreak situations on care homes to the NHSL Infection Prevention and Control Team (IPCT) to facilitate more effective and efficient planning of admissions and discharges between acute hospital sites and care home facilities.

Understanding of the chain of infection is key to implementing measures to prevent and control. Infectious diseases can spread in a variety of ways: through the air, from direct or indirect contact with another person, soiled objects, skin or mucous membrane, saliva, urine, blood and body secretions and through contaminated food and water. Relevant to this is the appreciation of the client group within a care home setting who are at an increased risk following any exposure to an infectious agent, due to their weakened vulnerable physical defences, age and any underlying health conditions[2,7,9,10].

Infection control is the responsibility of all health care staff. The HPT offers infection prevention and control guidance, advice and support to all community settings within Lanarkshire, including its 92 care homes. This support includes infection control training sessions provided by the HPT for care home staff. These interventions intend to promote and improve quality of care and facilitate understanding and use of standard infection control procedures that are integral to community care workers' roles.

Community Infection Control Education Resources

The Scottish Government[11] recommends that each care home should have an infection control champion. NHS Education Scotland (NES) provides training for care home staff identified as infection control champions to enable them to fulfil this role. The HPT carries out training for the champions' role across North and South Lanarkshire care homes on behalf of NES.

The Scottish Government assessed the way in which adult care homes were carrying out its infection control requirements. It noted some challenges staff had in being able to access up to date policies and protocol and stated "Access to legislation and guidance is essential for the service to carry out its statutory and mandatory duties and maintain best practice".

Research amongst care home workers found that although 96% of respondents agreed to the importance of the use of standard infection control practice, only 59% could identify routine policy or procedure within their area of employment stating inconsistency of good standards. The research found that lack of basic hand washing was highlighted as a particular area of concern[11]. The HPT offers hand hygiene training to care home staff utilising an ultra violet light box. This training resource is a valuable part of raising conversation and insight on basic hand hygiene.

Lanarkshire Outbreak Checklist Tool

The HPT has devised an 'aide memoire' Outbreak Tool for use by the care home staff. This was piloted in care homes during respiratory and gastrointestinal outbreaks. Care home staff reported that this checklist proved to be useful in supporting and guiding them during a period of increased workload, staff sickness and shortage where relevant infection control steps had the potential to be missed during these busy and challenging situations. This tool was ratified by the NHS Lanarkshire Infection Control Committee. It will now be offered and advocated by the HPT to care home staff when they contact the Public Health Department to report an outbreak situation.

Conclusion

The HPT will continue to work in collaboration with care home staff to support their community infection control needs, including education and outbreak management.

There will be annual infection prevention and control support visits to each of the Lanarkshire care homes by the HPT to offer current infection control guidance tailored to each establishment's individual needs.

Key Points

- People in Lanarkshire are living longer meaning a higher demand for places within care homes[12]. Winter pressures such as during the main influenza and norovirus season can put a strain on acute health care and community services, including care homes.
- Close working relations organisationally and professionally between the HPT and colleagues within the care home liaison nurse team, acute hospital staff, primary care and care home staff is paramount in providing an optimum partnership approach. Effective public health follow-up and situation management and support by the HPT for Care Home Managers and staff during care home outbreaks will optimise infection prevention and control intervention application.
- Successful implementation of a ratified outbreak record tool approved by the Lanarkshire Infection Control Committee will be used as an aide memoire by care home staff. This tool will guide staff through infection control steps to proactively prompt actions and steps to support the containment of and conclusion to outbreak situations.

Priorities for Action

- The HPT will continue to offer infection prevention and control support to community settings including care homes in varying ways relevant to their individual needs. This may be during outbreak situations or in offering advice and guidance on preparedness prior to main seasonal periods, such as the winter months, where there are increased outbreaks amongst the elderly vulnerable population and the staff who care for them.
- Continued multi agency co-ordination of acute and elderly community healthcare services during winter pressures such as flu and norovirus season is essential for optimum management and support at peak times.
- A package of training and information resources will continue to be implemented and developed and made available by the HPT to accommodate education and support for all multi-disciplinary staff within Care home settings around Infection Prevention and Control.

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2.2 Population Screening

Introduction

NHS Lanarkshire strives for good health and wellbeing for all of the people of Lanarkshire. Picking up disease early is an important part of this work. Evidence based population screening programmes allow the early detection of disease before symptoms develop. This can lead to quicker and better treatment with improved outcomes.

Although screening is not foolproof (some cases of disease will not be picked up by the test and some people with no disease will have a false positive screening test), they are an effective way of identifying people at high risk of particular conditions.

A key challenge of population screening is ensuring all individuals are adequately supported to make an informed decision about whether or not to take part. Ensuring that screening inequalities are reduced is equally important; ie focusing efforts on removing any unwanted barriers that may stop people engaging with the offer of screening or participating in screening when they would like to. It is important to make screening accessible to those groups who are seldom heard or easily ignored.

NHS Lanarkshire provides all of the Scottish population screening programmes. Figure 1, Screening Programme Highlights, shows the target population for each programme as well as uptake and headline outcomes.

What's new?

- The screening team within NHS Lanarkshire's Public Health department has introduced monthly screening "huddles" with the Director of Public Health to discuss issues and provide assurance that all programmes are working effectively. Six monthly highlight reports are prepared for the Corporate Management Team and annual reports go to the board's Population Health & Primary and Community Services Governance Committee
- The Scottish Screening Committee commissioned a review of screening in Scotland. This is currently underway, focusing on governance, leadership, commissioning and information technology. It is due to report in late 2018.
- Quality assurance for screening programmes is essential and Healthcare Improvement Scotland is currently reviewing the existing quality standards across all Scottish screening programmes.
- The new bowel screening test was introduced in November 2017. This test is simpler to use than the previous one and early indications suggest its introduction has led to improved uptake nationally and locally.
- A new IT system for Diabetic Retinopathy Screening was introduced across Scotland in April 2017. One of the benefits of the new system is that it allows more detailed examination of screening uptake rates, allowing health improvement interventions to be targeted to areas and groups of people with the lowest uptake.
- Healthcare Improvement Scotland conducted a review of Abdominal Aortic Aneurysm (AAA) screening in Scotland in 2017, in which NHS Lanarkshire performed well.

Figure 1 Screening Programme Highlights

Screening Programme	Target population	Denominator and Time Frame	Standard	Uptake	Outcomes[1]
Universal Newborn Hearing Screening (UNHS)	All newborn babies born to Lanarkshire residents in 2016–2017 or moving into Lanarkshire under the age of 12 weeks.	6,955 newborn babies April 2016 – March 2017	98% of babies should have completed the hearing screen by 10 weeks.	99.3% babies completed screen by 10 weeks.	5 moderate to severe hearing losses detected through screening.
Newborn Bloodspot Screening	All newborn babies born to Lanarkshire residents 2016–17.	6,854 newborn babies April 2016 – March 2017	99.5% of infants who have undergone screening tests have a screening result available or are recalled for repeat testing by 20 days of age.	99.9%	0 babies with PKU[2], <5 babies with CF[3], 6 babies who are carriers of CF, 6 babies with CHT[4], 8 babies with sickle cell carrier status, 0 babies with sickle cell disorder, 0 babies with MCADD[5], 5 babies who are carriers of a haemoglobinopathy disorder other than SCD[6], 0 babies with haemoglobinopathy disorder other than SCD.
Diabetic Retinopathy Screening	Patients with diabetes aged 12 years and over.	35,277 April 2016 – March 2017	Nationally agreed Key Performance Indicators (KPIs), including minimum uptake of 80% uptake.	69% Implementation of new national IT system required period of down-time which reduced uptake nationally.	Currently unavailable.
AAA Screening	Men aged 65 years	3,595 men aged 65 April 2016 – March 2017	Nationally agreed KPIs, including minimum uptake of 80% uptake.	82.8%	15 large aneurysms detected and referred for treatment.
Breast Cancer Screening	Women 50–70 years	79,369 women 8th Screening Round April 2013 – March 2016	Nationally agreed KPIs, including minimum uptake of 70%.	68.4%	Currently unavailable.

Screening Programme	Target population	Denominator and Time Frame	Standard	Uptake	Outcomes[1]
Bowel screening	All men and women aged 50 to 74	204,346 men and women, 1/5/15 to 30/4/17, Published February 2018	Nationally agreed KPIs, including the target uptake of 60%.	51.7% vs 56% nationally	Meets all KPIs apart from uptake and time to scope for those who need investigation after screening.
Cervical screening	All women aged 25–64	182,235 women Data from Sept 2017, annual uptake to 31st March 2017	Nationally agreed KPIs, including the target uptake of 80%.	74.5% vs 73.4% nationally	Meets all KPIs apart from uptake.

1 Actual numbers where cases number less than 5 individuals are censored;
2 Phenylketonuria;
3 Cystic Fibrosis;
4 Congenital Hypothyroidism;
5 Medium-chain-acyl-coenzyme A Dehydrogenase;
6 Sickle Cell Disorder

Key Points

- Uptake rates for the Newborn Screening Programmes and Abdominal Aortic Aneurysm Screening are good however uptake rates for Diabetic Retinopathy Screening and the cancer screening programmes do not meet the national targets.
- There is a need to increase screening uptake in areas with high levels of socio-economic deprivation and in groups that experience other barriers to screening.
- The governance of screening is a priority at both a national and local level. The national screening review will address any shortcomings in current arrangements.
- Although the new bowel screening test appears to have increased uptake locally and nationally, pressure from the increased demand is contributing to increases in waits for colonoscopy for individuals with a positive screening test. Services have been re-designed to enable more accurate prioritisation of people presenting with possible symptoms of bowel cancer which should release some of the pressure on colonoscopy services more generally.

Priorities for Action

- Continue to support the national and local focus on inequalities within screening, working alongside Health Improvement and Cancer Research UK colleagues. Scottish Government-funded projects to reduce inequalities in uptake are currently being evaluated.
- Continue to monitor colonoscopy services to ensure timely investigation of individuals with positive tests.
- Await the findings of the national Screening Review and implement the recommendations locally.

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3.1 Tackling Inequalities in Mental Health and Wellbeing Through Physical Activity – Clyde United Community Football Team

Good mental health is essential in achieving and improving outcomes for individuals, families and communities and, as such, underpins successful delivery of a wide range of national priorities and strategy commitments. The Good Mental Health For All[1] strategy brings together a vision of a mentally flourishing Scotland and sets it in the context of current thinking and developments to address health inequalities, reinforces the value of a coordinated, collaborative approach across services, sectors and communities towards improving and tackling inequalities in mental health. Poor mental health is a significant public health challenge. At any given time, approximately one in six adults in Scotland experiences a common mental health problem e.g. depression and anxiety disorder.[2]

The Mental Health Foundation have produced current research and data to get a clear picture of what mental health issues are, who they affect, and what works to build a mental healthy society. Current thinking suggests that the link between social status and mental health problems is the level, frequency and duration of stressful experiences and the extent to which these are buffered by social and individual resources and sources of support. These stressful experiences (including poverty, family conflict, poor parenting, addictions, childhood adversity, unemployment, chronic health problems and poor housing) occur across the life course and contribute to a greater risk of mental health problems if they are multiple in nature and if there are no protective factors to mitigate against their negative impact.[2]

Local strategic partnerships have an important role to play. Actions across the life course and in all policy areas can help prevent mental health problems and reduce mental health inequalities. These actions need to run alongside and complement early interventions, treatment and care of people with mental health problems as reflected through the priorities outlined in the Scottish Government's Mental Health Strategy: 2017–2027.[3]

Physical activity

- Look after your mental health with exercise[4] explains the benefits and importance of movement both for physical and mental health and well-being.
- Research indicates that modest amounts of exercise can make a difference. No matter age or fitness level, exercise can be used as a powerful tool to improve well-being.
- Exercise releases endorphins a powerful chemical in the brain that energize your spirits and makes you feel good. A variety of physical changes in the brain are also released, including neural growth, reduced inflammation, and new activity patterns that promote feelings of calm and well-being.
- Exercise, play and sport all have a role in making activity fun. Sporting activities such as football can be a great way to help individuals exercise whilst having fun and interacting with others.
- Exercise can also serve as a distraction, allowing you to find some quiet time to break out of the cycle of negative thoughts that feed depression.
- Physical activity helps to relax the muscles and relieve tension in the body. Since the body and mind are so closely linked, when the body feels better so, too, will the mind.

Good Mental Health For All in North Lanarkshire 2018–2023

A recent North Lanarkshire action plan, Good Mental Health For All in North Lanarkshire 2018–2023 focuses and aims to empower localities to drive local action alongside the communities they support. It is critical we adopt a person-centred approach to promote mental well-being and prevent mental health problems.

Clyde United

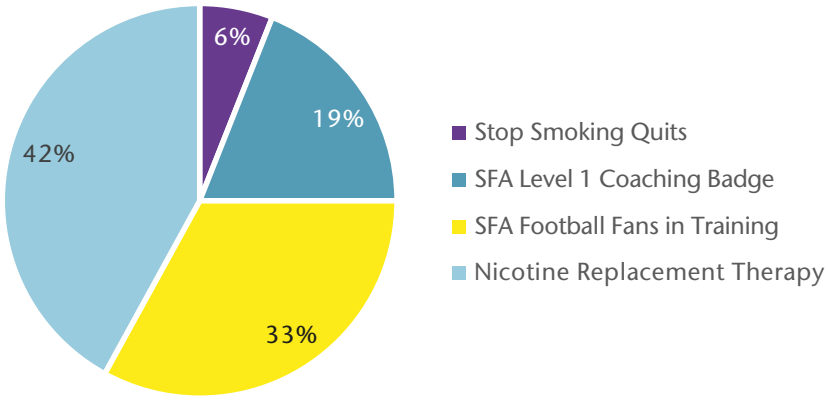
Clyde United is a community mental health and addiction recovery football team which was established in September 2016 after a lack of physical activity opportunities within the north locality was identified. The team are supported by a joint partnership between Health and Social Care Partnership North Lanarkshire; NHS Lanarkshire (NHSL) Health Improvement, Cumbernauld & Kilsyth Community Mental Health Team, Addiction Recovery Team, North Lanarkshire Leisure and Clyde FC Community Foundation. Adopting a person centred approach to using football as a therapeutic activity helps individuals achieve their own health and well-being outcomes linking into the principles of the New Economics Foundation Five Steps to Well-Being; Connect, Take Notice, Learn, Give and Be Active. www.gov.uk/government/publications/five-ways-to-mental-wellbeing

The programme aims to:

- Build self-esteem, confidence and positively impact on mental health and addiction concerns
- Reduce isolation by integrating individuals into their community
- Increase the up-take of mainstream physical activity opportunities
- Increase opportunities for employment and/or further education
- Participate in various league matches both within and out with Lanarkshire
- Participate in SFA coaching certification course
- Develop a sustainable partnership programme

Approximately 16 individuals are registered with the programme. Seven individuals have completed their level 1 SFA Early Touches coaching certification facilitated by North Lanarkshire Leisure. Twelve individuals completed the twelve week Football Fans in Training course facilitated by Clyde FC Foundation to encourage participants to develop self-management skills for healthier lifestyles choices e.g. nutrition, physical activity and awareness of alcohol units and weight gain. Fifteen men signed up for nicotine replacement therapy and <5 men continued to successfully quit smoking after participating in a 12 week programme facilitated by NHSL smoking nurse specialist (see figure 1).

Figure 1: Individuals who have participated in other interventions



Jointly we have achieved many milestones for the individuals within our programme and have produced a video case study (link available on request) highlighting one individuals journey from addiction into football and then onto further education aspiring to be a mental health nurse. The following case study outlines the difference the programme has made both to one of the players and his mum who is his carer:

"My son has attended Clyde United Football for over a year, he has had a mental health condition for all of his working life and being his mother, I have found this to be a very trying and difficult time for myself and him. During his life he has had limited support that suits his hobbies and goals.

The Clyde United programme started and my son agreed to attend as he was attracted to the link with a Scottish Professional Football League (SPFL) club and the opportunity to play in a league along with being coached by accredited professional football coaches. From the very beginning he has been a different person attending this group. The structure and training involved has reduced his anxiety and anger issues, he comes home after training and games physically and mentally tired which gives me respite and an opportunity to reduce my caring role for him. Due to attending this programme, he has started to look after himself more and is less isolated, this has allowed me to get on with activities I used to do."

On 2 February 2018 a friendly football match took place between MSPs and Clyde United at Broadwood Stadium, Cumbernauld. The match was a great success and all those who participated enjoyed the experience. The MSPs who participated agreed that the programme was a model of good practice because of the way football has been used to help support clients recovery and increase levels of physical activity and they will be sharing it nationally with others within Parliament.

Way Forward

Additional funding until March 2019 has been agreed from both the Health and Social Care Partnership and Community Engagement Fund to continue offering weekly coaching sessions and for the individuals to participate in the national Scottish Football Association Disability League. Continue to increase the number of referrals to the programme and support other individuals to increase their levels of physical activity by participating in therapeutic football sessions.

Key Points

- Poor mental health is a significant public health challenge. Promoting good mental wellbeing as part of prevention and early intervention will support complementary treatment and recovery from mental health problems.
- Mental health problems are strongly linked to health and social inequalities.
- A person's position in society plays an important part in their mental health with less advantaged people having greater experience of poor mental health.

Priorities for Action

- Integrate mental health into all policies at a national and local level.
- Use approaches that avoid relying on opting in, maximise income and provide for those with the greatest need within universal services. These actions are likely to be the most effective in reducing mental health inequalities.
- Tackle the social and health inequalities experienced by those with mental health problems, including those with long-term physical health conditions.

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4.1 Chronic Pain: Strategic Approaches to Improving Services

Introduction

Heightened attention has been given to chronic pain service provision since the publication of the McEwan report in 2004.[1] This focus still continues, with the establishment of the National Advisory Committee on Chronic Pain in 2017, and recent publications around chronic pain health care needs assessment,[2] prescribing,[3] and management in children and young people.[4]

Chronic pain is pain that has lasted for three months or more, despite treatment.[5] In Scotland, between 10 to 14% of adults have moderate to severely disabling chronic pain.[6] Chronic pain may occur on its own, but usually people with chronic pain have other conditions too.[7] People can experience chronic pain for a long time, with 21% of respondents to a European survey reporting having experienced pain for 20 years or more.[8] People with chronic pain are seven times more likely to leave their job than the general population due to ill health.[9] Furthermore in Scotland among people who died from a drug related death, there has been an increase in the number reported as having chronic pain, 2% (12 people) in 2014, 6% (37 people) in 2015, and 11% (90 people) in 2016.[10]

There is limited statistical information available on uptake of interventions to manage chronic pain, but where there is information there is variation in availability and use of these interventions between health board areas.[2] Within Lanarkshire:

- The Pain Association runs self-management support groups in three locations;[11]
- There are high level of prescribing of pain medications, and it is increasing for some medications;[3]
- In 2016/17, 1.71 people per 1,000 Lanarkshire population were new attendees to the hospital pain clinics2 and over 99% of them were seen within 18 weeks of referral.[12]

Managing chronic pain

The current Scottish Service Model for Chronic Pain[13] highlights a tiered approach to services, where patients are able to move between tiers based on need. The majority of people with chronic pain are able to manage the pain themselves, with relaxation, activity, and / or non-opioid pain killers. Alternatively, for people with moderate to severe pain, primary care (GPs, physiotherapists and / or pharmacists) can help support people by providing advice, linking to self-management support, access to exercise programmes, medications, or alternative therapies. Few patients should need to access specialist multi-disciplinary hospital based services, but if so, alternative self-management or other interventions are available, to help manage patients' pain. A small number of patients require access to highly specialised services, which are available outside of Lanarkshire. This tiered approach fits with several principles of the government policy *Realistic Medicine*.[14]

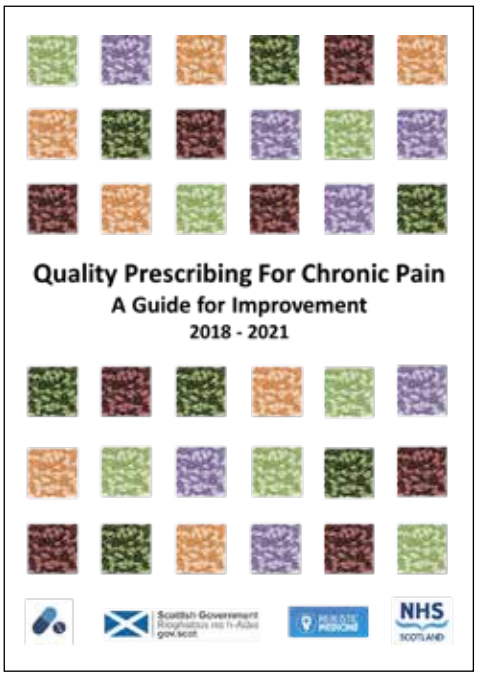
NHS Lanarkshire's strategic actions in 2017/18 to review and improve services

Chronic pain has been a key priority area for NHS Lanarkshire in 2017/18. Several work programmes have been underway to review and improve services. These include:

- An action learning set to increase understanding of expenditure and activity in the use of pain medications in Lanarkshire. Their work highlighted that there was higher prescribing

costs of pain medicines (analgesics, amitriptyline, pregabalin and gabapentin) in general practices in more deprived areas.

- The Prescribing Quality & Efficiency Quality Theme Working Group on Analgesia (pain medication) was set up, with a key aim being to improve formulary-compliant, clinically sound, cost-effective prescribing in NHS Lanarkshire.
- An examination of local data was conducted in relation to hospital services and findings fed back at a stakeholder workshop in February 2018. The workshop drafted an action plan with several service improvement suggestions, and a chronic pain coordinator with service improvement background has been appointed to help coordinate the highest priority actions.
- Contribution to the creation of the *Quality Prescribing for Chronic Pain, A Guide for Improvement 2018–2021*[3] and 'Health care needs assessment of adult chronic pain services in Scotland'.[2]



Key Points

- Many adults in Lanarkshire are suffering from chronic pain.
- Many people in Lanarkshire are prescribed pain medications, which can have side effects, however other interventions exist to help manage pain.
- Nationally an increase in chronic pain has been reported in those who die from a drug related death.

Priorities for action

- Ensure primary care staff are aware of the alternative interventions to pain medication, that can be accessed by patients in Lanarkshire.
- Ensuring shared patient decision making when starting on a medication, with consideration of the potential risks and benefits, and having a review plan to consider continuation of that medication. Ensuring regular reviews for patients already on pain medications.
- Consider a joint pain and addictions clinic, after review of the current pilot clinics running for people with general dependence on opiates.

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4.2 Distress Brief Intervention: Building Connected Compassionate Support

Introduction

Distress Brief Interventions (DBIs) are an innovative way of supporting people in distress. The DBI approach emerged from the Scottish Government's work on the *Suicide Prevention Strategy*[1], new *Suicide Prevention Action Plan*[2] and Mental Health Strategies[3,4]. The need to improve the response for people presenting in distress (particularly for people who do not always meet the threshold or criteria for traditional support) has been strongly advocated by people who have experience of distress and by frontline service providers[5] and is supported through a review of available literature.[6] This led to the Scottish Government establishing a DBI programme, which is initially being piloted over 53 months from November 2016 to March 2021.

North and South Lanarkshire Health & Social Care Partnerships (HSCPs) were jointly awarded host status to oversee the implementation of the DBI programme on behalf of the Scottish Government, following a competitive expression of interest process.

Lanarkshire also joined Aberdeen, Inverness and Scottish Borders as one of four DBI pilot sites across Scotland.

Distress Brief Intervention
Consistent Compassionate Support

Lanarkshire's central role in DBI is testament to the strength of partnership working and a shared commitment to build connected compassionate support.

Distress Brief Intervention

The overarching aim of the DBI Programme is to provide a framework for improved inter-agency co-ordination, collaboration and co-operation across a wide range of care settings, interventions and community supports, towards the shared goal to provide a compassionate and effective response for people in distress.

DBI is a two-level, time limited and supportive problem solving contact with a person in distress. DBI level 1 is provided by trained frontline staff working in Emergency Departments, Police Scotland, Scottish Ambulance Services and primary care. This involves a compassionate response, signposting and offer of referral to a DBI level 2 service. DBI level 2 is provided by commissioned and trained third sector staff who contact the person within 24-hours of referral and provide compassionate, community based problem solving support, wellness and distress management planning, supported connections and signposting for a period of up to 14 days.

For the purpose of DBI, distress is operationally defined as 'An emotional pain for which the person sought, or was referred for, help and which does not require (further) emergency service response'. DBI does not replace existing arrangements for anyone in distress who requires further medical treatment; it is an additional option for frontline staff.

The definition of compassion which underpins DBI is described as, "a sensitivity to distress together with the commitment, courage and wisdom to do something about it"[7].

DBI infrastructure

A DBI Central Team of Programme Manager, Principal Data Analyst and Administrator has been established in Lanarkshire to effectively oversee the national programme. The Scottish Government has established a national DBI Programme Board. Each of the four pilot sites, including Lanarkshire, has established DBI Implementation Groups. This structure has ensured that key stakeholders are involved and that local provision is embedded and connected with, and respectful of, related and complimentary programmes.

The programme board has set out the time-line, which synchronises all programme elements. Improvement science underpins the approach through controlled and incremental implementation, which enables learning and continuous improvement throughout the duration of the programme with a more accurate picture of real time demand and capacity.

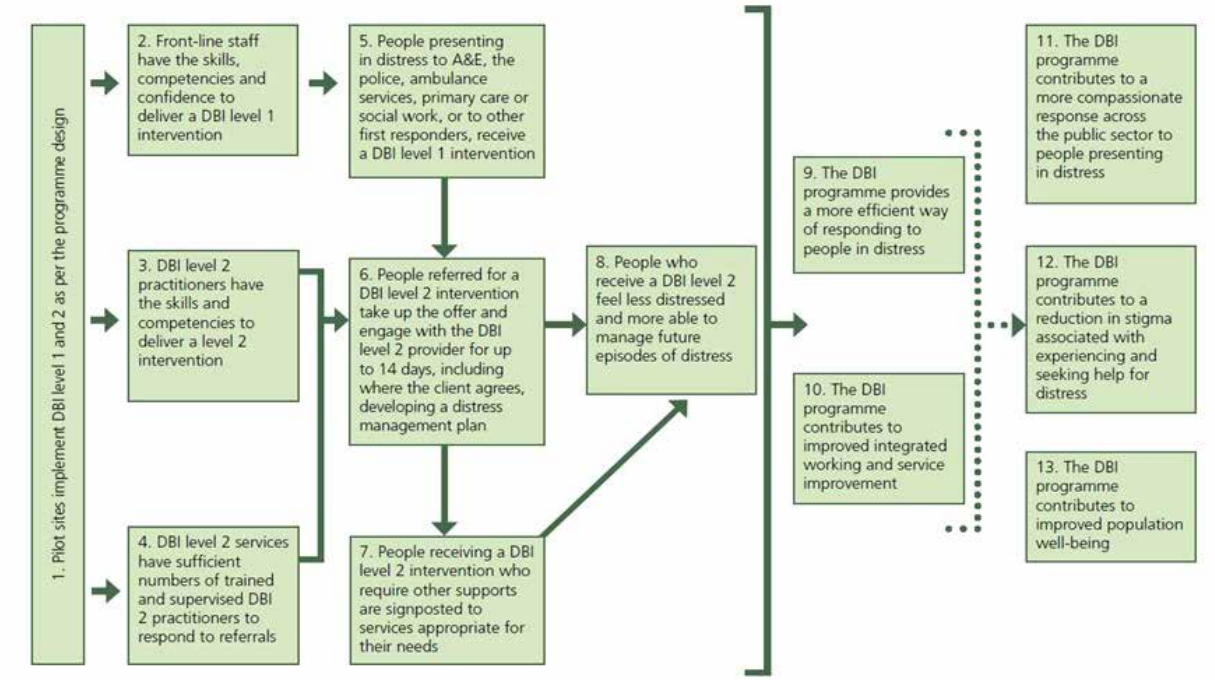
The University of Glasgow's Institute of Health & Wellbeing has led a systematic programme of developing, testing and refining both the DBI level 1 on-line and face to face training and DBI level 2 face to face training.

The collaborative infrastructure, tools and systems have been established, in support of the effective delivery of DBI, respecting information governance requirements.

A website has been established to provide ease of access to information related to the DBI programme for those involved and the broader community of interest: www.dbi.scot.

The DBI programme is being independently evaluated through a collaboration of the Nursing Midwifery and Allied Health Professions Research Unit at the University of Stirling, ScotCen Social Research Institute, The Mental Health Foundation and Glasgow Caledonian University. This is informed by a DBI evaluability assessment.[8] Please see figure 1 below for DBI Theory of change, extracted from the DBI evaluability assessment.

Figure 1: DBI Theory of change



Progress

The deliberate controlled testing of the training, infrastructure and systems in support of DBI took place in Lanarkshire from June 2017 to October 2017, focussed on the Emergency Department at University Hospital Hairmyres and the Primary Care Out of Hours hub in Hamilton. The vital learning from this controlled testing has greatly supported the incremental implementation of DBI, which now sees all four pilot sites across Scotland delivering DBI since October 2017 and all four key front-line DBI level service pathways (Emergency Departments, Primary Care, Police Scotland and Scottish Ambulance Service) now open across all pilot site regions.

All four pilot sites now have their third sector DBI level 2 providers in place, with Lanarkshire Association for Mental Health (LAMH) & The Richmond Fellowship delivering the service in South Lanarkshire and Lifelink delivering it in North Lanarkshire.

The multi-agency Lanarkshire DBI Implementation Group continues to incrementally implement DBI across localities and front-line pathways.

Experiences and outcomes

The programme is at an early stage, with an independent evaluation commissioned and due to report by March 2021. However, the encouraging early observations captured from routine data collection are shared below.

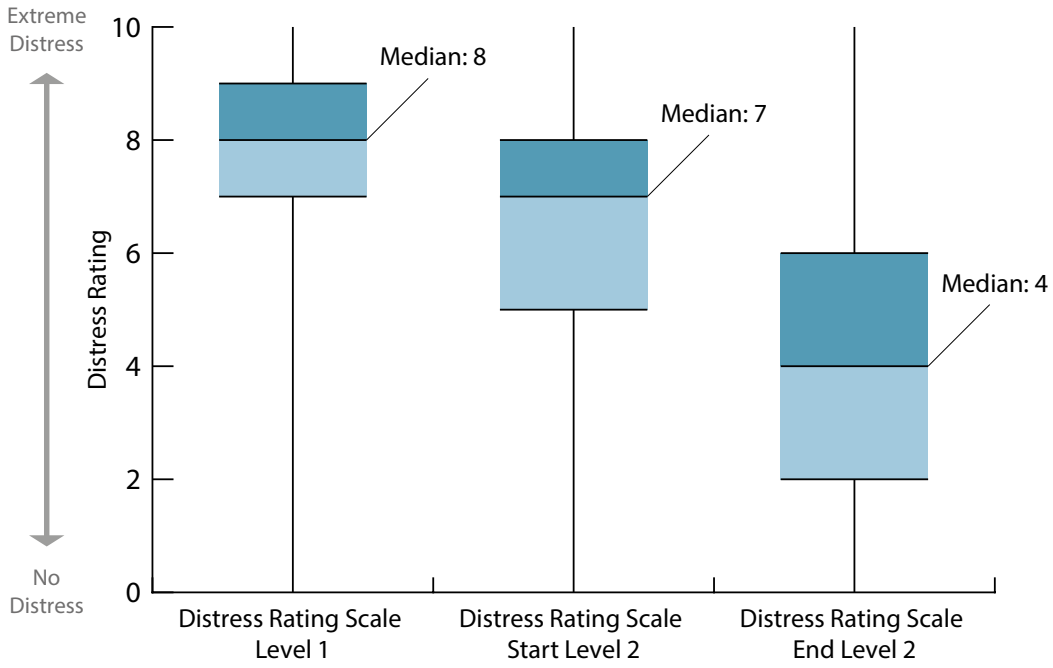
Over 900 staff have been trained across all four key frontline DBI level 1 service pathways (Emergency Departments, Primary Care, Police Scotland and Scottish Ambulance Service) across the four pilot areas. Over 50 staff across the six DBI level 1 providers have been trained in DBI level 2. Across measures aligned to individual learning outcomes, controlled testing phase learners reported statistically significant increases in self-assessed confidence, skills and knowledge (pre to post training). The staff delivering both level 1 and level 2 DBI report improvements in collaborative working and an improved culture of compassion. Staff also report improved staff experience through being able to meet the needs of people in distress through the additional DBI option.

Detailed results are presented for all referrals up to the 24th May 2018, at which time there were a total of 606 referrals to the DBI level 2 service, of which 258 (43%) were Male and 348 (57%) were Female. For those referred for DBI level 2 support:

- 100% were contacted within 24hrs of referral.
- 79% of the appropriate concluded cases engaged in at least one initial supportive intervention.
- 69% of the appropriate concluded cases engaged in further DBI support beyond the initial supportive intervention.
- Using the Scottish Index of Multiple Deprivation 74% of referrals were from the five most deprived deciles (the equivalent figure was 79% for Lanarkshire).
- 24% self-reported being under the influence of alcohol/ substances at point of referral (the equivalent figure for Lanarkshire was 30%).
- Key presenting problems included stress, low mood, thoughts of suicide and self harm.
- Key contributory factors included relationship difficulties, alcohol / substance use, bereavement, life coping issues and money worries.

As part of the DBI level 2 intervention a number of evaluation and outcome questions are asked as standard in a DBI evaluation outcome questionnaire to support continuous reflection and improvement. The early observations show average reductions in levels of distress from 8 out of 10 (extreme distress) at time of referral to 4 at last contact. Please see figure 2. In addition, average findings show that those who have received DBI, report experiencing very high levels of compassion both at level 1 frontline services and level 2. They also feel that they are working towards their own goals and feel more able to manage their immediate distress or situation and more confident to manage potential future distress. Those who had previously presented in distress prior to the implementation of DBI also subjectively reported a much improved experience since DBI has been introduced.

Figure 2: Median distress thermometer rating at referral, first contact and final contact



Conclusion

DBI is being grown incrementally through a strong spirit of collaboration and commitment to connected compassionate support.

DBI helps create the conditions for frontline staff to deliver compassionate support and people in distress to experience it.

Key Points

- The need to improve the response for people in distress is strongly advocated by people who have experience of presenting in distress and frontline services.
- The Scottish Government's four year DBI programme (November 2016 to March 2021) aims to build connected compassionate support through a collaborative culture.
- DBI training builds knowledge, skills and confidence in frontline staff, who have referred over 1,000 people in distress for DBI level 2 support (24 hours to 14 days), with those who receive the support reporting reductions in distress, improved outcomes and experiences.

Priorities for action

- Continue to incrementally implement DBI whilst ensuring fidelity to the DBI specification.
- Support the independent evaluation of DBI to fully understand its benefits in terms of: experience for the person in distress, staff experience, improved collaborative working, efficiency and effectiveness.
- Consider the reflections, lessons learned, outcomes and recommendation that come from the DBI interim and final reports to continually build connected compassionate support in Lanarkshire.

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Dr Linda Findlay, Medical Director, South Lanarkshire Health & Care Partnership
Mrs Lorna Bruce, Senior Nurse/Distress Brief Intervention Lanarkshire Co-ordinator
Distress Brief Intervention Lanarkshire Implementation Group

Scottish Government published a new Oral Health Improvement Plan (OHIP)[1] in

4.3 Priority Setting Frameworks and Decision Making

Introduction

There is an ever increasing need to provide a range of services which exceeds the amount of resources available, making prioritisation a pressing consideration. It is vital that decisions to prioritise services are not based on intuitive methods, incomplete information or conflict with the overall strategic goals but guided by the overall impact on health, and that allocation of resources is made explicit. An evidence review undertaken by Public Health within NHS Lanarkshire identified the benefits of using a health economics tool to facilitate the prioritisation process.

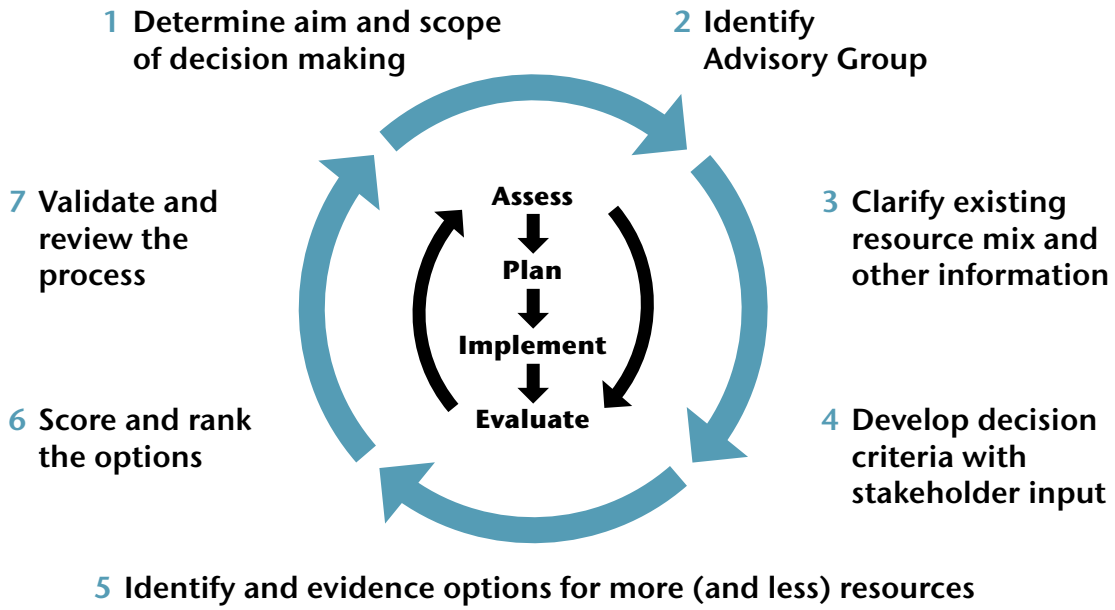
NHS Lanarkshire sought input from the Health Economics Network for Scotland (HENS) and Glasgow Caledonian University (GCU) to support work focusing on priority setting in South Lanarkshire Health and Social Care Partnership (HSCP). The main aims of the work were to test out an evidenced based way to support rigorous decision making, for non-health economists to learn about using an economics framework for Strategic Commissioning and to develop a toolkit to aid priority setting for use in the strategic commissioning process. A sub group of the South HSCP Strategic Commissioning Group (SCG) was identified to work with HENS and take on board the recommendations of the Scottish Government guidance on Prioritisation.

Programme Budgeting Marginal Analysis (PBMA)

PBMA is a generic economics framework which can help set priorities with the goal of obtaining maximum benefit from the limited resources available. It is underpinned by two key economic principles: opportunity cost and the margin. Opportunity cost refers to having to make choices within the constraint of limited resources; certain opportunities will be taken up while others must be forgone. The benefits associated with forgone opportunities are opportunity costs. Marginal analysis refers to the fact that assessment of costs and benefits is best addressed 'at the margin', where the focus is on the benefit gained from investing resources in a particular area or benefit lost from disinvesting resources.

PBMA can provide a structured way of thinking about planning service delivery either at the level of a project (e.g. diabetes), programme (e.g. Prescribing) or services for a whole population (e.g. Urgent Care Services Out of Hours). Implementation of the above framework relies on principles of project management and although not strictly derived from economics, seven steps of project management, tailored to economic considerations, are outlined in Figure 1.

Figure 1: Project management: the 7 steps



These steps were followed by the project group.

Summary Outline of Process in South Lanarkshire

Initial meetings helped define the aim and scope of the project and the approach was agreed with the SCG. The key issue that South HSCP was keen to address was to ease pressures on acute beds through the prevention of unnecessary admissions and through earlier discharge to appropriate community-based facilities. Therefore, the agreed focus was on intermediate care services and the question to answer was, "How do we prioritise services to reduce avoidable hospital admissions and facilitate early discharge?"

The scope was over 65s in South Lanarkshire and preparatory work identified a list of services that could offer the potential to achieve the aim. An Advisory Group was set up and involved a number of key stakeholders. A programme budget, a map of current activity and expenditure for the services defined, was also developed alongside the process and discussed at each meeting and was important in identifying options for change.

A workshop was held to define and agree the criteria to assess the various options and a total of 16 criteria covering four headings were agreed and weighted using a simple scoring system. The purpose of the criteria is to provide a framework to assess the (non-monetary) benefits of options which are put forward during the priority setting process. This allows for each option to be assessed using a common set of criteria. The evidence is then used to allocate scores to each option to reflect how it performs in relation to each of the criterion.

The programme budget was used to help to identify options for change and the following questions were used at this stage:

- What are the main candidates for more resources and what are their cost and effectiveness?
- Are there areas of care which could be provided to the same level of effectiveness but with fewer resources to fund candidates for more resources?
- Are there areas of care which should have fewer resources because alternative uses of resources would be more effective?

A separate workshop and email follow up involving members of the Advisory Group helped to define and agree the criteria to assess the options. Draft criteria from the health economist were reviewed by the group and 16 criteria under four headings were agreed upon. The group then weighted the criteria using a simple scoring system. The weighting of the criteria reflected their relative importance to one another. A simple allocation of points to each criterion was used.

Examples of criteria included avoiding unnecessary hospital admission, which was given the most weight, empowering individuals to manage their own health and wellbeing and availability of the appropriately skilled workforce. The four main headings under which the criteria featured were efficient use of hospital and community services, person centred care, improved outcomes and sustainability.

The group discussed the potential options for investment and disinvestment with a lead for each option identified. Evidence for each option was inserted into a standard business case template which outlined the option, the need for change and sections to include evidence on how well the option meets each of the agreed criterions. A workshop was held to discuss the options and score them based on how well the evidence for each option met the criteria agreed earlier in the process and the scores were then combined with the criteria weights.

The costs of each option were then used to calculate a cost per benefit point to show the balance of costs to benefits. As there were no options for disinvestment put forward in the process, it was not possible to recommend the shifting of resources from one area to another.

A report was completed outlining the process and a survey of all the key stakeholders involved was undertaken to identify learning from the process and make future recommendations. Overall there was recognition of the need for systematic and transparent approaches to priority setting and some interest in further work to build skills. With regard to improving the process, it was clear from the responses that there was a need for a defined aim and scope for the work, with engagement of senior people to ensure there is high level input leading to clear recommendations. Inclusion of Third Sector and patient/ public representatives at the beginning of the process will also ensure understanding of the work throughout.

Key Points

- The use of prioritisation frameworks are critical to the strategic planning & commissioning process to aid robust, cost effective use of all resources and to ensure transparent decision making.
- PBMA is a generic economics framework which can help set priorities with the goal of obtaining maximum benefit from the limited resources available, underpinned by two key economic principles: opportunity cost and the margin.
- South HSCP explored the use of PBMA on prioritising services as part of intermediate care service delivery to help address the issue of reducing avoidable hospital admissions and facilitate early discharge.

Priorities for action

- The findings and recommendations from the report outlining the process and the survey undertaken to identify learning from it should be taken into account whilst considering future prioritisation of services.
- A local toolkit outlining key prioritisation frameworks and the possible approaches and techniques should be developed to assist service transformation and strategic planning and the commissioning process.
- A wider group consisting of members from NHS Lanarkshire and both North and South HSCPs should be set up to advise and support the prioritisation process to ensure a consistent and robust approach to decision making and efficient use of limited resources.

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On behalf of the Advisory group, Priority setting in South Lanarkshire Health and Social Care Partnership.

5.0 Climate Change

Climate change is the greatest threat to public health in the 21st Century

Climate change is happening and it is the greatest global public health threat we currently face.[1] There is clear and unequivocal evidence that the global temperature has increased and is projected to continue increasing. Half of the CO_2 emissions between 1750 and 2011 have occurred in the last 40 years, being caused by industrialisation, fossil-fuel driven economies, changes in land use such as deforestation and expanding populations.[1,2] The evidence clearly demonstrates that these changes have been driven by human activities.

With the increasing global temperature, we are already seeing major impacts including warming and increasing acidity of the oceans, ice sheets reducing in size, rising sea levels and impact on crop and other food production.[1–3]

Although the general pattern predicted for Scotland is hotter, drier summers and milder, wetter autumns and winters, a knock on effect of climate change is increasing extreme weather events which are harder to predict. Globally we have seen an increase in heat waves, droughts, flooding, cyclones and wild fires. Within Scotland we have seen increasing storms, increasingly heavy downpours with subsequent flooding and extreme cold snaps.[2–5]

The health impacts of climate change

1. Flooding

As outlined already, climate change is increasing the likelihood of heavier downpours of rain which are more frequent, intense and sustained. This kind of rainfall leads to the risk of increased flooding as rivers are more likely to burst their banks but also, importantly for Lanarkshire, the drainage systems cannot cope with the extra water and they overflow (known as surface water flooding). In Lanarkshire it is estimated that there are currently 1827 properties which would be flooded by rivers bursting their banks and 2743 properties which would be flooded by surface water in the event of a 1 in a 100 year storm. These numbers are estimated to increase by 24% and 17% respectively by 2035,[6] representing an additional 900 properties affected by flooding. The effects of flooding are not distributed equally across society, with some groups such as older people, those on lower incomes and those with health issues being more vulnerable.[7] Vulnerable people are more likely to live within flood prone areas, be less able to prepare for flooding and find it harder to recover after flooding, with many under-insured.[8,9]

Flooding poses the immediate risks of injury, electrocution, carbon monoxide poisoning from equipment used to dry out buildings, increased risk of bacteria within water from sewer overspill (and therefore, illness) and potentially death from drowning. There are potential impacts on services such as emergency and healthcare and their ability to respond to increased need, and also the provision of electricity and clean water supplies. Long term displacement from homes and communities, loss of possessions and isolation all have significant impacts on mental health and wellbeing which can last for many months or years.[7,9,10]

Flooding also has a significant impact on our infrastructure, even if not affecting our own homes, impacting society as a whole. For example, flooding affects the functioning of the transport system which allows for the delivery of goods and services, and the ability to get to work, including those delivering vital frontline healthcare. Almost 2000km of Scotland's strategic road network, 714km of the rail network and 59 rail stations are already vulnerable to flooding with these predicted to increase by almost 1000km, 440km and 27 respectively by the end of the century.[10]

2. Extreme Heat

Another effect of climate change is an increase in heat wave events globally. There were 175 million extra people exposed to heat waves in 2015[3] with many of the world's poorest populations being most acutely affected through the physical effects of heat such as heat stroke and dehydration, but also effects on their livelihoods with impact on the ability to grow food and to work in such extreme heat.[1–3]

Scotland is not immune to such effects and it is predicted that heat waves such as those in 1976 and 2003 could be happening every other year by 2050.[11] Heat waves increase deaths, hospital admissions and GP consultations, with the elderly, the very young and those with existing health issues being the most vulnerable.[3,10,12] Currently there are estimated to be 38 extra deaths each year in Scotland related to heat and this is estimated to increase to between 70–271 in the 2050s, with this calculation not taking into account the predicted increase in the elderly population.[10]

Human impacts recorded from the 2003 heat wave were increase in respiratory conditions, cardiovascular issues, heat stroke, dehydration, sunburn (which in turn increases the risk of skin cancer) and drowning (due to people trying to cool off swimming in lakes and rivers). Other impacts included reduced availability of water, death of livestock and crop failure within Europe which had the knock on effect on availability and therefore increased food prices, and major impacts on transport including road and rail.[11]

3. Extreme Cold

Deaths due to the cold continue to be an issue each winter in Scotland, related to an estimate of between 2,590 and 3,890 extra deaths each year.[10] One of the few positives of the increasing temperature is that the number of cold related deaths should reduce, however, with the increasingly elderly population, the total number of deaths is only likely to drop by approximately 2%.[10]

Although there is predicted increased overall temperature, Scotland will still be vulnerable to unpredictable and extreme cold snaps,[7] as seen in the winter of 2010-11 and with the recent 'beast from the east' in early 2018. Such weather impacts on health with increased slips, trips and falls, increased risk of heart attacks, stroke, respiratory illness, influenza and hypothermia. Similarly to flooding, the impact is not equal across society with older people, those under the age of five, those in poorer housing conditions or homeless and those with existing health conditions being more vulnerable.[13] These groups have pre-disposed vulnerability but the risk is increased for many by the inability to heat their homes properly. In Lanarkshire older people, those living in older properties and social housing were all at higher risk of fuel poverty.[14]

Such weather puts increasing pressure on health services due to increased demand but also due to transport issues for staff unable to get to work. As with flooding, the transport infrastructure which we rely on for the delivery of goods and services is adversely affected by extreme cold snaps, impacting on access to many of the supplies we take for granted. There is an impact on the economy due to absence from work, issues with energy supply and business continuity. The recent 'beast from the east' is estimated to have cost the Scottish economy £200–300 million over just a 3–4 day period.[15]

4. Food

Scotland is known for its varied and high quality food including fruit, vegetables, shellfish, fish and meat, however, climate change is already having an impact on these resources. Although warmer temperatures have the potential to improve growing conditions, it may also encourage the proliferation of pests and disease, which previously could not survive in Scotland. In addition, extreme weather can have a devastating impact on agriculture, with excessive rainfall and extremes of hot and cold leading to damaged crops and soil. Hotter, drier summers may lead to competition for water between people, agriculture, industry and the natural environment. Outside of Scotland, growing conditions, pest and disease patterns will also change, impacting on many of our food supply chains, potentially causing reduced supply and increase in prices.[5,10]

Biodiversity across the globe has been reducing[16] and within Scotland, the natural habitats and ecosystems of many species of land and marine animals will increasingly come under threat.[5,10] Ocean acidification is an issue globally and will continue to worsen if Greenhouse Gas (GHG) emissions continue to increase. The rate of acidification has been more rapid in the North Atlantic near Europe compared with other parts. A more acidic ocean has the potential to corrode coral (many of which are off the West Coast of Scotland) and other shell forming creatures, potentially impacting negatively on Scotland's shellfish industry. Due to the warmer waters, many commercial fish are dwelling more deeply, having potential impact on fishing yields.[5,10]

5. Inequalities

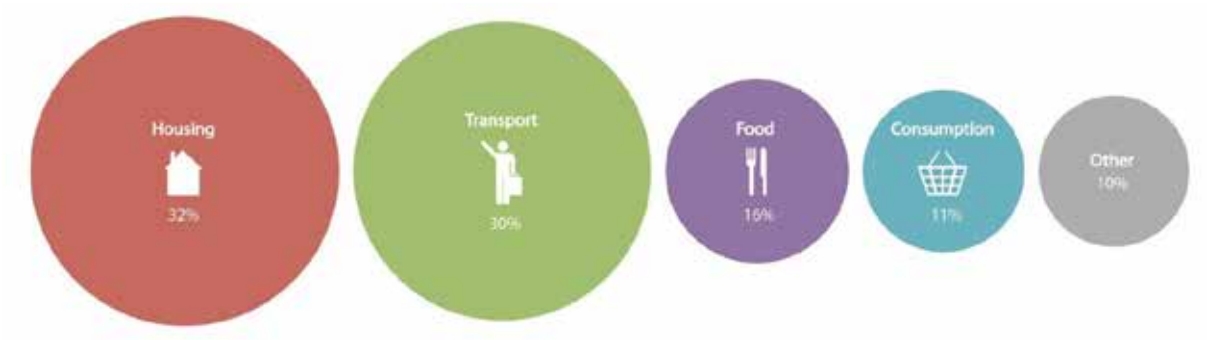
The impacts of climate change will not be experienced equally, either globally or locally. "Climate change will have its greatest effect on those who have the least access to the world's resources and who have contributed least to its cause. The inequity of climate change – with the rich causing most of the problem and the poor initially suffering most of the consequences – will prove to be a source of historical shame to our generation if nothing is done about it.".[1] As described already, the global impacts are predominantly being experienced by the world's poorest, but so too in Lanarkshire as already described, flooding, the extremes of heat and cold and the potential increase in costs will have the most impact on the most vulnerable within our communities: the elderly, those on low incomes, those already with chronic illnesses and the socially isolated.[17] They are more likely to be exposed to risk and less likely to be able to prepare, adapt or recover following extreme events. And as is the case on a global scale, it is likely that those on higher incomes have contributed most in terms of emissions e.g. within one of the least affluent areas in Lanarkshire 50% had no access to a car compared with 15% in one of the most affluent areas.[18] Those in more affluent circumstances are more likely to use air travel and have other higher 'luxury' emissions.

The Causes

The Scottish Government has committed to make a 66% reduction in GHG emissions by 2032[19] and there are ambitious plans to decarbonise Scotland's economy and become a low carbon society. However, we cannot expect all action to be at Government level, we must make changes as organisations, communities and individuals.

Probably surprisingly, the majority (75%) of Scotland's GHG emissions are associated with consumption by individuals and households[20] and they are broken down in Figure 1.

Figure 1: Scotland's GHG consumption emissions associated with individuals and households 2012.[21]



Source: Scottish Government

Housing

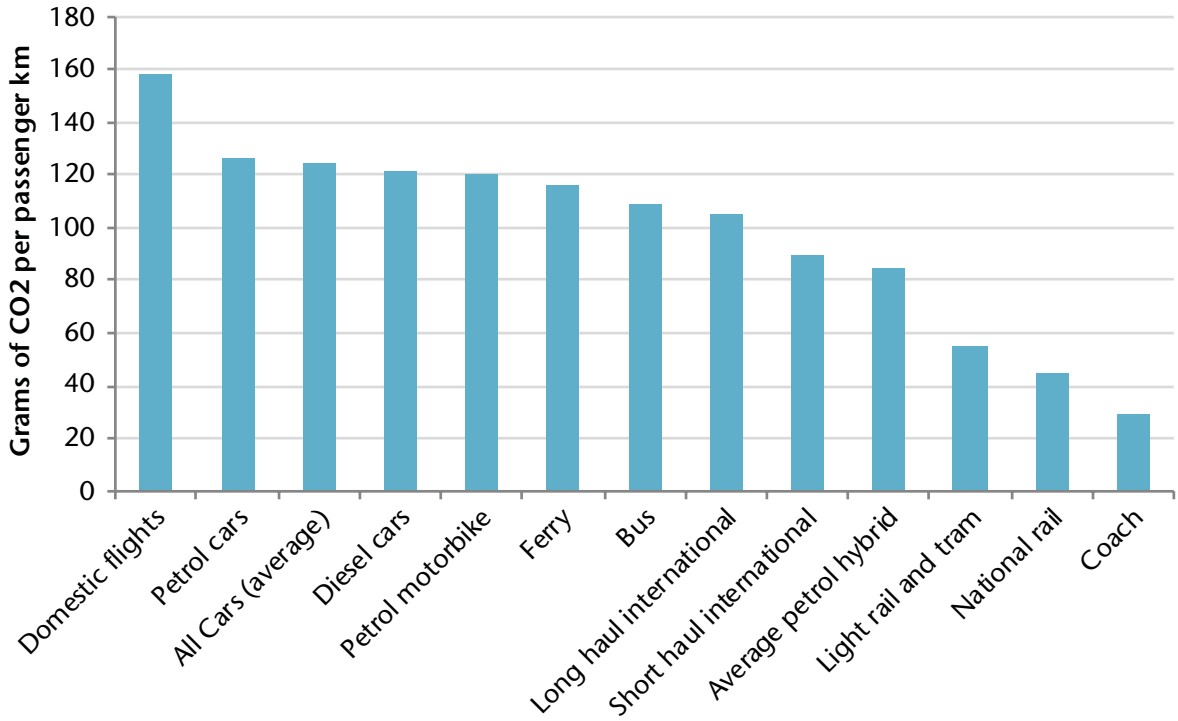
In terms of housing, most of the emissions are related to energy use within the home such as heating the home and water, cooking and electricity for lighting and appliances.[21] Effective loft and cavity wall insulation is one of the key ways to reduce emissions and reduce household bills.

Transport

Our reliance on the car has increased rapidly over the last four decades, with the number of cars doubling since 1975.[22] We have become increasingly reliant on the car for all lengths of journey and within all spheres of life: work and pleasure. There is also an increasing level of journeys with just one person in the car, increasing from 56% in 1999 to 67% in 2016.[23] Only 30% of people walk, cycle or use public transport to get to work and this figure has not changed in almost 20 years.[21] Of those who drive to work, 46% could use public transport but the main barrier to doing so is that it takes too long.[23]

Domestic air flights have the highest carbon emissions per passenger kilometre of all forms of transport[24] (see Figure 2) and the number of domestic flights has been increasing since a dip in 2010.[21]

Figure 2: Grams of CO_2 emitted per passenger km for different modes of UK transport 2015.[24]



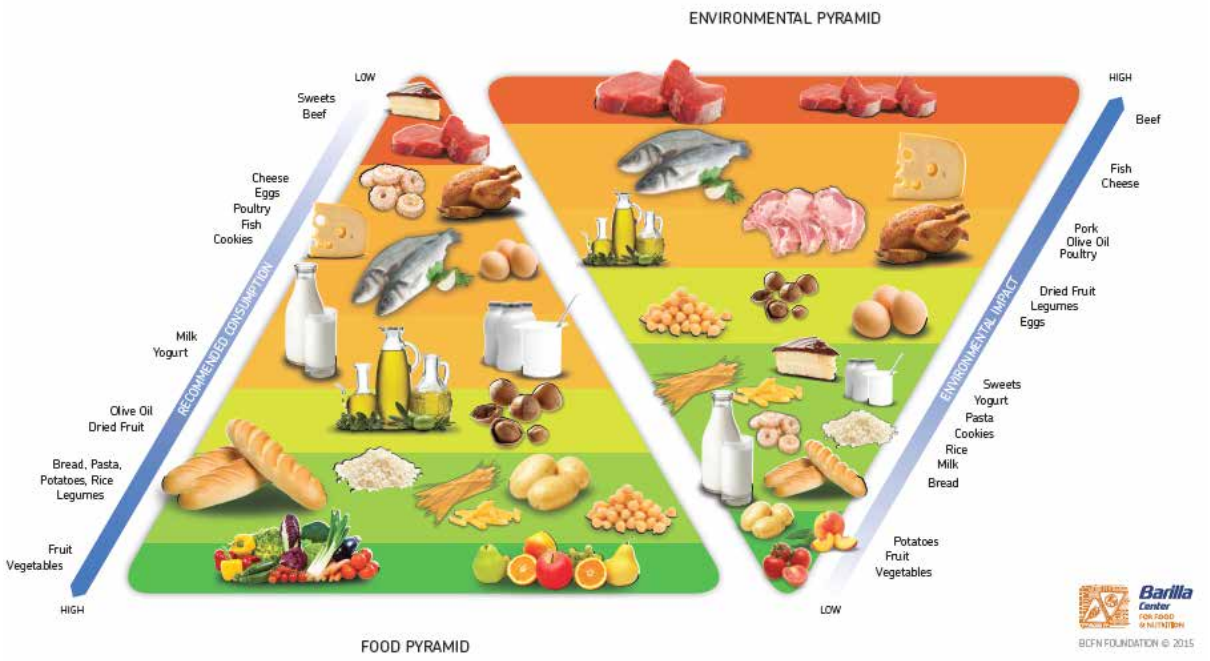
Source: Transport Scotland

Food

The food choices we make not only influence our health, but can have a considerable impact on GHG emissions. There is a clear hierarchy in terms of the emissions from different food stuffs: with fruit, vegetables, beans, pulses and cereals having the lowest emissions and meat from cows and sheep/lambs (ruminant animals – animals with a four-part stomach) having the highest.[25,26] To get a picture of the difference between these food stuffs in terms of CO_2 emissions, beef produces over 60 times the amount compared with field grown vegetables.[25] Much of the carbon footprint from ruminant animals (such as cows and sheep/lambs) is due to the way their bodies process food, releasing methane into the atmosphere.[27] The proportion of meat in our diets has increased substantially over the last few decades[26] moving from a luxury food to an every day staple.[28] But we are over-consuming meat in terms of what is required for health and also in terms of what the planet can sustain.

Figure 3 highlights this 'double pyramid' aligning healthy eating guidance with environmental impact of different food stuffs. Those food stuffs that have high environmental impact also tend to be the foods that we should eat less of for good health and conversely, those with low impact are the foods we should be eating more of.

Figure 3: Double pyramid showing the classic Mediterranean Diet aligned with environmental impacts of different food stuffs.



Source: BCFN Foundation.

Food waste is another important contributor to GHG emissions, with 1.6 million tonnes of CO_2 attributable to the food we throw away, with 60% of this waste being avoidable. These emissions are related to the waste of energy it took to grow, harvest, transport and prepare and also the GHG emissions released when food waste decomposes in landfill. Avoiding these emissions is the equivalent of taking 1 in 4 cars off the road and would save the average household £460 per year.[29]

Consumption

Consumption refers to our purchasing behaviour, subsequent use of items and disposal. All that we purchase contributes to GHG emissions in relation to its production, packaging, transport, how we use the item and how we dispose of it. Much of our economy is driven by consumption but this drives high GHG emissions, produces high levels of waste and constantly draws on the limited resources of our planet. There are calls to move to a more circular economy where we value what we have more and 'make things last': focusing more on repairing, reusing and recycling.[30]

Conclusions

Climate change has been described as having the potential to undermine many of the public health gains of the last 50 years, however, how we respond also represents one of the greatest opportunities to improve global health.[3] As described within this chapter, many of the human driven causes of climate change are also many of the drivers behind poor health: inequalities, sedentary lifestyles, over consumption, low fruit, vegetable and fibre consumption and high red meat consumption. Our response to climate change and our actions to reduce our GHG emissions will have co-benefits in terms of our health and in many cases, also save us money.

Priorities for Action

We all as Individuals can make changes.

Housing:

- Consider insulation and ways to reduce energy use within the home e.g. explore grants and support to improve loft and cavity wall insulation or find out about renewable only energy suppliers.

Transport:

- Consider how to reduce your journey's impact on the environment e.g. explore active travel: walking or cycling, using public transport or car share.

Food:

- Consider the food you eat and how you can reduce your impact on the environment e.g. reduce meat consumption by having one meat free day per week or eat more food that is in season.
- Consider how you can reduce food waste e.g. planning meals and using leftovers.

Consumption:

- Think about how you can change your personal consumption e.g. by following the 5Rs: Rethink, Refuse, Reduce, Reuse, Recycle.

As an organisation NHS Lanarkshire can make changes. As a public body, we are required under the Climate Change (Scotland) Act 2009 to reduce GHG emissions, make climate change adaptations and consider sustainability in all functions. NHS Lanarkshire has already made many improvements over the last few years to ensure we meet these obligations and is working with others to develop a Climate Change Risk Assessment Toolkit and an Adaptation Action Plan. There is a need for us all to embrace these developments and also to recognise that we can do more.

Buildings:

- If the business case for a 'new Monklands' hospital is approved, there is a major opportunity for NHS Lanarkshire to demonstrate its commitment to reducing the impact of climate change in the design and operation of the proposed new hospital.
- Consider energy use across the NHS Lanarkshire estate e.g. expanding the amount of renewable energy we can produce in-house from solar panels or wind turbines.

Transport:

- Consider ways to reduce the impact of travel by NHS staff commuting and travelling during work e.g. supporting active travel infrastructure, actively encouraging car sharing schemes and reducing use of domestic flights.

Food:

- Consider the environmental impact of catering choices across the NHS estate for patients and staff e.g. review the amount of meat on the menus and how much produce is locally sourced.

Consumption:

- Consider NHS Lanarkshire's waste profile e.g. in the catering setting promoting reusable options, and reducing single use and unrecyclable options.

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6.0 Responding to Adversity in Childhood – What Does it Mean for Organisations, Services and Practice?

Introduction

Adverse childhood experiences (ACEs) are described as adverse events or trauma which occurs in a child's life which result in a toxic stress response. These include abuse (emotional, physical and sexual), neglect (emotional and physical) and household adversity such as domestic abuse, substance misuse, criminality or living in care.[1] ACEs are exacerbated by poverty and deprivation.

Experiencing adversity in childhood increases the risk of health harming behaviours and illness later in life. For example, individuals who have experienced four or more ACEs are four times more likely to be a high risk drinker, sixteen times more likely to have used crack cocaine or heroin and twenty times more likely to experience imprisonment at any point in their lifetime.[2] Experiencing ACEs also means that individuals are more likely to have poorer education and employment outcomes, be involved in crime and have low mental wellbeing.

There is no published study on the prevalence of ACEs in Scotland. The first Welsh ACE survey found that 47% of adults reported having experienced at least one ACE during their childhood, with 14% experiencing four or more.[2] It has been suggested that the prevalence of ACEs in Scotland may be similar.

The last Annual Report of the Director of Public Health 2016/17 provided an introduction to ACEs and their link to health and health inequalities. This report will take stock of the work undertaken to date and set out what needs to happen next to ensure ACEs are recognised and their impact reduced.

Where are we now?

Partner agencies have begun coming together to discuss and implement actions to tackle adversity in childhood. A Lanarkshire ACEs Group has been established which is led by Health Improvement and involves a range of partner staff. A lead has been identified for each Locality area to progress and co-ordinate local activity.

Viewings of the documentary Resilience: The Biology of Stress and the Science of Hope[3] have been shown across Lanarkshire to a range of professionals, leaders and community groups (29 screenings involving over 600 individuals). Resilience looks at the findings of the 1998 ACE Study by Felitti and Anda[4], as well as the work of American Paediatrician, Nadine Burke Harris. The documentary focuses on evidence of the effect of early adversity on the developing brain, behaviour and long term health outcomes. Viewings of the Resilience documentary has raised awareness of ACEs across organisations and communities and has allowed for fruitful local discussions about how to build more resilient communities and mitigate the consequences of childhood adversity.

More recently, a joint North and South Community Planning Partnership event was held which allowed organisational leaders to consider a range of childhood adversity, such as poverty and neglect, and identify key areas for collective action and maximum impact.

This included work to support positive destinations for care experienced young people and targeted, intensive parenting support where this is needed.

Trauma-informed practice and services

Being trauma-informed is important for preventing and mitigating the impact of ACEs. Trauma-informed care combines an understanding of adversity and its impact on longer term health outcomes.[5] Services need to be provided in a way that avoids retraumatisation and enables people to access and use the services they need. Traumatic and adverse experiences need to be acknowledged, understood and responded to effectively. The core principles of trauma-informed care should emphasise safety, trust, choice, collaboration and empowerment.[6]

Given what is known about the science of early brain development and how this can be affected by childhood adversity, it is recommended that social-emotional development be assessed regularly at child health reviews and that the social determinants of health and parental strengths are asked about routinely.[5] Primary care services are ideally placed to prevent, identify and address trauma related problems, in conjunction with specialist services to support families experiencing significant trauma, where this is necessary.

Engaging families

Engaging with families involves establishing relationships which are based on trust. In order to foster engagement, a focus on family strengths as well as concerns is essential.[5] Communication skills are important; using appropriate language, empathy and communicating support and a commitment to help. Families should be partners in identifying and addressing problems and setting realistic expectations and steps for improvement.[5] Staff need time to engage in this way with families and continuity of care is important if trusted relationships are to be maintained.

Building resilience

Individuals experiencing similar trauma can often have quite different outcomes depending on their resilience. Resilience provides a 'buffer' between the person and the traumatic event and these protective factors should be understood.[5] An essential component of being trauma-informed is promotion of resilience. Resilience factors include:

- Safe and supportive relationships
- Being equipped to manage behaviours and emotions
- Feeling involved and connected
- A sense of control and empowerment

Organisational leadership and culture

Embedding a trauma-informed approach to service provision and practice requires organisational commitment and a defined leadership position on trauma-informed care.[6] Organisational culture which fosters collaborative working and appropriate information sharing between services, service user involvement in service planning and strengths-based approaches is needed. Organisational policies should support trauma-informed care and enable the workforce to develop capacity, capability and confidence in this area. The National Trauma Training Framework[7] implementation will include the development of Scottish Trauma-Informed Leadership Training (STILT) to support organisational change and readiness.

Staff training and supervision

Developing the workforce includes not only staff training but supporting the wellbeing of staff. Training should cover the prevalence and impact of ACEs, as well as how to respond to disclosure and develop resilience, both in individuals and in self. The National Trauma Training Framework aims to improve workforce capacity to recognise and respond to the individual needs of people with ACEs and adult experiences of trauma.[7] It supports staff to have conversations with the people they work with about what has happened to them in order to better respond. The intended outcome is that people affected by trauma feel safe and protected from harm, that they feel emotionally safe to make sense of the trauma and focus on what they want to achieve. A training strategy and plan will support implementation of the Framework.

The Framework addresses knowledge and skills requirements at four levels which reflects the range of roles that staff have within the organisation. These are:

- Trauma-informed – knowledge and skills for the whole workforce
- Trauma skilled – knowledge and skills for workers who have more direct and substantial contact with adults and children who may be affected by traumatic events e.g. health and social care practitioners
- Trauma enhanced – knowledge and skills for workers who have more regular and intense contact with adults and children who are known to be affected by traumatic events and who provide specific supports or interventions e.g. mental health, addictions and homelessness services
- Trauma specialist – knowledge and skills required by staff who play a specialist role in directly providing evidenced based psychological therapies to individuals affected by traumatic events.[7]

As well as training, it is crucial that staff have adequate and regular supervision to support them in their role in building resilience and addressing adversity. Enquiring about ACEs can often resonate with staff on a personal level and therefore supports for staff wellbeing are paramount.

Routine enquiry

Given the suggested prevalence of ACEs in Scotland, work is underway to explore the potential benefits of embedding Routine Enquiry of ACEs in every appropriate assessment by practitioners, in order to inform more appropriate care plans and deal with the root cause of presenting issues, rather than the symptoms. Routine Enquiry is not about screening, but understanding and working with people to discuss what will help them.

REACh model

REACh (Routine Enquiry of Adversity in Childhood) is a process introduced by Lancashire Care to routinely ask people during an assessment about traumatic/adverse experiences in their childhood. It encourages disclosure, helps practitioners to respond appropriately to what is heard and then plan interventions which improve their health and wellbeing in the longer term.[8] The model provides a framework for the introduction of Routine Enquiry:

- Readiness checklist and organisation 'buy in'
- Change management – systems and processes to support enquiry
- Training staff – hearts and minds & how to ask and respond appropriately
- Follow-up support and supervision for staff and the leadership team
- Evaluation and research[8]

There is some evidence to suggest that introducing Routine Enquiry of ACEs would be beneficial. Spontaneous disclosure of abuse is low when compared to disclosure when individuals are asked directly about their experiences.[9] There is a need for referral pathways for those who need additional support from more specialist services; however, in most cases, the person can be supported sensitively by the staff member to make sense of what happened to them and to address questions.[8] The evaluation of REACh would suggest that organisational support for Routine Enquiry increases practitioner confidence and that training and post-training supervisory support are essential. Routine Enquiry can facilitate earlier and more appropriate intervention, therefore reducing unnecessary demand on specialist services. Routine Enquiry was found to be acceptable to practitioners and clients and allowed individuals to reflect on their own parenting approach. Disclosure was reported by some as therapy in itself, providing relief, hope and understanding of self.[10]

Measurement of longer term outcomes is needed to assess if Routine Enquiry is making a meaningful difference to people's lives; as yet there is limited evidence in this area. Understanding a person's 'ACE score' is a first step; however, it is the support and care received following disclosure that will impact on future outcomes.

Key Points

- ACEs are common and impact on health, behaviour and longer term outcomes.
- A range of work has been undertaken to increase awareness and understanding of ACEs across Lanarkshire.
- Organisational commitment and leadership is required to develop trauma-informed practice and services.

Priorities for action

- Assess organisational readiness in relation to provision of trauma-informed care and develop an ACEs Plan to set out the actions required to take this forward.
- Implement the National Trauma Training Framework, including Scottish Trauma-Informed Leadership Training.
- Consider the introduction of Routine Enquiry of ACEs in specific services, in a managed and supported way, which includes assessment of outcomes.

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7.1 Keep Well, the Criminal Justice Services and the Homeless Population

Cardiovascular disease (CVD) accounts for a quarter of all deaths in Scotland each year and is identified as one of the 'big killer' diseases.[1]

The term CVD encompasses conditions such as coronary heart disease (CHD), stroke, peripheral arterial disease and aortic disease. In 2015, 213,100 people living in Scotland were diagnosed with CVD. In Lanarkshire 1,195 deaths were attributed to CHD in 2017.[2, 3]

Socioeconomic status is of particular relevance to those living in Scotland. People under the age of 65 years living in areas of deprivation are at most risk of developing heart disease than those in the same age group living in more affluent areas.[1]

Compared to the general population, the majority of those people who have Offending behaviour have poorer health, experience social inequalities and come from communities who have experienced higher levels of health inequalities and live in areas of deprivation.[3]

Higher rates of mortality, physical and mental health problems have been identified in this group as well as lower levels of literacy and numeracy. Poor access to, and uptake of health services is also an identified issue.[4]

Lanarkshire has long recognised these facts and, has put measures in place to address CVD risk and health inequalities. The Keep Well (KW) program which originally started in 2006 opened up its access to health checks in 2009 to include more vulnerable groups. The program incorporates those individuals in the Criminal Justice (CJ) system who attends Restorative Justice Services. Now funded by the Health and Social Care Partnerships (HSCP), work is on-going in North and South Lanarkshire to engage with individuals attending these services.

Keep Well acknowledges that every healthcare contact is a health improvement opportunity and has developed a health workshop, the content of which, is based on the British Heart Foundation Healthy Hearts Kit.[5] Key messages discussed include: prevention of CVD, identification of risk factors, and goal setting. Following the workshop, each person attending is given the opportunity to opt in for a one to one health check with a KW Nurse, with 98% of those choosing to do so. Service User feedback using questionnaires indicates that those attending Keep Well find the experience beneficial by empowering them to improve their own health.

Keep Well health checks are also offered to women attending the groups set up by Criminal Justice for women offenders. Referrals for KW health checks are also made from Justice Staff for individuals who have requested a health check following induction or who have a low score on the health outcome section on the Justice Star assessment tool.

Whilst physical health is a key aspect of the KW health check, the social determinants affecting health and wellbeing are also addressed. This is important as, the risk of developing CVD and ill health is greater if wellbeing is poor.[6] In addition to the clinical measurements taken at the KW health check, testing for blood borne viruses is also offered to individuals who may be at risk of infection.

A calculation of cardiovascular disease risk is assessed using the ASSIGN tool. A Minnesota Edinburgh Complexity Assessment Method (MECAM) tool is also used to assess mental wellbeing and bio psychosocial need.[7, 8]

A Motivational interviewing approach is used during the health check to encourage discussion and promote health behaviour change. Following the health check, individuals with identified clinical risk, psychosocial or complex issues are Case Managed by the KW team until they are able to be supported by other mainstream or third sector services.

A similar approach is also used for people who are homeless as evidence has shown that individuals from this group have also poor health due to a range of complexities which include mental health, drugs and alcohol.[9] Keep Well has established connections with homeless service providers and provides regular clinics to service users in Lanarkshire. As a result, clinics held in 2017/18 identified 42% of those attending for a KW health check were drinking excessively and alcohol brief interventions were delivered accordingly. Also, 16% of individuals presenting at Keep Well clinics were offered and accepted testing for blood borne viruses due to risk taking behaviour which was highlighted during discussion.

The Keep Well model is continually adapted to ensure the service is patient centred, effective and efficient. As a result, follow up contact with individual's following the health check has identified that the majority of those who attended did engage with services and did begin to make health behaviour change as a result of this contact and follow up support from Keep Well.

Figure 1: Criminal Justice Service Users attending Keep Well 2017–2018

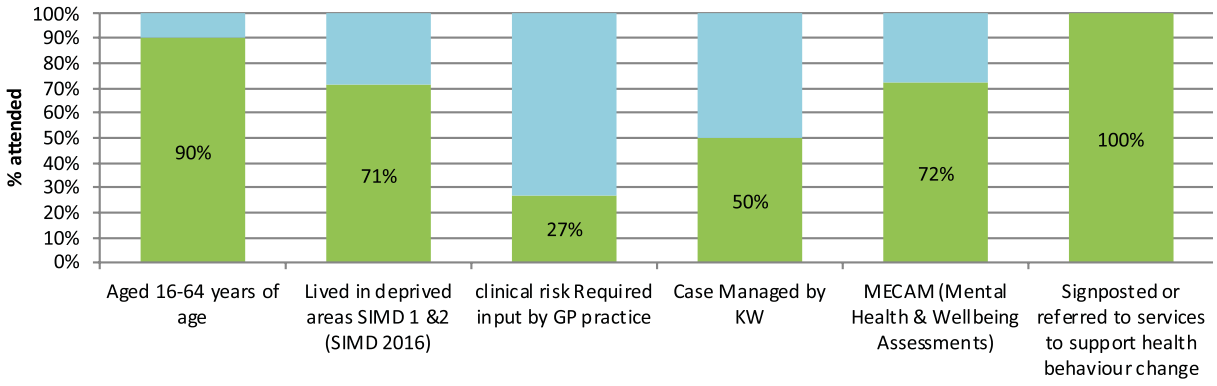
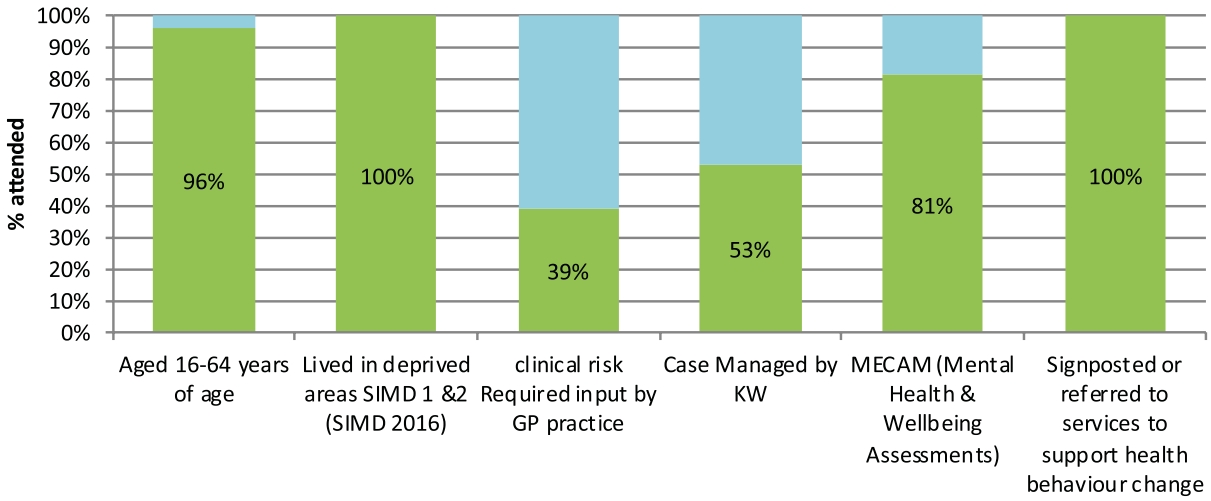


Figure 2 Homeless Service Users attending Keep Well 2017–2018



Key Points

- Keep Well continues to be an effective inequalities focused service, with emphasis equally on improving physical health and mental wellbeing. It delivers key messages to support improvement in health and wellbeing; it offers support to individuals with their health behaviour change journey.
- The program through a Case Management approach assists those who have disengaged from mainstream services with the relevant support to reengage and to access other supportive service including third sector organisations.
- Good partnership working with Criminal Justice and Homeless Services is vital to engage with service users. KW has become an integral part of this journey as a key partner to support outcomes for offenders.
- The model delivered by KW is effective and accessible not only for people in the criminal justice system but has also been tested and adopted for other groups including black minority ethnic groups, homeless people, substance misuse, the deaf community, carers and gypsy travellers.

Priorities for action

- Keep Well will continue to support the “Rolling” programs developed by criminal justice teams working in partnership to engage with more service users to offer more KW health checks to more people in the criminal justice system.
- KW plan to support the health literacy agenda for Lanarkshire to continually review and update the content and delivery of information to service users and to encourage more people to utilise these resources as a method for self-help.
- KW will support the agenda to reduce the ‘burden of disease’ for people living in Lanarkshire who face health inequalities due to their culture, ethnicity, social issues, or disability.

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8.1 Oral Health Improvement Plan

January 2018 setting out the direction of travel for oral health improvement and NHS dentistry for the next generation. The five areas for the first wave of priorities highlighted by the Scottish Government are:

- Domiciliary care (care provided in the home)
- Occupational Health
- Community Challenge fund for Oral Health Improvement
- Appointing a Director of Dentistry in each Health Board
- Practitioners with problems. e.g. Dental practitioners experiencing health problems which impact on their ability to work

Lanarkshire is well placed for most of these priorities but, in particular we are leading the field in our approach to oral care for our older dependant adults both in terms of treatment provision and prevention. Treatment for those patients requiring domiciliary care is currently provided by both the General Dental Service (GDS) and the Public Dental Service (PDS) within Lanarkshire with the more complex patients being seen within the PDS. General Dental Services are more commonly referred to as "High Street" dentists and this is where the majority of patients will be treated as opposed to the Public Dental Service which provides treatment for patients with conditions or impairments which require specialist care. This shared care model is highlighted within the OHIP document as being best practice.

Training Care Home staff to improve oral health

NHS Lanarkshire's implementation of the Caring for Smiles programme, which is a national programme aimed at improving the oral health of our older dependant adults, has been very successful.[2] In the NHS Lanarkshire health board area in 2015–16:

- 97% of Care Homes have participated in the accredited training, the highest percentage among Scottish health boards
- 11% of care staff participated in the accredited training, whilst this is a low percentage it was the highest among Scottish health boards
- 100% of Care Homes have participated in the non-accredited training

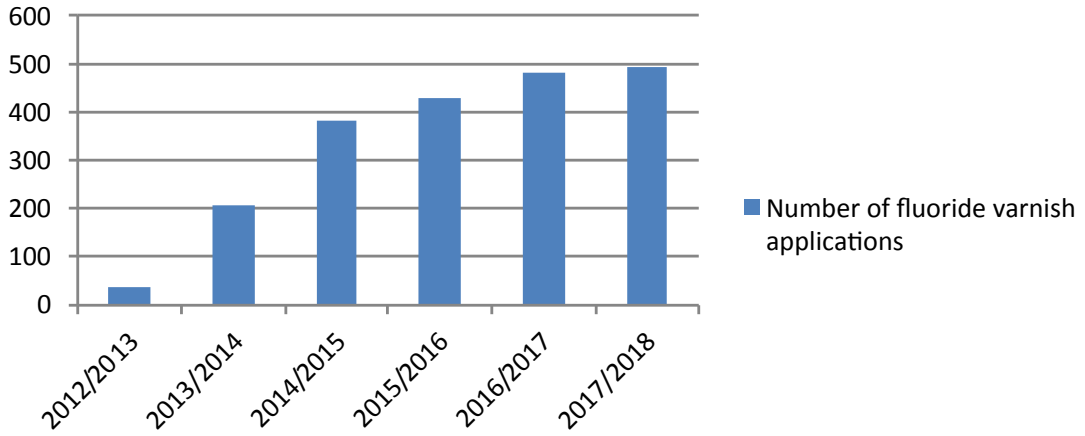
The training was particularly appealing to care homes due to the Oral Health Educators within the PDS providing not just theoretical training for carers working within this sector but, more importantly, hands on practical demonstrations of oral care for patients.

Fluoride varnishing in Care Homes

In addition to this work with carers, NHSL's PDS have been building on the proven prevention work within Childsmile to develop a programme of fluoride varnish applications for older dependant adults within Care Homes who still have their own teeth. The programme started in 2012 within one Care Home where 36 residents had fluoride varnish applied as a primary preventive measure. Since then the programme has expanded significantly (Figure 9.1.1), as more and more of our population retain their own teeth into older age.[3] The residents have the high dose fluoride varnish applied four times a year provided there are no health contraindications. While there have been no studies undertaken regarding the efficacy of fluoride varnish applications for this sector of the

population there is evidence of its effectiveness within the child population.[4]

Figure 1: Number of older dependant adults being treated with Fluoride Varnish applications within Lanarkshire.



Source: NHS Lanarkshire's Public Dental Service databases

Moving forwards

Care for older dependant adults is set to become an increasing burden on all aspects of healthcare delivery and oral health is no exception. The vision of shared care for domiciliary patients between GDS and PDS, set out in the new OHIP, is one which has already been embraced within Lanarkshire and will continue to grow as we strive to improve the oral health of this vulnerable section of the population.

There are many other aspects of oral healthcare addressed within the OHIP document and an overarching steering group has been formed to look at taking forward the recommendations. As this work progresses details will emerge as to how oral healthcare will develop within Lanarkshire and across Scotland as a whole. Within Lanarkshire we have a foundation of strong relationships across different groups. Both Health and Social Care Partnerships who provide and influence oral health care through Childsmile and Caring for Smiles and we look forward to building upon these with the opportunities the OHIP will provide as it matures.

Key Points

- Improving oral health for our older dependant adults is a priority for NHS Lanarkshire
- A robust training package for Care Home staff based on the National programme Caring for Smiles is being undertaken
- A preventive programme of high dose fluoride varnish applications is being expanded throughout the Care Homes within Lanarkshire

Priorities for action

- Ensure the dental services within Lanarkshire are well placed to react to and meet the challenges which the OHIP will bring as it evolves.

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8.2 Alcohol and the Dental Team: Relevance, Risk, Role and Responsibility

Background

The impact of alcohol consumption in Scotland in terms of harms to health, as well as the wider impact on individuals, families, communities and the economy, is well documented. In 2015, a total of 41,161 adults were admitted to hospitals at least once with an alcohol-attributable condition. An estimate of 3,705 deaths were attributable to alcohol consumption.[1]

The UK Chief Medical Officers' guidelines for both men and women is, that to keep health risks from alcohol to a low level, it is safest not to drink more than 14 units a week on a regular basis. In Lanarkshire, 36% men and 18% women exceeded the drinking guidelines.[2]

Drinking any alcohol on a regular basis carries a health risk for everyone. This includes an increased risk of cancer of the mouth, bowel and breast and an increased risk of liver and heart disease. Alcohol can affect the development of the baby in the womb therefore the advice is not to drink any alcohol during pregnancy.[3]

National guidance describes an Alcohol Brief Intervention (ABI) as a short, evidence based, structured conversation about alcohol consumption with a patient/ client, in a non-confrontational way motivates and supports the individual to think about and/or plan a change in their drinking behaviours in order to reduce their consumption and/or their risk of harm.[4]
The 2017/18 HEAT (Health Improvement, Efficiency, Access and Treatment) target for Lanarkshire was to deliver 7,381 ABIs. At least 80% of those were to be delivered in three priority settings of Primary Care, Emergency Departments (EDs) and Antenatal Care. The remaining 20% were to be delivered in wider settings such as dentistry, mental health, young people, older people and criminal justice. This target was exceeded in 2017/18. Table 1 shows the number of ABIs delivered in NHS Lanarkshire, split by quarter and by setting for the year 2017/18.

Table 1: Number of ABIs delivered in NHS Lanarkshire

	Number of ABIs delivered				
Date	**Primary Care**	**EDs**	**Antenatal Care**	**Wider Settings**	**Total by Quarter**
Quarter 1: 1/4/17 – 30/6/17	1690	701	<5	821	3216
Quarter 2: 1/7/17 – 30/9/17	1459	632	<5	645	2737
Quarter 3: 1/10/17 – 31/12/17	919	594	<5	481	1995
Quarter 4: 1/1/18 – 31/3/18	1145	717	<5	517	2380
Annual Total	5213	2644	7	2464	10328

Source: South Lanarkshire Alcohol and Drug Partnership

It is important to note that many people who are at risk of alcohol-related harms may not attend other health professionals such as their own GPs. Approximately 94% of adults in Lanarkshire are registered with a dentist, with 68% of those having attended in the past two years.[5] Dental professionals usually update the medical history (including social history) of their patients at check-up appointments. This provides a unique opportunity to identify those people who are at risk of alcohol-related harms as an enquiry about alcohol use is now firmly established within the taking of a social history.

Role of the Dental Team

In order to provide the dental team with an awareness of recent changes in alcohol guidelines and to improve their current practice in discussing alcohol with their patients, an educational event was held in October 2017. Eighty-two people attended the event including dentists, dental nurses, dental hygienists and practice managers. Information on how alcohol misuse affects the body and how to conduct an ABI was given. Seventy-two (88%) participants completed the evaluation exercise and the results indicated an increase in confidence following the event in: being able to describe the implications of alcohol misuse; being able to identify if their patients are drinking above the lower risk levels; their ability to understand the role of ABIs and; being able to signpost possible high risk drinkers to alcohol support services. Participants were also asked if they planned to change anything in their practice as a result of the session and responses included: having more discussions about the risks of alcohol with their patients and being more aware of highlighting the risks of alcohol with patients.

The next stage, following on from the educational event, is to use the 'Model for Improvement'[6] to investigate ways to introduce ABIs into routine practice with dental teams. The 'Model for Improvement' emphasises an approach to learning that relies on testing changes, preferably on a small scale, and observing whether the result is an improvement. Initially a Plan-Do-Study-Act (PDSA) cycle will be used in one dental practice in Lanarkshire to identify challenges and how these can be overcome. The aim thereafter is to support the introduction of ABIs routinely into dental practices across Lanarkshire.

Key Points

- Alcohol problems are a major concern for public health in Scotland and ABIs can reduce alcohol misuse and related harm.
- In Lanarkshire, 36% men and 18% women exceeded the drinking guidelines (not to drink more than 14 units a week on a regular basis).
- Dental teams are well placed to provide alcohol advice to their patients as they have a professional duty to enquire about alcohol intake within the taking of a social history.

Priorities for action

- Conduct a test of change, initially in one dental surgery in Lanarkshire, to identify the challenges and potential solutions to support teams to routinely conduct ABIs in their practice.
- Support dental teams in providing alcohol advice and, where appropriate, the delivery of ABIs to their patients through attendance at ABI training.

References

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Statistical Appendix

List of tables

Appendix document

The data tables are available in a separate document at the following link:
www.nhslanarkshire.scot.nhs.uk/download/public-health-2017-18

General notes:

- Lanarkshire has two Health and Social Care Partnerships (HSCPs) – North Lanarkshire and South Lanarkshire. The HSCPs cover the same geographical areas as North Lanarkshire Council and South Lanarkshire Council. There are ten localities within the HSCPs – six in North Lanarkshire (*Airdrie, Coatbridge, North, Bellshill, Motherwell and Wishaw*) and four in South Lanarkshire (*Cambuslang/Rutherglen, East Kilbride, Clydesdale and Hamilton*) – **see map on page iv**. On 1 April 2014, changes to NHS board boundaries resulted in NHS Lanarkshire becoming coterminous with the HSCPs and local authorities. The tables in the Statistical Appendix indicate whether information relates to the old or new NHS Lanarkshire boundary, the exception being where all data relate to April 2014 onwards.
- Populations shown and used in rates calculations are, for NHS Lanarkshire, the HSCPs and Scotland, mid-year estimates produced by National Records of Scotland (NRS). Locality populations are from NRS small area population estimates at data zone level.

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