



# REALISING REALISTIC MEDICINE





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PART 1

# REALISING REALISTIC MEDICINE

## INTRODUCTION FROM THE CHIEF MEDICAL OFFICER



I felt I had no choice but to write this report 'Realising Realistic Medicine' following the broad and enthusiastic discussion which ignited around the 6 key questions I asked in my 1st report 'Realistic Medicine'. Much to my delight doctors, nurses, dentists, social workers, clinical psychologists, allied health professionals, patients and their families communicated their strong feelings of support for the changes we were proposing to the practice of medicine including the suggestion that these changes were not only for healthcare but social care as well. These positive comments came from all over the world with the #realisticmedicine reaching almost 10 million Twitter feeds a year after publication.

These conversations have been of enormous benefit in helping to shape thinking as we embark on translating the Realistic Medicine philosophy into actions that justify that interest and enthusiasm.

We have built a collaborative alliance by engaging clinicians from many professions in every Health Board in Scotland, leaders from medicine and public health, as well as stakeholders from a wide group of organisations who can assist in bringing about change.

I know that many within the health and care workforce have been putting into practice Realistic Medicine for years and that others are now developing initiatives focused around embedding this philosophy for the future. This report talks about realising this vision of our future and sets out the multi-professional, national and international support we now have to adopt Realistic Medicine in Scotland. It also outlines our plans, in collaboration with the Scottish Health Council and the ALLIANCE, the national third sector intermediary for a range of health and social care organisations, for engagement with the public during

2017. I hope that the practical examples and shared learning from around Scotland showcase the exciting work underway. I have been told many times that the approach in Realistic Medicine is 'the right thing to do' and I hope that by championing this as the Chief Medical Officer for Scotland, clinicians feel that they have greater latitude to practise in this way.

Realistic Medicine puts the person receiving health and care at the centre of decision-making and encourages a personalised approach to their care. Its aims of reducing harm and waste, tackling unwarranted variation in care, managing clinical risk, and innovating to improve, are essential to a well-functioning and sustainable NHS.

My vision for 'Realising Realistic Medicine' is:

**By 2025, everyone who provides healthcare in Scotland will demonstrate their professionalism through the approaches, behaviours and attitudes of Realistic Medicine.**

## REALISING REALISTIC MEDICINE

### 'REALISTIC'

1. HAVING OR SHOWING A SENSIBLE AND PRACTICAL IDEA OF WHAT CAN BE ACHIEVED OR EXPECTED.
2. REPRESENTING THINGS IN A WAY THAT IS ACCURATE AND TRUE TO LIFE.

### CREATING CONDITIONS

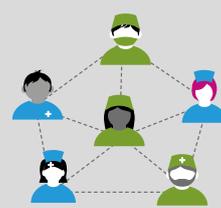
#### COMMUNICATE



#### CONNECT



#### COLLABORATE



#### CULTURE

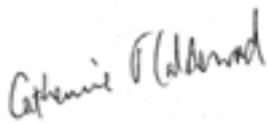


### THE VISION

BY 2025, EVERYONE WHO PROVIDES HEALTHCARE IN SCOTLAND WILL DEMONSTRATE THEIR PROFESSIONALISM THROUGH THE APPROACHES, BEHAVIOURS AND ATTITUDES OF REALISTIC MEDICINE

The Annual Report also contains the traditional snapshot of the 'Health of the Nation' – we have chosen to publish only highlights this year. I hope these key headlines will stimulate those who do not generally access this material so they too can share the broad intelligence about Scotland's health. What has struck me from engagement during 2016 is the wealth of knowledge, expertise and talent across all those who support people with their health and care needs in Scotland and I look forward to continuing to collaborate with you.

Thank you to everyone, including members of the public, who provided feedback and offer continuing support for this work. Through this I have come to the conclusion that it is possible to 'Realise Realistic Medicine' in Scotland and I am certain that collectively we will continue to influence the delivery of health and social care worldwide.



Dr. Catherine Calderwood MA Cantab FRCOG FRCP Edin  
Chief Medical Officer for Scotland

**//** You should expect the doctor (or other health professional) to explore and understand what matters to you personally and what your goals are, to explain to you the possible treatments or interventions available with a realistic explanation of their potential benefits and risks for you as an individual, and to discuss the option and implications of doing nothing. You should expect to be given enough information and time to make up your mind. You should consider carefully the value to you of anything that is being proposed whether it be a treatment, consultation or diagnostic investigation and be prepared to offer challenge if you feel it appropriate. **//**

I'd really welcome your opinion. If you have feedback I can be reached at:

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Phone: 0131 244 2379

You can also interact with me on Twitter  
 [twitter.com/CathCalderwood1](https://twitter.com/CathCalderwood1) #RealisticMedicine  
and via my blog [blogs.scotland.gov.uk/cmo/](https://blogs.scotland.gov.uk/cmo/)  
and via LinkedIn  at <https://www.linkedin.com/in/catherine-calderwood-691979108>.

## Production of the Report

I would like to thank my colleagues for their input into this report. A large number of people spent time helping my team and I to prepare 'Realising Realistic Medicine'.

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## Executive Summary

Realistic Medicine puts the person receiving health and care at the centre of decision-making and creates a personalised approach to their care. It aims to reduce harm, waste and unwarranted variation, all while managing risks and innovating to improve. These concepts will be essential to a well-functioning and sustainable NHS for the future.

### Realistic (definition)

*adjective:*

1. Having or showing a sensible and practical idea of what can be achieved or expected.
2. Representing things in a way that is accurate and true to life.

This report has been prepared in response to the feedback around Realistic Medicine and sets out a future vision and strategy to realise Realistic Medicine in pragmatic terms.

### REALISTIC MEDICINE IN THE INTERNATIONAL CONTEXT

When 'Realistic Medicine' was published it became clear that there was interest in its content from outside Scotland. On Twitter #RealisticMedicine reached nearly ten million feeds on almost every continent. This virtual network is enhanced by real time collaboration. Contributions from international figures can bring experience and expertise that will support the realisation of Realistic Medicine. There is a broad international movement with consensus around the need to co-create health with people and tackle unsustainable and undesirable practices in healthcare.

### REALISTIC MEDICINE, PEOPLE WE CARE FOR AND SUPPORT AND THE WIDER PUBLIC

Over the course of 2017, with support from the Scottish Health Council and the ALLIANCE, we look forward to establishing what Realistic Medicine means to people we care for and support and the wider public. We must gain a true understanding of what the concepts described in Realistic Medicine mean for those accessing health and care services, in order that we can truly co-produce a realistic approach to health and social care. A number of methods will be used to find out how best to achieve this, including focus groups, the Citizen's Jury and Citizen's panel.

### REALISTIC MEDICINE AS A MULTI-PROFESSIONAL ENDEAVOUR

Realistic Medicine has resonated with many professions providing health and social care. Here, the term 'medicine' does not solely apply to the work carried out by doctors – it should be considered as the broad concept of using skills and knowledge to maintain health and to prevent, identify and treat illness. It is impossible to achieve Realistic Medicine without a truly multidisciplinary approach, appreciating the varied skills and experience of the health and social care workforce in Scotland. It is more important now than ever to gain a shared understanding of what Realistic Medicine means in different health and social care contexts. I have invited my fellow Chief Professional Officers in Health and Social Care to discuss what Realistic Medicine means in their professions and to establish how we can work together to achieve the aims of Realistic Medicine.

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**“Realistic Medicine can be seen more as a thread that runs through all work to improve and change care and is constantly referenced, rather than a stand-alone concept.”**

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### CREATING THE CONDITIONS FOR REALISTIC MEDICINE

I asked for feedback on my first report and this confirmed that colleagues across Scotland identified with and supported the themes within Realistic Medicine. I received stories from people about what practising Realistic Medicine had meant to them and how this resonated with changes that they had made, or were making, in their own practice. People felt most energised by the potential to positively influence culture through more shared decision-making, and to reduce harm, waste and variation. Delivery of these linked aims, fulfilling our collective desire to change the focus of care, will require a co-ordinated set of actions across all clinical and care professions in Scotland, but as practitioners and leaders in our own systems, each of us has the ability and the licence to make progress with this. Simultaneously, a number of national initiatives will support this by helping create the conditions for Realistic Medicine to flourish at this local level.

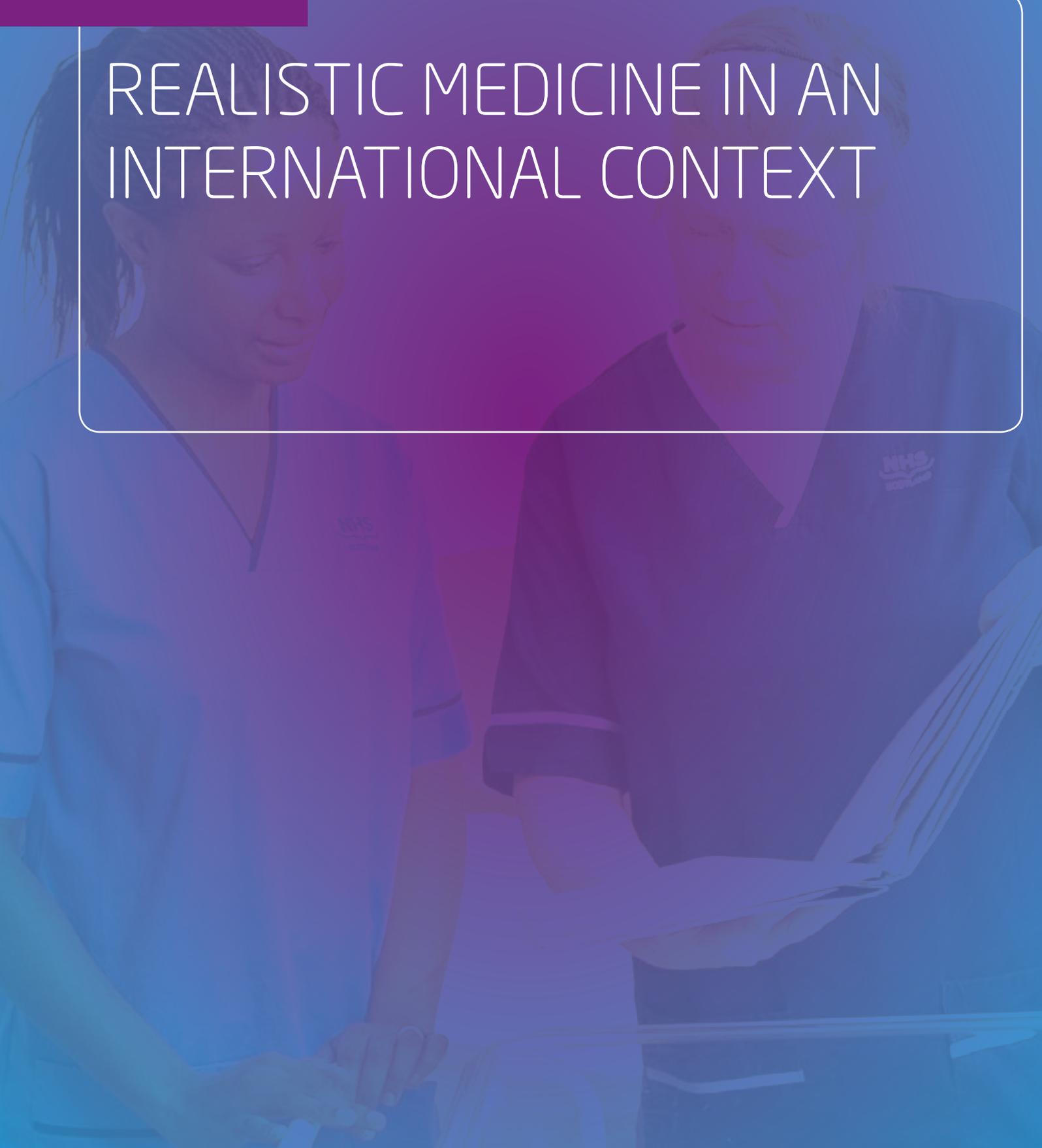
## REALISTIC MEDICINE AROUND SCOTLAND

My team have spent time over the past year meeting and speaking with professionals to find out about examples of Realistic Medicine going on all around Scotland. My report highlights some case studies of work that reflects the principles of Realistic Medicine, and further case studies can be found at this link:  
**[www.gov.scot/ISBN/9781786526779](http://www.gov.scot/ISBN/9781786526779)**

I look forward to continuing to work with you to champion Realistic Medicine so we can deliver a modern and innovative health and care system for all the people of Scotland.

CHAPTER 1

# REALISTIC MEDICINE IN AN INTERNATIONAL CONTEXT



## Across Europe in the 19th century, medical practitioners sought a collective professional identity, driven not only by a desire to be associated with progressive and affirming codes of behaviour and ethics, but by broader influences; societal, cultural, economic and political.

From its beginning in separate countries, the advance of professionalism coalesced throughout Europe, regardless of cultural or political background, strengthened within these states by a growing interest in sharing approaches and thinking through the formation of medical colleges, societies, and periodic journals. This international movement reinforced not only this sense of shared understanding and identity, but eventually precipitated the development of licensing standards expected for doctors too. In Scotland, as medical training became more formalised and also was undertaken in groups, medical students and doctors formed 'cliniques' where learning was shared and supportive networks with strong allegiances were created. Here, we see some of the origins of modern approaches to lifelong learning and professional development.

International learning through communities of shared interest has long been a part of the advancement of science and practice of medicine. As clinicians in Scotland contemplate how the consequences of the referendum on UK membership of the European Union will affect their European networks, there has never been a more important time to restate the importance of continuing to be outward looking in our pursuit of learning and critical appraisal. Though it is perhaps not in our nature to admit it, we should also appreciate that there are occasions when others will learn from us, and that as part of our professional compact with colleagues across the world we must ensure that we create the opportunities, by whatever means, to share learned knowledge and experience.

When 'Realistic Medicine' was published in January 2016, it soon became clear that there was interest in its content from outside Scotland. The social media footprint alone demonstrated that in this digital age, sharing a message was incredibly quick and effective, with responses from almost every continent, and from places as remote as within the Arctic Circle. By January 2017, Realistic Medicine had reached almost ten million Twitter feeds and new networks for learning and collaboration were forming.

The report was written acknowledging and reflecting conversations and questions that were taking place in surgeries and hospitals up and down the country, so it

should really be no surprise in this ever shrinking global environment that similar conversations were occurring elsewhere. Indeed, the original report acknowledged this, picking out the Welsh 'Prudent Healthcare' approach as one from which we could learn.

Dr Albert Mulley is Director for Global Healthcare Delivery Science at the Dartmouth Institute for Health Policy and Clinical Practice, and Professor of Medicine at Geisel School of Medicine. His policy paper for The King's Fund, 'Patient Preferences Matter'<sup>1</sup>, was influential in shaping some of the content within 'Realistic Medicine'. He describes 'Realistic Medicine' as a 'bold and important statement from a Chief Medical Officer' and feels that this has enabled an honest and challenging dialogue in Scotland that puts the country at the forefront of an international response to concern about over-reliance and over-provision of high expense, highly technical care as a substitute for getting the basics of health and social care right.

Dr Mulley provides two key challenges: 'How do we choose to measure?' and 'How do we choose to manage?' Both are interlinked, as health systems across the world tend to manage what they measure, but sometimes measure only what is readily accessible. He said, 'We need to learn from variation and deliver what adds value; not just variation in outcomes and cost, but variation in attitudes to risk and patients' preferences – that should be the strategic intent of every health system.'

There is a strong history of sharing between Scotland and Wales, and many similarities between approaches described in 'Realistic Medicine' and 'Prudent Healthcare'<sup>2</sup>. Dr Sally Lewis of Aneurin Bevan University Health Board, Wales, has led on the implementation of Prudent Healthcare. Her appointment as the UK's first Assistant Medical Director for Value-Based Care is a strong statement of commitment by her health board. She agrees with the need to find measures that are relevant to the care we want to provide. She says, 'We must be able to justify our decision-making and also to provide people we care for and support and clinicians with the tools for co-production. One of the essential aspects therefore is to define, measure and analyse true outcome data, including Patient Reported Outcome Measures (PROMs).'

Dr Mulley is typically expansive and forthcoming in his observations here. Just as there are reductionist clinicians, unyielding in their commitment to science and technology and who evade more subjective or context specific considerations, so also there are reductionist managers with an assembly line approach and exhibiting Taylorism<sup>1</sup> thinking. He contends, the potential hazard is that this thinking is applied at its extreme to guidelines and to pathway development, and becomes a form of reductionism too.

**“We fail to measure what really matters in producing value-based care because we’ve been trained in a reductionist environment where people don’t trust measures that aren’t highly objective and generalisable, when most things that contribute to value at the level of the individual are highly subjective and context specific, including their preferences. If we don’t measure whether services delivered are concordant with people’s preferences, we can’t measure that value creation”.**

He suggests an alternative response to this, ‘Because the services we deliver are so complex, don’t over-specify. Instead, think like the parent or the guardian and create the simple rules that set direction of travel or purpose, boundaries and the basis for reward. The way you make that practical, is to measure what matters; don’t over-specify or tread on someone’s autonomy, think about the intrinsic motivation of people who have the normative values that got them into that role in the first place. Develop the simple rules and direction setting; what you reward is respect, manifest by listening to what matters to the person. Then you develop a measure that allows clinicians, or the team that they’re responsible for, to hold themselves accountable for following those simple rules.’

The CollaboRATE measurement tool<sup>3</sup> was developed by a Dartmouth research group, led by former Welsh GP Glyn Elwyn, whose aim is to develop tools and interventions that improve shared decision-making in healthcare. This fast, simple scale, intended for use with people to assess the quality of the shared decision-making in the clinical encounter from their perspective, shows discriminative validity in the amount of shared decision-making present and correlates with other established measurement tools such as SDM-Q-9 and Perceived Involvement in Care Scale<sup>4</sup>.

## collaboRATE

### Thinking about the appointment you have just had...

1. How much effort was made to help you understand your health issues?

0 1 2 3 4 5 6 7 8 9

No effort was made

Every effort was made

2. How much effort was made to listen to the things that matter most to you about your health issues?

0 1 2 3 4 5 6 7 8 9

No effort was made

Every effort was made

3. How much effort was made to include what matters most to you in choosing what to do next?

0 1 2 3 4 5 6 7 8 9

No effort was made

Every effort was made

Despite the increasing need to provide care to people with complex needs in integrated multi-disciplinary teams, the experience of some remains that their care is fragmented and poorly co-ordinated. The Dartmouth group are also in the process of developing, with public involvement, and testing, a fast, simple patient-reported measure of integration in care delivery, IntegRATE, that allows assessment of the perception of these teams working practices in four domains: information sharing, consistent advice, mutual respect and role clarity<sup>5</sup>. As Realistic Medicine becomes part of the way that we deliver care in Scotland, tools such as these will become very important in providing measures that will allow us to assess our ability to truly involve people in the decisions relating to their care, and ensuring that this is delivered in a joined up, integrated fashion between professionals, communicating and acting with clarity of role and mutual respect. Without this feedback for reflection, how can we assess whether we are truly practising in the style that we intend?

Dr Mulley acknowledges the operational obstacles to achieving this style of healthcare. He suggests that you have to redesign teams, and roles within teams, to level hierarchies and make care less expensive: ‘Because it’s a step change, rather than a marginal improvement, the other operational piece is you need to know how to organise for innovation, rather than just improvement.

‘You can make incremental change, you can improve, by asking everyone to do two jobs, to deliver performance, using current measures, and to improve, and you can do the improvement in 5-10% of your job, and delivery in the rest. But if you’re asking people to do new job descriptions, new teams, new ways of communicating it’s too much to ask for people to do in 10% of their time; and no-one can do it alone.’

<sup>1</sup>**Taylorism:** System of scientific management advocated by Fred W Taylor. In Taylor’s view, the task of factory management was to determine the best way for the worker to do the job, to provide the proper tools and training and to provide incentives for good performance. He broke each job down into its individual motions, analysed these to determine which were essential, and timed the workers with a stopwatch. With unnecessary motion eliminated the worker, following a machine-like routine, became far more productive (Encyclopaedia Britannica).

This recognises one of the challenges to realising Realistic Medicine, identified during engagement across Scotland over the last 12 months, that needs to be overcome; the need for time.

Dr Mulley continues, 'My colleague Professor Chris Trimble, from Tuck School of Business, Dartmouth, is an expert on making innovation happen inside established organisations from Tuck School of Business, Dartmouth. He argues that there needs to be a dedicated team, responsible for learning about whether or not the hypothesis that you're using to design a new role or team holds, not managing old performance issues, they're devolved of that responsibility, but they are held accountable for disciplined learning that create the hypothesis for future models and innovation. Without this dedicated team, supported by the CEO, and dealing with the creative tensions that will always exist between performance management and innovation teams, it doesn't happen<sup>67</sup>.

Not only will this take time, but it also requires a change of mind-set. Dr Lewis has experience of this in Wales: 'As healthcare professionals we tend to do what we always have done and present solutions which are framed as such. Changing the way we think about how to do things is extremely challenging, needs good facilitation and good information.'

Lewis continues, 'There is often a profound lack of understanding about what other healthcare professionals actually do, and the scope of their practice. Getting everyone in the room we have found to be hugely beneficial in building that mutual trust and confidence necessary to redesign.'

'In Wales, the term 'minimum appropriate intervention' was discarded as it was not properly understood by those outside health. This really does involve a change in mind-set for many, including the 'gentle art of doing nothing'. We need to understand better why healthcare professionals tend to default to action and often make incorrect assumptions about what people are seeking.'

Realistic Medicine attempts to deal with the dual conundrum of providing care that has greater worth to individuals through proper identification of preferences and shared decision-making, whilst also addressing the need to improve health and wellbeing at a population level. These two aims are not distinct and are closely aligned by the concept of 'value'.

Professor Sir Muir Gray is Director of the Value-based Healthcare Programme at Oxford University, and has provided advice to countries on healthcare systems and value-based care all around the world.

He describes the different ways to think about value.

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**"Personalised healthcare and population healthcare are two sides of the same coin. The best way to think about this is to think about value."**

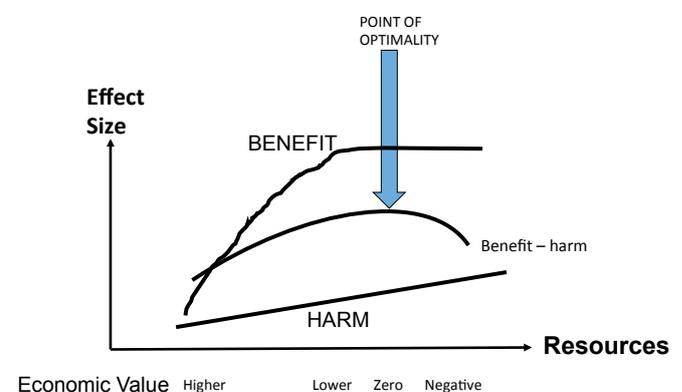
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'The term 'value' in the plural - 'values' - means principles, for example 'this health board values openness'. In the singular, the meaning is economic, and in England NHS Rightcare developed the concept of Triple Value:

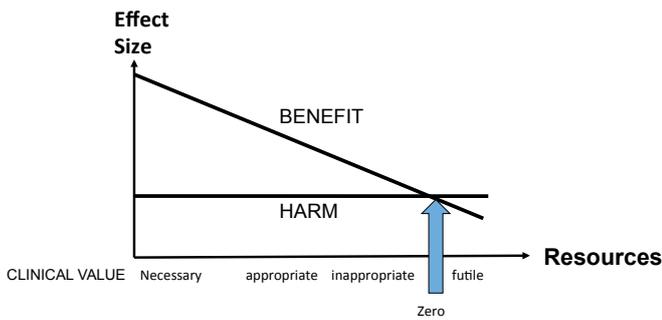
- **Allocative** - determined by how well the assets are distributed to different sub-groups in the population
- **Technical** - determined by how well resources are used for outcomes for all the people in need in the population. This is much more than efficiency, which is determined by the outcomes and costs for the people seen, but ignores overuse and underuse
- **Personal** - determined by how well the outcome relates to the values of each individual'.

Sally Lewis agrees: 'There is so much hidden harm from over-intervention, but we are relatively blind to this, instead focusing on harm from missed diagnoses or under-intervention which is of course important as well'.

When he speaks to audiences, Muir Gray uses a couple of slides to try to illustrate this.



He views this diagram, first created by Avedis Donabedian, as one of the most important in healthcare. It shows how benefits to people increase rapidly with investment of resources, but then level out, even though investment increases, whereas harm rises in a straight line. 'The more work we do,' he says, 'the more harm we cause because procedures we carry out have risks'. Therefore finding the point of optimality is critical.



Gray then uses this second figure to show the different relationship from an individual's perspective. He says: 'When there is only enough resource to make interventions available to a few, they are offered to people who have most to gain, and who are more willing to accept risk. However, as investment increases, interventions are offered to people who are less severely affected, therefore the maximum benefit they can expect is less, but the probability and magnitude of harm remains the same.'

The Royal College of General Practitioners (RCGP) new standing group on over diagnosis and overtreatment is interested in interventions and activity on the right side of this spectrum<sup>7</sup>. McCartney and Treadwell call out the need for clinicians to have readily accessible 'evidence that matters' and is useful to people we care for and support when decisions are being made, such as number needed to treat and relative risk, and this is essential if we are to shift the model of decision-making. Greenhalgh *et al* suggest that evidence-based medicine should not be viewed as a failed model, but that we need to go back to the movement's founding principles 'to individualize evidence and share decisions through meaningful conversations in the context of a humanistic and professional clinician-patient relationship.'<sup>8</sup>

Dr Lewis, a GP by clinical background, feels building a more personalized approach to care, through co-production and shared decision-making, is perhaps the most important aspects on which to concentrate:

'Evidence-Based Medicine has been great but we have, in my opinion, allowed it to push us into a very formulaic mode of delivering care where one size fits all, rather than using the evidence to inform care. Guidelines have become rules – this has made us very risk averse at a system level. Arguably, the Quality and Outcomes Framework has reduced variation, but it has also reduced patient-centred, holistic care! We need a balance.'

Dr Mulley describes how innovation and this approach to evidence has shaped the care provided by a new primary care practice, Dartmouth Health Connect. When he left Harvard, where he had been Chief of General Medicine at Massachusetts General Hospital (MGH) for nearly three decades to join Dartmouth, he saw the opportunity to build a care model truly fit for the purpose of engaging people and supporting their role in decision-making and co-production of care. He recruited Rushika Fernandopulle, a former MGH colleague, to design 'from scratch' and implement a care model based on his experience at the Atlanticare Special Care Center<sup>9</sup>.

Rather than recruiting the usual number of clinicians for the target population of service users, he recruited about half that number but also recruited 'coaches', half of whom had no experience in healthcare. Coaches were recruited for their shared life experience with the local population, their empathy and engagement skills, and enthusiasm to make a difference. Rather than a GP spending an hour with a person identified as having the potential to benefit from deeper interviewing, one of these coaches would spend time with them developing a deeper understanding of their preferences and using skilled interview techniques to assess and to motivate.

'Every morning there's a huddle, it could be 10 coaches, two GPs and one nurse in the room, and leadership of the huddle is rotated on a daily basis so 10 out of 13 days it's a coach that's leading the huddle. The purpose of the huddle is to have a conversation that prioritises the urgency of the people we care for and support every day that they're concerned about. So for example, a doctor might think that it's important to focus on Mrs X with her diabetes and improving her diet and exercise; she's gained weight and her A1c is too high, and there's a suspicion that she's still smoking. And the coach says, I couldn't agree with you more, but this isn't the week. She just got bad news about the messy divorce she's going through and she needs some support.'

Professor Gray considers how the understanding of systems-based thinking in healthcare, and its implications has evolved: 'One of the concepts that has emerged, which we didn't think of as students, is one of overuse of healthcare and the potential harm and waste this creates; even if there was lots of money, Realistic Medicine would still be very important. It's only partly stimulated by consideration about the sustainability of delivering a population-based approach to healthcare.'

'I think as a nation, you're probably at the forefront of the approach to value-based healthcare, but you can strengthen this further, learning from elsewhere, especially on the population health side.'

In his landmark work with Dartmouth on unwarranted variation, Professor John Wennberg identified that the use of accessible data, to stimulate understanding and change practice was critical. This led to the development of the Dartmouth Atlas of Variation, variants of which are now being used by clinicians in many countries across the world. In England, NHS Rightcare<sup>10</sup> has been developed in partnership with a wide variety of organisations, whilst in New Zealand, the Health Quality and Safety Commission has a visually impressive, easily navigated and public online version<sup>11</sup>.

## Case Study



Realistic Medicine workshop with NHS Tayside and Open Change

### REALISTIC MEDICINE AND SERVICE DESIGN

Dundee has recently been named the UK's first UNESCO City of Design. The city has adopted a design values statement which includes the following: 'focusing on social design, redesigning public service and community engagement'. In light of this, NHS Tayside has started the process of realising Realistic Medicine using a service design philosophy. This means involving both healthcare and design professionals in changes to services, always while involving the public.

The 'Health and Social Care Designed in Dundee' alliance has initiated a wide range of events and

activities that have aimed to raise awareness of service design within NHS Tayside and teach methods that can use service design to realise Realistic Medicine. A number of these events have been hosted alongside Open Change, a Scotland-based service design agency.

The aim has been to 'begin a conversation about how we can work collaboratively and how we build a trusting and supportive environment that supports a diverse range of clinicians, nursing staff, allied health professionals, people and carers to work together to deliver healthcare, better.'

A workshop on design in healthcare will be held at a future NES conference, led by NHS Tayside representation.

The strength of Atlases is not to provide answers but to provoke questions that lead to better understanding of the reasons for variation, and to help identify variation that is unwarranted. They do not suggest an ideal level, nor do they suggest that high is bad, or average is ideal. This is important, as in this respect they cannot be used as a tool to judge performance of one area against another. Instead, they are intended to facilitate debate and reflection and for this to be used to drive improvement.

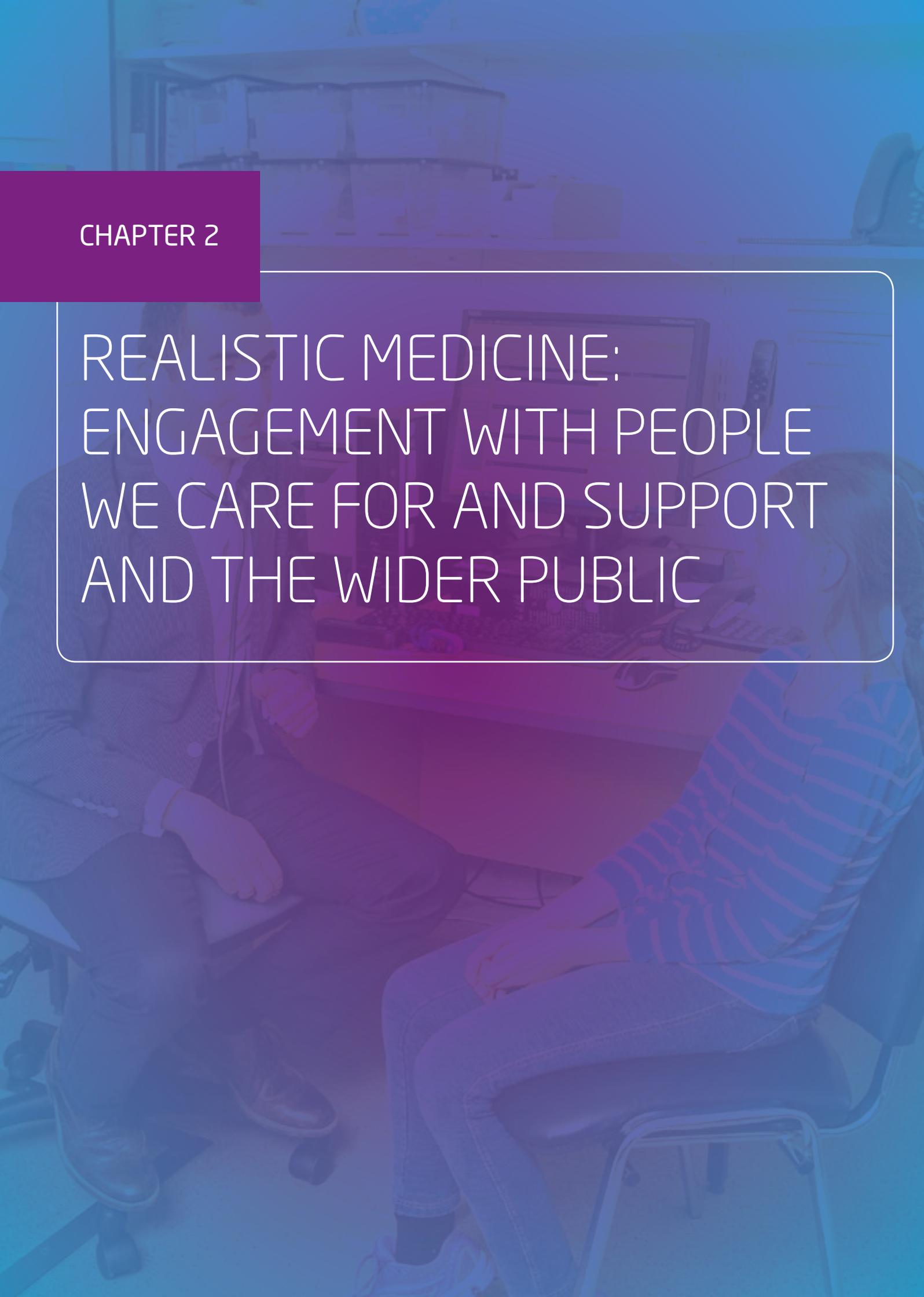
'Improving population health, by addressing unwarranted variation, needs a public health approach, but to be owned by the chief executives and chairs of the Boards in Scotland,' says Gray. 'To start, focus on the culture and the systems of a couple of symptoms, a couple of diseases and a couple of characteristics using population based systems thinking. For example look at people with headache, or end of life care, but within each area you need to look at the systems.'

**//** To create a new culture, you need the right glossary, a common language; language creates reality. We need to work towards a common language that is understood. A system is a set of activities with a common set of objectives; a network is a set of organisations that delivers the system; a pathway is a route that people usually follow through the network. We should also identify the words that we should stop using. **//**

As we begin to realise the concepts within Realistic Medicine, it is encouraging and reassuring to know that around the world, just as opinion coalesced around the advent of professionalism in the 19th century, there exists a broad international movement with expert consensus and helpful experience around shared aims; and that these all assert the need to co-create health between practitioners and citizens as an inviolable standard.

## COMMUNICATE





CHAPTER 2

REALISTIC MEDICINE:  
ENGAGEMENT WITH PEOPLE  
WE CARE FOR AND SUPPORT  
AND THE WIDER PUBLIC

**Clinicians can only practice 'realistically' with the full understanding and support of the people we care for and support, those who care for them and the wider public. Gaining a broader understanding of what Realistic Medicine means beyond the medical profession and beyond Scotland has been a good starting point; however the most important group to foster shared goals with is the public for whom Realistic Medicine will be a reality.**

The Scottish Health Council and the ALLIANCE will be key in achieving these aims. The Scottish Health Council will be taking part in connecting with the public on Realistic Medicine.

Realistic medicine identified key themes going forward – shared decision-making and reducing harmful and wasteful care. It is essential we have a broad-ranging discussion with the public about these issues.

While there is currently no agreed definition of shared decision-making in healthcare, the common variants used are all broadly similar in stressing the importance of people we care for and support and professionals working in partnership, making decisions based on the best clinical evidence, making sure that people are fully informed about risks and benefits, and combining this information with the person's values and preferences.

Research from the UK and other countries suggests that strategies to enhance shared decision-making can improve:

- People's knowledge about their condition and treatment options
- People's involvement in their care
- People's satisfaction with care
- People's self confidence in their own knowledge and self care skills
- Professionals' communication with people we care for and support.

It is clearly important to understand what people understand by the terms 'Realistic Medicine' and 'shared decision-making' and what they want to see happen as a result. Not all people will want the same thing, nor should they. There will be a wide range of views. However an important context for this work is that in surveys of NHS patients over a number of years over one-third of people we care for and support have consistently told us they would like more involvement in decisions about their care. So there is a clear issue we need to address.

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**"We must find a way to describe that providing treatment is not always the way to go and that people's dignity must be foremost. We must have the courage to be honest, open and balanced. Accept that we all have the right to make the decisions that are right for us. Have the courage to involve the community in difficult decisions and explain these in a manner which is open and honest."**

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We also know that people we care for and support, carers and the public need to be involved and to give their views on reducing harm and waste. We know from a number of studies that better patient and carer participation in itself can lead to safer care, so these two key themes support each other. We know that harm and waste are also subjects on which people we care for and support, carers and the public will have valuable insights and input. We need to have a shared understanding of how we do this, and even what we mean by 'harm' and 'waste'. Do we all hear the same thing when we hear these words?

The Scottish Health Council is very happy to be involved in this work. They want to build on work that has already been done so we are not starting from scratch. For example in Healthcare Improvement Scotland, the DECIDE project worked with people to develop communication strategies to support informed decisions and practice based on evidence, and used the learning from this to support patient-friendly guidelines. This in turn helps support shared decision-making in practice.

The Scottish Health Council will also be working through the Our Voice framework. Our Voice is an initiative involving the Scottish Health Council, the ALLIANCE, Scottish Government, Healthcare Improvement Scotland and CoSLA, and is about developing approaches at individual, local and national levels to support improvement and to empower people to be equal partners in their care.

This initiative will be key to taking forward the discussion around Realistic Medicine and involving people we care for and support and the public in this discussion.

As part of this work the Scottish Health Council will be surveying members of the Scotland-wide Our Voice Citizen's Panel in early 2017. This is a panel of volunteers that have been recruited directly to be broadly representative of the Scottish population. This survey will help us identify key issues, concerns, and what support people feel they need to engage in shared decision-making and will also support the aim

of reducing harm and waste. More in-depth discussions will be taking place in public discussion groups around Scotland in the spring. We also have plans to commission a Citizen's Jury – which gives a chance for a small number of the public to spend a length of time learning about, hearing evidence, and discussing this issue – later on in the year.

## Case Study

### THE CITIZEN'S JURY

A Citizen's Jury is an innovative way of involving people in more complex decision-making processes related to the functions of government and other public bodies. Citizens' Juries are the opposite of a survey or poll. They involve lengthy deliberative processes where a group of community members gather to provide an overall response or recommendation about a particular issue or topic.

The Jury studies detailed evidence and can hear from experts in relevant subjects in a similar manner to a trial. Like in a trial, where public trust is put in the verdict reached by a jury because the public is assured that the evidence has been scrutinised by their peers, Citizens' Juries can be effective because they show the community that citizens like them are being given detailed information and coming to carefully considered conclusions, as well as providing rich information for public bodies to base decisions upon.

It is really important that we make sure this works for everyone. The Scottish Health Council are currently at the early stage of a project working alongside community members in an area of multiple deprivation, to develop practical ways to support local people in shared decision-making with clinicians and professionals. We hope that this will provide ideas and

tools that can be shared more widely and help reduce health inequalities.

We see engagement on Realistic Medicine as the beginning of a longer-term dialogue, building on the 'Healthier Scotland' public engagement carried out last year, and exploring what we as a society expect

## Case Study

### COMMUNICATING WITH PEOPLE WE CARE FOR AND SUPPORT

In NHS Borders an 'empowering poster' has been developed and will be displayed. It includes questions for people to be encouraged to ask their doctor. It will be displayed in waiting areas and used to encourage dialogue from the person's perspective. This will be aligned with themes from both 'Realistic Medicine' and 'Choosing Wisely' and further literature will also be aimed at junior doctors and students – empowering them to approach seniors and ask about tests, management, etc.



Poster being used in NHS Borders

from medicine and healthcare and clinicians, and how we can work together to support informed evidence based decisions with people and carers involved to the extent that they wish in these decisions. This will lead to better outcomes for everyone, people, carers, professionals and the people of Scotland.

A further piece of work that has already been started is the linking of Realistic Medicine and House of Care. A 'Realistic Medicine Meets House of Care' summit was held in August 2016 and there was broad support at this summit for linking the two concepts. The aim of the summit was to bring a wide range of stakeholders from policy, research, practice and teaching to share with them the learning and experience of Year of Care and how the underlying principles of their approach can be applied to wider contexts.

There was a broad enthusiastic response to the concepts that were presented and many agreed it was a tangible method and framework to help implement many aspects of Realistic Medicine. Many agreed that the starting point needed to be in helping to shape and develop cohesion in the values of professionals but also the culture of the general public. In many respects

there was perhaps no need for any policy development as the policy landscape in Scotland is fertile for this type of approach. Indeed there was a strong voice that the time was 'now'.

**"Loneliness and social isolation are public health and health inequalities issues. Realistic medicine can help address this challenge, with its emphasis on improvement and innovation, shared decision-making, and a personalised approach to care. Our vision should be for kinder, more inclusive and enabled communities. To get there we need joined up, strategic action across all the social determinants of health and strong partnership working between our public, third and community sectors."**

Voluntary Health Scotland



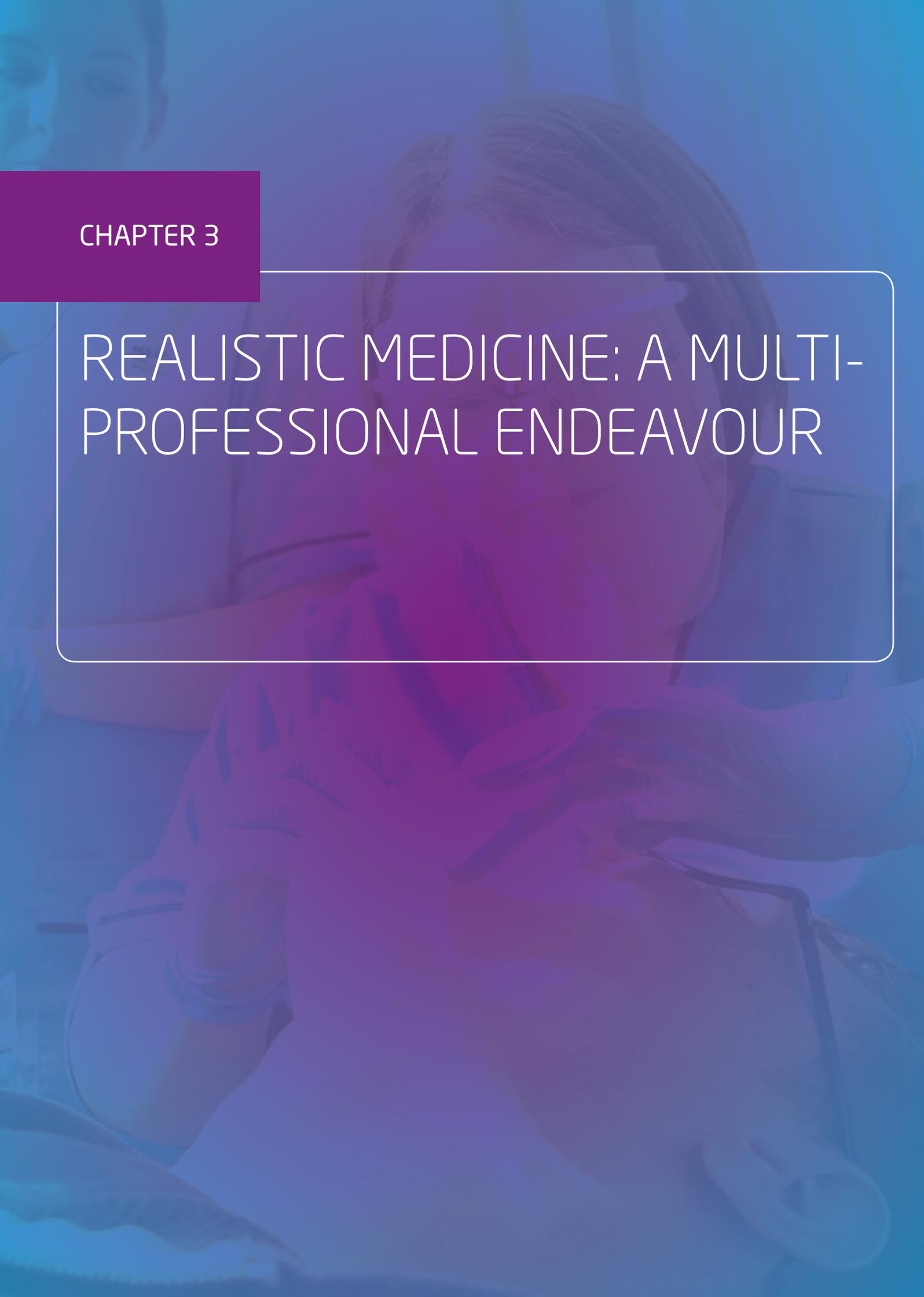
## Case Study

### THE POTENTIAL OF REALISTIC MEDICINE TO TRANSFORM MENTAL HEALTHCARE AND SERVICES

The next Scottish Government Mental Health strategy will be published in 2017. This will reflect the philosophy of Realistic Medicine, embracing the best international evidence, supporting empowerment and recovery oriented approaches to care and intervention, more effective use of knowledge and skill across the multi-professional knowledge base, and the conditions to support innovation in care delivery models and approaches.

New models of mental health provision in primary care that involve better access to a wider range of interventions delivered by a more diverse range of clinical and care professionals. With new primary care transformation funds we are testing out over 30 different models of mental health provision in primary care across Scotland and these will report findings in two years.

Empowering people with information to manage their own conditions is essential. NHS 24 is working on this in relation to mental health. The Distress Brief Intervention Programme seeks to offer people who have presented in distress with a two week intervention involving supportive listening and problem solving. This is done collaboratively with them, not to them, and is fundamentally about people participating actively in their own care and treatment. Mental health is an area where rights are carefully considered especially in those who lack capacity. The role of advanced statements with the new legislative requirement for registration by the Mental Welfare Commission for Scotland provides an important way for people to consider and record their wishes and opinions about any future necessary mental healthcare and treatment should they become subject to compulsion.



CHAPTER 3

REALISTIC MEDICINE: A MULTI-  
PROFESSIONAL ENDEAVOUR

## The messages outlined in last year's report resonated with a range of clinical and care professionals across Scotland and beyond.

Many nurses, pharmacists, psychologists, allied health professionals, social workers, care professionals and healthcare scientists identified with the issues raised and – importantly for realising widespread provision of 'realistic care' across Scotland – recognised ways in which their professions and services have already been making the changes that will be needed if Realistic Medicine is to become the norm across Scotland in the future.

I asked my colleagues from the other main clinical and care professions within Scotland to share their reflections with me on what realising Realistic Medicine might mean for their profession and, crucially if we are to maximise our collective will, ideas and expertise, what this could mean for the ways we all work together to make the changes that people want to see.

People want to be independent, to do as much as they can when they are able to, have a decent quality of life, goals, objectives and dreams and to be at home and safe in their community. People expect high quality, responsive and flexible services to be there when they need them – and at an early stage so that difficulties and challenges can be resolved quickly. System reform, processes and structures are of course important in improving how we deliver care and support and improvements that will help deliver the ethos set out in Realistic Medicine are already happening at pace across Scotland through health and social care integration and other national policy developments.

### CHANGING PROFESSIONAL SYSTEMS OF CARE

Many strategic commitments across the professions have been made in ways that resonate with the growing movement of Realistic Medicine enthusiasts and change agents across all the professions in Scotland's health and care delivery systems. For example, the 'Oral Health Plan for Scotland'<sup>12</sup> has emphasised the need to modernise an outdated and complex system to improve oral health and related inequalities. Just as with medicine and medical care systems, the dental care system has evolved as a result of an historical need which must change given the current profile of health and care need.

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**"We must return the mouth to the body and integrate oral health with general health."**  
Margie Taylor, Chief Dental Officer for Scotland

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The Chief Dental Officer has stated that adults tend to be 'treated in a system that pays dentists for doing things to teeth', suggesting a more realistic approach to the future delivery of adult dental care might be to support a greater focus on oral health improvement. This would encourage dentists to work with their primary care colleagues to raise awareness in people of any risk to their oral health. As an example, when a person is diagnosed by their doctor as being at risk of, or suffering from, diabetes they will be given dietary advice and referred to have their blood, eyes, feet and weight checked on a regular basis. In addition to these checks the patient should be made aware of the importance of attending the dentist regularly for specific advice and treatment in order to avoid future periodontal (gum) disease and tooth loss. This approach could further empower people to self-manage all the potential consequences of their long-term condition at an earlier stage following diagnosis.

Changes to professional systems of care are already happening in Scotland and provide a strong foundation for all the clinical and care professions to work together on new innovative, more efficient approaches that are more in tune with what matters most to people – approaches that will lead to further increases in the already high satisfaction levels across Scotland and provide positive opportunities for professional development and improved approaches to meeting people's health and care needs.

For example, over the last four years the national Musculoskeletal Programme has used an improvement approach to support roll out of self-referral, telephone triage and digitally enabled, supported self-management and rehabilitation. The Musculoskeletal Advice and Triage Service (MATS) is operated by NHS 24 and is operational in nine NHS Boards (covering 70% of the population).

People with musculoskeletal problems or pain are taken through risk stratification questions to determine their clinical need for: self-management advice (e.g. exercises, footwear); supported self-management; (an Allied Health Professional (AHP) call back for instance a physiotherapist or podiatrist); AHP referral for treatment; secondary care referral, e.g. to trauma or orthopaedics and occasionally immediate A&E attendance. This leads to a higher quality and reduced number of referrals to orthopaedics with people on the right pathway for an optimal outcome.

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**“We need fully utilise the skills and capabilities of allied health professionals to support transformation in community provision across prevention, early intervention and enablement approaches – working in partnership with the people, in communities and with organisations.”**

Jacqui Lunday Johnstone, Chief Allied Health Professions Officer for Scotland

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Nursing colleagues have been leading work to trial new models of healthcare delivery developed around fostering holistic human connections, enablement and self-management – with less of an emphasis on traditional management and professional hierarchies. The Buurtzorg approach from the Netherlands has attracted international attention for its innovative use of independent nurse teams in delivering high quality relatively low-cost care in the community. This model has the potential to identify and inform ways in which realising realistic medicine and care could be organised within new professional structures and processes.

As an obstetrician I have seen first-hand how maternity teams have a long history of working in partnership to ensure that women and babies have appropriate intervention for their individual needs, and with care delivered by the most appropriate professional. Scotland's current model of care aims to optimise normal processes and avoid unnecessary intervention; whilst insuring that women with additional needs have the appropriate care and services.

## WORKING EFFECTIVELY ACROSS CLINICAL AND CARE PROFESSIONS

I was very struck by the reflections of our Chief Social Work Adviser, Alan Baird on my Annual Report last year. Alan welcomed the real opportunities for us to be joined up in respect of the questions I posed through 'Realistic Medicine' – questions and challenges that he recognised as being the same ones facing Scotland's social care and wider social services.

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**“The objectives set out in 'Realistic Medicine' will be very familiar to those working in Scotland's social services who have already been on a similar journey and who have considerable experience of shared decision making, co-producing outcomes for individuals using services, delivering personalised care and supporting and managing risk in order to empower individuals yet afford sufficient protection.”**

Alan Baird, Scottish Government's Chief Social Work Adviser

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People need to feel valued, supported, have the right values and behaviours, be appropriately skilled and be able to utilise their skills as well as develop new ones. I would welcome an increasing role for the involvement of social work, social care and care professionals in multi-professional training, pathway development, care and support planning – this will deliver more realistic approaches to care delivery across the country.

Social workers are a key part of the decision-making processes that influence safe, effective and person-centred care across the country. They have skills in working with individuals in ways that are collaborative and outcome-focused. Social work, social care and health workers inhabit a shared arena in which links are already there with clinical colleagues – but more can be done locally and nationally to support the coming together of these services and those who provide them. This way the principles of Realistic Medicine can shape and influence the new and innovative service models within Scotland's Health and Social Care Partnerships.

Allied Health Professionals also often work across clinical and care professional groups to enable people to live well and avoid dependency on health and care professionals, including delaying or avoiding unnecessary admission to hospital. The strengths

and assets-based approaches used by AHPs have foundations in shared decision-making, are informed by the social determinants of health and shaped by the principles of co-production. AHPs are experts in rehabilitation and increasingly the evidence that their

work enables people to live independently, supports self-management, empowers people to return to work and avoids dependency on clinical and care systems, will inform the development of multi-professional pathways of care.

## Case Study



The INSPIRE team at the BMJ Awards Ceremony

### THE INSPIRE PROJECT – AN EXAMPLE OF INNOVATIVE MULTI-PROFESSIONAL WORKING TO IMPROVE CARE QUALITY AND OUTCOMES

The INSPIRE Project is an innovative project around intensive care unit (ICU) recovery which pre-dates Realistic Medicine but closely resonates with its message. People who require an ICU stay are released into diverse environments and ICU-specific follow-up is not always clear. The evidence base shows that people's quality of life post-ICU is poor and many have ongoing cognitive, physical, social and psychological problems. This affects both people and carers. InSPIRE is an innovation between nursing, medicine, allied health professions and pharmacy. It takes a self-management approach where shared decision-making and personalised care are key, focusing on what happens to people after their ICU stay.

In this respect it is a prototype of the sorts of multi-professional working that Realistic Medicine will support in the future.

People undergo a five-week rehabilitation programme which is constantly being refined using Quality Improvement techniques and – crucially – input from previous people we care for and support. As well as medicine, nursing, social work, clinical psychology and third sector based care professionals are involved. A patient advisory council also exists in ICU where 12-14 former-patients and family return to ICU and are asked simply 'how to make things better'. Changes have ranged from basic signage to complex care packages.

The project won a prestigious BMJ Award for 'Innovation into Practice Team of the Year' in May 2016 and is now being scaled up to other Health Boards including NHS Fife and NHS Lanarkshire. Each is able to take an individual approach in order to make INSPIRE suit the local community.

Nurses across Scotland are developing a national system to better support the identification of people's needs in a consistent way for everyone, every time – determining what matters, who matters, what information people want, involving people with discussions and decisions about care and enduring adaptation of service responses to personal needs.

**“Registered nurses work as part of a multi-disciplinary and multi-agency team within the context of integrated services. There are core values, skills and competencies expected at all levels of community and primary care nursing as well as hospital based nursing such as comprehensive holistic assessment, person-centred care, risk assessment and recognising vulnerability. Working across the NHS, third and independent sectors nursing teams support delivery of a range of health and care outcomes.”**

Fiona McQueen, Chief Nursing Officer for Scotland

The context of Realistic Medicine is one that is embraced by the nursing profession when supporting people to take charge of their own health and decisions around treatment paths to optimise and improve health and wellbeing outcomes.

This is achieved through:

- Empowering people to take charge of their own health and wellbeing to remain healthier for longer
- Development of self-help programmes and anticipatory care plans to support people with long-term conditions to take charge of their health and maintain their independence for as long as possible
- Utilising technology to monitor each individual's condition enabling additional support to be provided rapidly where required reducing the need for hospital admission or emergency department attendance
- Caring for more people with complex needs at home or in a homely setting
- Providing high quality nursing care to individuals and their families at end of life.

The healthcare science workforce contributes to 80% of all clinical decisions that are made in the NHS. The year-on-year increase in diagnostic testing activities and associated costs that has been observed and the sevenfold variation in requesting rates for some diagnostic tests further underlines the need for a broader range of professions within NHSScotland to identify innovative ways of examining any unwarranted or harmful variation. Approximately 25% of diagnostic tests that are undertaken are not appropriate or necessary.

## Case Study

### NATIONAL FALLS PROGRAMME

Falls are the single biggest reason for people over 65 to present to the Scottish Ambulance Service (SAS), with over 80% being transferred to hospital, often because other arrangements for care could not easily be put in place.

This has a range of unhelpful, and sometimes serious, unintended consequences for both the individual and for the services involved. There is significant variation in the use of alternative pathways to admission across Scotland and the current situation is not a productive use of resources for any of the agencies involved across health and social care. The Chief Health Professions Office, as the Scottish Government policy lead for falls prevention and rehabilitation, commissioned a

National Falls Programme to lead improvement in primary prevention of falls.

In November 2016 it established a national multi-agency collaborative involving all 31 of the Integrated Joint Boards and Scottish Ambulance Service (SAS) to support implementation of the SAS Falls Pathway 'once for Scotland'.

Work undertaken in various parts of Scotland has shown that through implementing a falls pathway, it is possible to reduce transfer to hospital by up to 50%. Similarly, a targeted mini collaborative improvement programme within 45 care homes across Scotland, as a partnership with the Care Inspectorate and Scottish Care, was able to deliver up to a 50% reduction in avoidable falls and also a subsequent reduction in transfer.

Our Healthcare Science Delivery Plan is tackling this and I expect to see the work to realise Realistic Medicine support this further through ensuring that the right test happens at the right time in the right way – as it is only through this work that we will start to have an approach to testing that is more closely based on pathways and preferences than professionals ordering tests ‘just in case’ or because of a personal professional interest.

**“Working collaboratively within a distributed model of leadership and as part of multi-disciplinary teams, scientists can play a key leadership role in optimising patient pathways”.**

Karen Stewart, Healthcare Science Officer,  
Scottish Government

Multi-professional working will increasingly need to support work that ensures that people can access the right health or care professional at the right time – delivering more person-centred but also more efficient care. For example, the impressive work on developing care pathways for musculoskeletal problems has had a significant positive impact on managing demands, reducing the need for medical consultant appointments. The development of new roles for nurses, radiographers and pharmacists have supported a more efficient approach to meeting the needs of people who may previously have had to be seen by a medical practitioner.

The exploration of how diagnostic tests are used in pathways shows noticeable variation in the way the test is being offered, used or interpreted across the NHS Boards. For example B-type natriuretic peptide (BNP) can be appropriately utilised to triage breathless people for echocardiography. Pilots have been initiated which have produced data that highlights a saving of approximately 10-11 weeks from GP appointment to the person commencing treatment. Prior to the test of change a person would have to wait approximately 14 weeks for treatment, while the new model of delivery is 2-3 weeks. These models have also approximately reduced echocardiograms by 50% and outpatient appointments by 50% with projected annual financial impact of around £30k (via cost avoidance).

Recognising the evidence around midwifery-led labour and birth which seeks to avoid unnecessary intervention, NHS Boards already provide some services related to home birth, freestanding midwifery units alongside midwifery units and obstetric units. This focus on personalised care, optimising processes and providing services which avoid unnecessary

intervention has been strengthened in the recent ‘National Review of Maternity and Neonatal Service in Scotland’<sup>13</sup>.

It will be important to ensure that the learning for the education, innovation and multi-professional working required across other services is captured and informs the way that collectively we realise Realistic Medicine and care in the future.

Pharmacists are trained as experts in medicines and increasing numbers now practice as independent prescribers. More pharmacists and pharmacy technicians are now being appointed in General Practice settings, supported by new competency frameworks that enhance the mix of skills available to address medicine-related issues in this setting and across the interface with secondary care.

The pharmacy profession interacts with people on a daily basis with the aim of ensuring medicines and other interventions meet their healthcare needs. Community pharmacies are located in the heart of communities and research suggests that they are accessed daily by 600,000 people in Scotland to obtain medicines and seek health promotion and harm prevention advice.

Pharmacy practice has been evolving to ensure that people are supported in understanding what to expect from their medication – central to this role is an acknowledgement that people want to be active partners in treatment options and to be supported through consideration of their expectations, preferences and evidence-based advice. For truly shared decision-making there needs to be a shift towards participative care, meaning that there is an acceptance by professionals of a situation where people may choose something different from what has been traditionally offered – collaboration across professions to support personalisation of care planning will be vital to making this work safely, efficiently and effectively.

The pharmacy profession is already playing its part in helping to realise Realistic Medicine through the provision of pharmaceutical care. It has been adapting to meet the challenges of changing demographics, advances in medicines technology and evolving perspectives on the benefits of medicines. The pharmacy profession has embraced it as a mechanism to modernise practice through innovation, participation and collaboration to improve the health of the population.

## Case Study



Social Prescribing community meeting at Heathery Wood Gypsy Traveller site in Fife

### PRACTICING REALISTIC MEDICINE WITH SPECIFIC COMMUNITIES

In NHS Fife, a specific programme addressing the needs of Gypsy Travellers has been implemented. The evidence base for this was a previous needs assessment for the four Traveller sites in Fife – a mixture of public and private sites. Those living on Traveller sites have limited access to health services and research was undertaken looking at Travellers' experience of health and expectations of services. Access was found to be hindered by poor literacy and poor understanding of what services were available.

An innovative social prescribing model was developed to identify priorities for these communities and staff were supported to learn more about this group via an e-learning module. Regular community meetings were commenced on-site to help establish person-centred approaches to care.

For example, the community identified priority areas beyond healthcare, such as fire safety, and so the fire brigade became involved to give advice in this area. Travellers were able to communicate with a community nurse who visited regularly and was able to refer and signpost to appropriate services.

The initiative identified areas that Travellers do use to obtain information, and after consulting with the groups and undertaking a survey they will now upload information to the Fife Council website which is often used by Travellers. Nurses on-site will continue to undertake work on healthy eating, physical activity and mental health – with a new mental health nursing liaison link.

This initiative is an example of taking person-centred care out of the hospital or clinic room and delivering it where it is most meaningful – in this case within communities themselves.

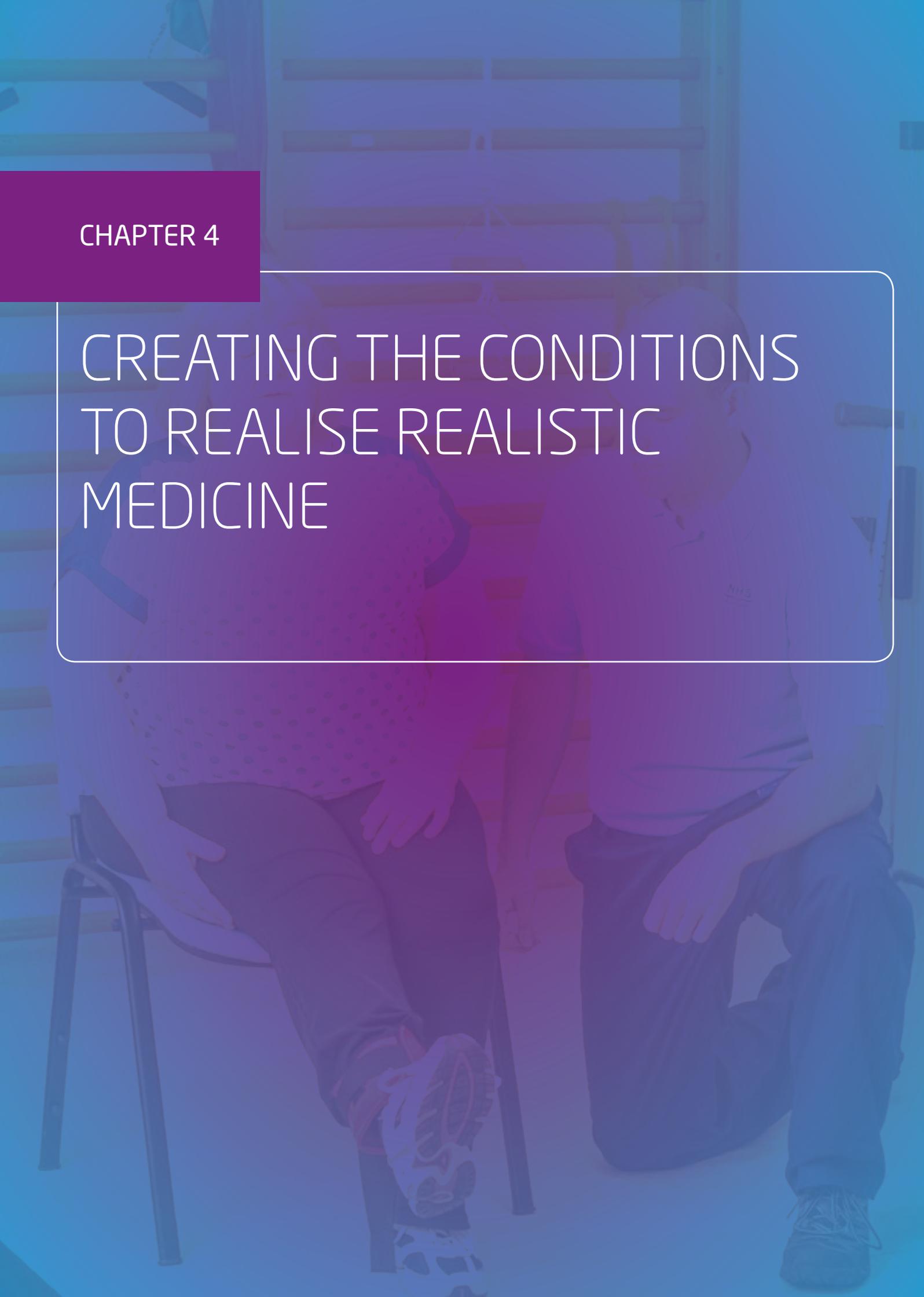
**“Pharmaceutical care for people involves the responsible provision of drug therapy to achieve agreed outcomes that improve a person’s quality of life. From pharmacy this requires a person-centred approach that supports shared decision-making with people, often with their carers, and the wider clinical and care team.”**

Rose Marie Parr, Chief Pharmaceutical Officer for Scotland

I am delighted to have the support of my colleagues across the clinical and care professions. They have helped identify areas for collaboration, as well as questions for us to consider more widely as part of our collective commitment to supporting the delivery of transformational changes in health and social care in Scotland. We will be working closely together to consider some of the specific areas where we can support improved ways of working, shared learning

across professions and enhanced support for the co-ordination of professional knowledge and skills to better deliver Realistic Medicine and care. We all want to support more effective multi-professional working to contribute to improved outcomes and reductions in harm or unwarranted variation – this shared commitment across Scotland's clinical and care professions will support both the changing approaches required within professions as well as the delivery of more effective multi-professional working across care pathways, services and sectors.





CHAPTER 4

# CREATING THE CONDITIONS TO REALISE REALISTIC MEDICINE

## If we are to realise Realistic Medicine, it will require us all, collectively and individually, to consider how we approach care delivery.

It should stimulate reflection about our attitudes and behaviours, in how we interact with the public and colleagues of all professions, and how we learn and share with others. This honest reflection, aided by measures that matter, must motivate us to innovate, improve and change when this is appropriate.

### REALISING REALISTIC MEDICINE

#### 'REALISTIC'

1. HAVING OR SHOWING A SENSIBLE AND PRACTICAL IDEA OF WHAT CAN BE ACHIEVED OR EXPECTED.
2. REPRESENTING THINGS IN A WAY THAT IS ACCURATE AND TRUE TO LIFE.

#### CREATING CONDITIONS

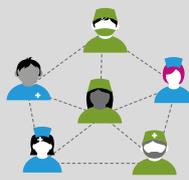
##### COMMUNICATE



##### CONNECT



##### COLLABORATE



##### CULTURE



#### THE VISION

BY 2025, EVERYONE WHO PROVIDES HEALTHCARE IN SCOTLAND WILL DEMONSTRATE THEIR PROFESSIONALISM THROUGH THE APPROACHES, BEHAVIOURS AND ATTITUDES OF REALISTIC MEDICINE

When I published 'Realistic Medicine', I sought feedback from readers on its content. I received it in large numbers from people of different backgrounds, through letters, emails, an online survey and via social media. The volume and usefulness of this was such that my team prepared a short report<sup>14</sup> in which the assessment of this feedback was presented.

### "Realistic Medicine - not Nihilistic Medicine."

It was very clear that colleagues across Scotland identified and supported the themes within Realistic Medicine. Time after time, I received stories from people about what practising Realistic Medicine had meant to them and resonated with changes that they had made, or were making, in their own practice. It soon became very clear to me that the report had precipitated powerful conversations and had the potential to be a catalyst for change in medical culture. People felt most energised by the potential to positively influence culture through more shared decision-making, and to

reduce harm, waste and variation. Delivery of these linked aims will require a co-ordinated set of actions across all clinical and care professions in Scotland.

The 'Health and Social Care Delivery Plan' was published in December 2016<sup>15</sup>. In it, the Scottish Government emphasised its commitment to Realistic Medicine and to begin work that would help to create the conditions for it to flourish:

- **As part of the National Clinical Strategy work-stream a Realistic Medicine team will be established** within Scottish Government. This will ensure the correct policy and operational environment at a national level so the numerous examples of local Realistic Medicine practice can thrive.
- **The Scottish Health Council and the ALLIANCE will explore with Scottish people what Realistic Medicine means** to them during 2017, and how best it can be co-produced.
- **The national health literacy plan 'Making it Easy' will support Realistic Medicine** by helping everyone in Scotland to have the confidence, knowledge, understanding and skills to live well with any condition they have.
- **The consent process for people we care for and support in Scotland will be reviewed** by the Scottish Government, General Medical Council and the Academy of Medical Royal Colleges to update advice to clinicians following the Montgomery Supreme Court judgement.
- **The Professionalism and Excellence in Medicine Action Plan will be refreshed** aligning and prioritising high impact actions that will support clinicians with Realistic Medicine.
- **A Scottish Atlas of Variation will be published and a collaborative training programme for clinicians initiated** to create better understanding and aid identification of unwarranted variation and promote high value care.
- **A single national formulary will be developed** to help achieve more equitable, greater value-based care so that the potential population benefit from medicines use can be maximised.
- **The principles of Realistic Medicine will be incorporated as a core component of lifelong learning in medical education;** in undergraduate and specialty training programmes and through continuing professional development.

## Case Study



NHS Education Scotland: A PBSGL in progress

### REALISTIC MEDICINE AS AN EDUCATIONAL TOOL

Practice-Based Small Group Learning (PBSGL) groups are a familiar part of learning, particularly in general practice. There are now around 2,250 members in over 350 groups in Scotland including over a third of all Scotland's, practice nurses and pharmacists.

In December 2016 a survey was circulated asking PBSGL members what they would like to see in new modules. 856 people replied, with Realistic Medicine being a priority. Therefore a new module is now in development with NHS Education Scotland: 'Realistic Medicine: building on the challenge in the 2016 Chief Medical Officer's report'

Through my conversations with other health and social care professionals and patient groups during the course of the past year, I have been able to identify many pieces of work demonstrating how Realistic Medicine is already being realised in some parts of Scotland's health and social care services. We already know that doctors use or would wish different treatments for themselves than the people who consult them for the same conditions, that people tend to overestimate the benefits of treatment and can underestimate the risks. In January 2017 the Lown institute published the 'Right Care Series'<sup>16</sup> in 'The Lancet'. These powerful articles discuss overuse and underuse of medical care internationally. The examination conducted by this series of papers is timely and fits closely with the questions asked in 'Realistic Medicine': 'Achieving the right care is both an urgent task and an enormous opportunity'.

These concepts are not new. Philippe Pinel, a renowned French physician, said over 200 years ago:

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**'It is an art of no little importance to administer medicines properly: but, it is an art of much greater and more difficult acquisition to know when to suspend or altogether omit them.'**

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Pinel's observation has as much relevance today, as it had two centuries ago; it has been very difficult to achieve this in modern practice but it is encouraging that international interest and debate around this is becoming much more evident. In my view, it is only by working through these issues, openly and transparently, with the public and across the professions, that we will find sustainable, acceptable solutions.

While there is consensus that shared decision-making is an essential part of practicing Realistic Medicine, there is also potential for tension between this and

the other aims of Realistic Medicine if the relationship between personal and population health is not understood or clearly articulated in the design and delivery of new models of care. The two approaches can co-exist and are complimentary if viewed through the prism of value-based care that enables a safe, effective and person-centred approach. Here, to re-iterate wise counsel offered earlier by Dr Mulley, it is important to consider 'How do we measure?' and 'How do we manage?' To this, I would also add 'What do we research?'

Worldwide evidence consistently shows that research is a cornerstone of all high performing health systems, leading to better targeted and more personalised treatment and to improved outcomes for people. In Scotland we have a rich tradition of research across all aspects of healthcare, with Scottish academic work having influence all over the globe.

Translation of research into clinical practice has transformed how healthcare is delivered and Realistic Medicine must support the further translation of research into improved care.

We have committed to invest up to £4m in a Precision Medicine Ecosystem that will co-ordinate precision medicine resources and opportunities across Scotland, bring together the findings from individual research projects and improve information sharing in the fight against diseases such as cancer and multiple sclerosis. Scotland also has a vibrant academic primary care research community, supported by the Scottish School of Primary Care and the Scottish Primary Care Research Network. It will be important to continue to provide the highest quality research and evaluation to support the new GP contract and the new models of care. Responsibility for health is devolved to the Scottish Parliament with policy and funding of the NHS research

## Case Study



'Alistair's Story': A story of shared decision-making in treatment at the renal conservative care clinic  
<https://vimeo.com/181638187>

### CONSERVATIVE CARE FOR RENAL DISEASE

Renal services in NHS Lothian have made explicit, supportive discussion about the option of not receiving dialysis for end-stage kidney disease the norm, recognising that this treatment does not always increase life expectancy or quality. This work pre-dates Realistic Medicine by many years, however closely reflects the Realistic Medicine philosophy. A formal programme has

been established to support those who choose not to start dialysis or choose to withdraw from dialysis. This includes alternatives such as home visits, holistic care and social work input. People continue to attend clinics and have regular opportunities to discuss future planning. Demand for this 'conservative care' treatment has been high amongst people and commended nationally through healthcare awards programmes. An essential part of this is inclusion of trainees who learn about having these realistic conversations in practice.

and ethics system lying with the Chief Scientist Office. Scotland manages its research activity through NHS Research Scotland as a single, unified point of access for both non-commercial and commercial research studies and clinical trials, including recruitment of members of the public. Proactive public involvement in research is crucial to success and we work closely with patient representatives on all aspects of our research support. Over 140,000 people have registered with SHARE (the Scottish Health Research Register) as willing participants in research projects. This streamlined approach makes Scotland a globally attractive place to undertake research and for investment in health science. Over the last three years active study sites have increased by 19.7% (11.8% in 2014-15 alone) and Scotland currently attracts ~10% -13% of Medical Research Council funds.

With a population encompassing 8.4% of the UK population, Scotland accounts for 11.8% of UK health research expenditure in Scotland (Figure 1, UKCRC, 2015).

The National Clinical Strategy<sup>17</sup> proposes supporting people to 'fully understand and manage their problems' and providing 'care that is person-centred rather than condition focused, based on long-term relationships between people we care for and support and the

relevant clinical team(s)'. Evidence-based decisions retain importance and are discussed in the National Clinical Strategy, however it is acknowledged that evidenced-based medicine and protocols are often based on studies in specific populations. This means that evidence is not always directly transferrable to the context and preferences of individuals, therefore limiting the utility of protocols if applied indiscriminately. This does not however mean we should move away from using evidence-based medicine rather that we should consider 'using guidelines realistically' in future interactions with people. This will require approaches that place a greater prominence on personally meaningful outcomes as one of the primary endpoints when determining the impact of interventions.

Realistic Medicine describes the culture we need in our health service to meet the expectations and challenges of our modern society. Changes in those expectations mean that no matter the setting in which medical decisions are made, clinicians must work in partnership with people to ensure good care.

The landmark decision by the Supreme Court in 2015 in the Montgomery vs. Lanarkshire Health Board<sup>18</sup> case makes it clear that both a personalised approach and shared decision-making are crucial in gaining

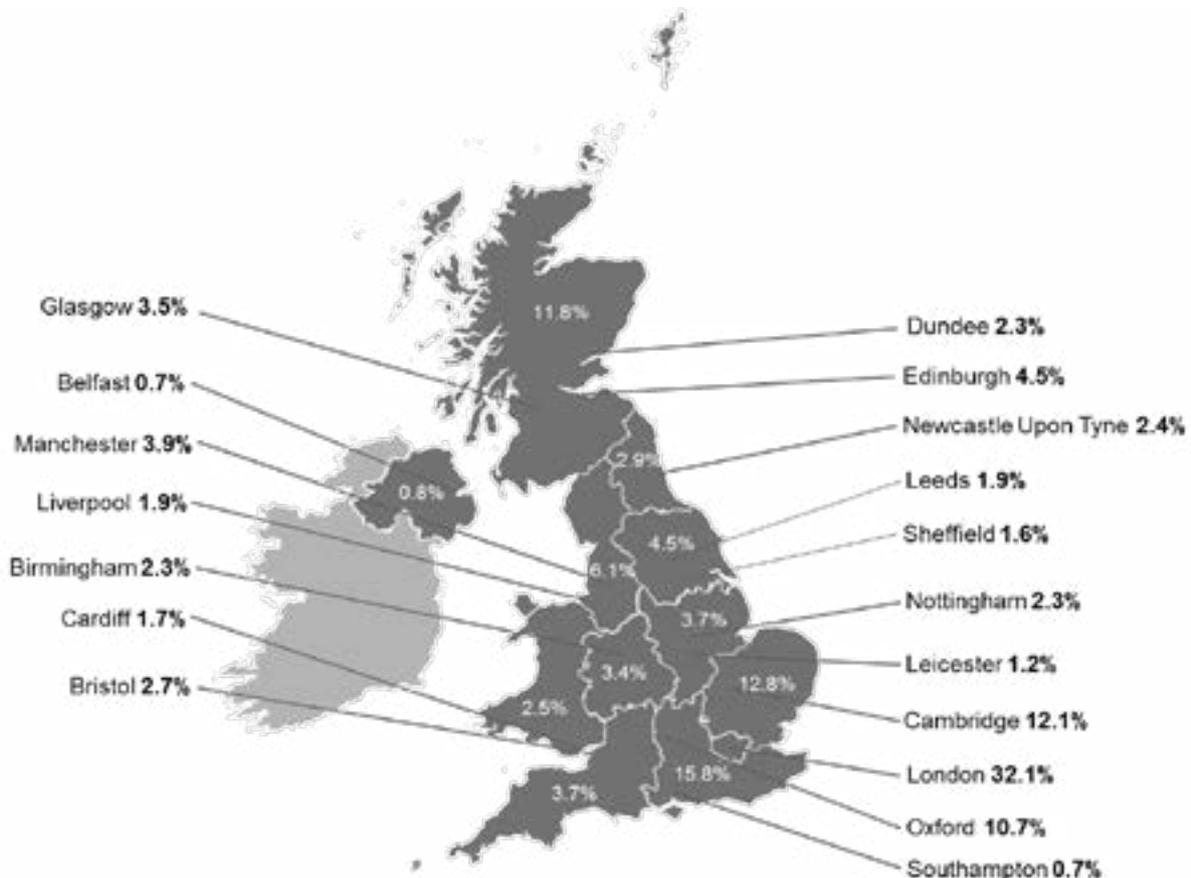


Figure 1: Research expenditure in 2014

consent for treatment and thus in delivering modern healthcare. To achieve both we need to develop a better understanding of people's needs as well as the factors influencing how decisions are made and consent provided. Central to this is the principle that the relational factors underpinning conversations about care need to support a partnership based on openness, trust and communication.

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**"The doctor's advisory role cannot be regarded as solely an exercise of medical skill without leaving out of account the patient's entitlement to decide on the risks to her health which she is willing to run (a decision which may be influenced by non-medical considerations)."**

The Supreme Court Judgment, *Montgomery (Appellant) vs Lanarkshire Health Board (Respondent)* (Scotland) March 2015

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When we are faced with making decisions about care and treatment we need to have information about issues that matter to us and the opportunity to make sense of this in a way that encourages collaboration as the foundation for decisions and subsequent care and support planning.

It is increasingly expected that people will receive care, support and treatment in environments where they are treated as equals and they must not be influenced by pressure from medical staff, friends or family.

The GMC describes a basic model of partnership between doctor and patient: 'The doctor explains the options to the patient, setting out the potential benefits, risks, burdens and side effects of each option, including the option to have no treatment. The doctor may recommend a particular option which they believe to be best for the patient, but they must not put pressure on the patient to accept their advice. The patient weighs up the potential benefits, risks and burdens of the various options as well as any non-clinical issues that are relevant to them. The patient decides whether to accept any of the options and, if so, which one.'<sup>19</sup>

The move away from a traditional, paternalist 'doctor knows best' approach will require more discussion with people about the treatment options available to them (including no treatment) as well as relevant risks and benefits. The Supreme Court's judgment emphasises that discussing risk is not about potentially

overwhelming people with information covering every conceivable risk. It is about having a meaningful, clear conversation and coming to a shared decision. In many instances this will take time and perhaps more than one consultation. In response our health and care services will need to adapt. This will be one of the initial areas of further work in support of a co-created vision and plan for change involving regulators, Royal Colleges and people with lived experiences within Scotland's health and social care services. Revised guidance on consent from the General Medical Council will be part of the package of change measures.

Some people who spoke to me after my first report was published expressed anxiety about how spreading some of the existing prototypes and good examples of Realistic Medicine may lead to more complaints and claims. My view is that by approaching care in a more person-centred manner, encouraging more tailored and personally meaningful conversations and shared decisions, this will lead to improved experience and outcomes, which will in turn reduce the number of complaints received (many of which relate to communication and consent) and support the communication behaviours that will also underpin a greater culture of candour and early resolution – both prominent features of the Scottish Government's support of openness and learning.

Providing people with the information they need and in a format they find helpful is crucial. Whilst some will still expect paper-based written information, others, and especially adolescents and young adults, may prefer electronic information presented in various ways and on a variety of platforms. Our health service needs to respond to this and adapt to the changing expectations of the i-generation and generations of the future. The recently launched new arrangements for NHS Inform provide a strong platform to build on.

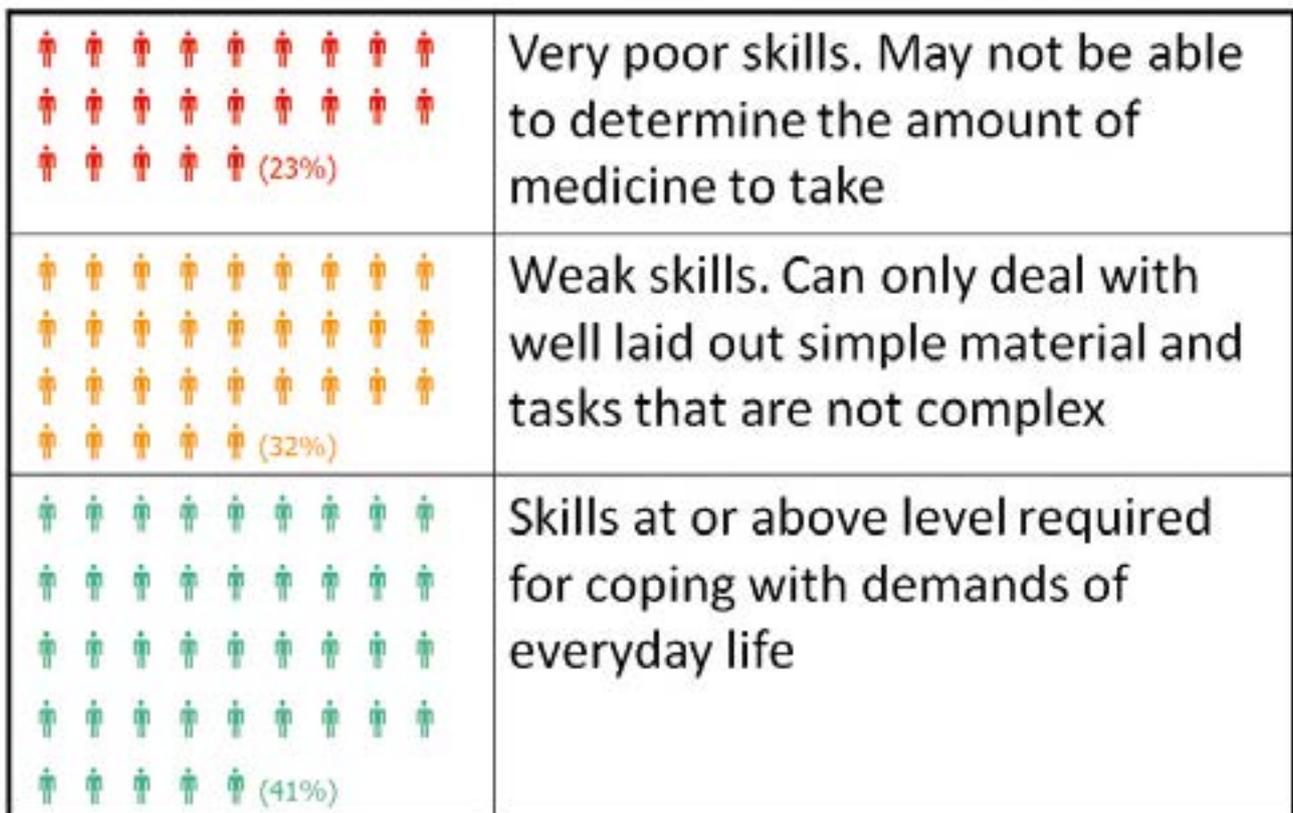
In this context, Aye Mind ([www.ayemind.com](http://www.ayemind.com)) is an exciting and innovative development that gives us a 'window' on the future. Aye Mind focuses on young people and their mental health. It demonstrates how the internet, social media and mobile technologies can be used together to create valuable resources in a format that users want. We are exploring how the philosophy, skills and knowledge already gained in creating Aye Mind can be applied to other areas of healthcare. The potential for engaging and informing people, their families and carers is enormous.

The availability of electronic communication provides other opportunities to enhance understanding and shared decision-making. Recording consultations and producing presentations on handheld devices are good examples that are being developed by a variety of clinical groups. Both enhance the personalisation of care as well as information sharing. The Scottish Government's commitment to electronic health records will further support people to practice Realistic Medicine and care planning.

Availability of information in pictorial and graphic formats also helps in circumstances where health literacy is less developed. This is relevant not only to decision-making and consent but more broadly to other aspects of healthcare and in particular, access. Work undertaken by a National Demonstrator Programme in Dundee on health literacy suggests that a significant portion of the adult population in Scotland would benefit from support with health literacy to support understanding – through improved layout of content and understanding of information (such as the amount of medicine to take). We also need to improve our approach to enabling people to seek support where required with health literacy, recognising that understandably people may feel embarrassed about this issue.

'Teach back' allows the evaluation of a person's understanding in their own words, most usefully at the end of a consultation. The demonstration of successful understanding reflects the clinicians ability to explain in a way consistent with a person's health literacy. Examples of questions that can be helpful in starting the process include:

- 'I want to be sure I explained everything clearly. Can you please explain it back to me so I can be sure I did?'
- 'What will you tell your husband/wife/partner about your condition and treatments we discussed? What about the benefits and the risks?'



4%: No skills to understand basic health information

By asking a person to complete a 'request for treatment' (RFT), a clinician seeks a record of a person's understanding of care in their own words. At present this is generally in the form of a written document but in the future there is no reason why other electronic media cannot be used or developed. The person is asked a series of relevant questions:

- 'What is wrong with me?'
- 'What treatments are available (including no treatment)?'
- 'What treatment have I decided to have and why?'
- 'What is the benefit I expect and what are the risks?'

Notwithstanding the fact that there are potential improvements that could be made in the person-centredness of the question, particularly given the Scottish Government's commitment to move from a 'What's the matter with you?' to 'What matters to you?' mindset, establishing a person's degree of comfort and engagement with this is important. Encouragement to get help from a member of staff, friend or relative to assist recording the responses may help to improve this and address any literacy concerns. The following can be helpful:

- 'Many people find it easier to speak as they answer these questions and have a friend or relative write down their answers. Would that be best for you and can we help in any way?'

## Case Study

### SAVING TIME AND IMPROVING THE QUALITY OF IN-HOSPITAL REFERRALS IN NHS TAYSIDE<sup>20</sup>

Reducing waste is not simply about reducing physical resources used. Time spent inefficiently can be wasteful, and an example of an improvement project focusing on this is detailed here. This was led by a foundation doctor: often the most important person to identify solutions to a problem is the person being affected by it. Foundation doctors should be supported to take on projects like this.

Making referrals to other hospital specialties is a key duty of the foundation doctor. In Ninewells Hospital, NHS Tayside, doctors noticed that the effectiveness of referrals was limited by contact details not being readily accessible and doctors not knowing what information is relevant to each specialty. The doctors reported significant delays in obtaining contact details from the operator while waiting for the phone to be answered, and found they did not know the specific information needed in each referral. **Foundation doctors were phoning the operator between 1 and 7 times per day (median 4 times) and reported it took between 1-7 minutes on for the phone to be answered before being put through to or given contact details for the relevant team.**

Foundation doctors reported spending 2-7 minutes finding out what information would be needed for referral, for instance by asking colleagues or nurses.

To increase the information available, a page was set up on the staff intranet called 'Referral Finder'. The page included contact details, guidelines for referral and links to relevant protocols for each specialty. By making this information readily accessible the objective was to increase the speed and quality of referrals.

**When surveyed two months after the web page was established, foundation doctors reported a reduction in calls to the operator from baseline and reported achieving more effective referrals, with the majority being able to access Referral Finder in under one minute.**

After a second survey 100% agreed that the website saved time and there was a 49.3% reduction in doctors who reported not knowing the specific information needed for a referral.

Calculations were undertaken investigating the cost saving of this intervention in terms of doctor and telephone operator time. An annual saving of £37,047 was made.

**Having adequate information improved referrals and resulted in time saved. This simple intervention allowed more time for care and more time for the operators to answer queries from people we care for and support, relatives and other callers.**

We are working with a number of services, including the Central Legal Office on RFT and believe this may be particularly suited to situations where discretionary interventions are planned, where a person chooses a form of management that is controversial or involves additional risk, or when a person chooses a non-standard form of management (for instance where a person decides not to have a treatable cancer removed surgically). In these circumstances, RFT tests and records understanding and expectation and may also guide further discussion. Those who have used it, (people we care for and support and clinicians) have found RFT both acceptable and useful.

I know that sometimes people prefer to delegate their decision-making to the clinician caring for them stating, 'you know best doctor'. This can place the clinician in an invidious position and requires some reflection on why the decision is being passed over. Work continues with patient groups to review communication and how this can be used to better ensure that all people who access our health service do so expecting and preparing to be partners in making decisions that affect their lives.

#### REALISTIC MEASUREMENT THAT ENHANCES A SYSTEMS-BASED APPROACH TO CARE

Delivery of care in any setting involves making decisions. Improvement results from making more good decisions and fewer bad ones. That can happen intentionally or by chance. Sustaining improvement is harder and requires us to understand which decisions were good and which were bad. To do that we need a clear view of what is happening and the capability to correctly interpret variation in that picture over time.

There is no shortage of ideas for improvement. Converting those 'ideals' into practice is an altogether more difficult challenge. As aspiration and complexity increase, it can outstrip our capability or capacity as individuals, teams or organisations to execute change. We can become overwhelmed. It can seem harder to do the right thing, or more attractive to take the path of least resistance. There is a saturation point beyond which new ideas become 'unrealistic'. Beyond that point lays risk of paradoxical reduction in quality, avoidance of difficult conversations, perverse incentive, empty assurance and low morale.

Dissecting the multiple layers of real world complexity that conspire to cloud our view or undermine the integrity of our response, can help us to understand how we might begin to recalibrate the decisions we make.

#### Realistic (definition)

##### *adjective:*

1. Having or showing a sensible and practical idea of what can be achieved or expected.
2. Representing things in a way that is accurate and true to life.

**Measuring** is the process of gathering a clear and accurate view of reality. Monitoring is the process of understanding changes in that picture over time. Together they form the basis of the decisions we make each and every day in every context – personal or professional, clinical or operational, individual, local or national. Without them we cannot learn.

The integrity of the decisions we make depends upon the accuracy and completeness of the information available, coupled with our wherewithal to process, analyse and interpret. The information we gather is in turn determined by what we choose to value and the questions we choose to ask.

As clinicians, measuring is the cornerstone of what we do. We establish a thorough account of the presenting complaint, relevant past events, medicines, family and social history. We supplement that information with careful clinical examination and selected baseline investigations, then seek to place our findings within the context of a person's understanding, wishes and expectations. The completeness of the picture we form depends directly upon the questions that we ask and determines our basis for informed, shared decision-making. Gaps in our 'measurement' or understanding compromise those decisions and can undermine the intelligence of our interventions.

**Monitoring** is what enables timely recognition of deterioration, or confirms response to the interventions we make. Our ability to monitor successfully, intervene effectively and follow up appropriately depends directly upon our understanding of variation over time.

A lack of understanding of that variation is harmful to individuals, teams and organisations on a number of levels. If we don't understand variation we don't know whether we are getting better or worse. If we don't know that, then we don't know what to start or stop doing, what to do more of and what to do less of. We don't know how and where to deploy finite resources.

We risk making variation worse by changing the wrong things at the wrong time. We cause waste and harm by intervening when it would have been better to do nothing, or not intervening when it would have been timely to do so. We waste time trying to explain perceived trends when nothing has changed.

We can have all the data in the world but it is meaningless unless we are able to learn from it. Ensuring the information we seek is truly informative and that we are in a position to respond and improve can help us to simplify what is required. It releases space to think, allows focus on what adds value and helps us to move aside that which simply obscures the view. Realistic measurement and monitoring can enhance our decision-making across diverse settings. Alignment through a common approach, informed by our people we care for and support' wishes, fears and expectations, yet cognisant of real world complexity can draw together our collective efforts towards our ambition of realising Realistic Medicine.

Similarly, it is necessary to have realistic measurement within programmes that deliver population health improvement and disease prevention, utilising a public health approach to ensuring effective, consistent and high quality health and social care services. Here, colleagues in public health bring an essential contribution to creating a sharp, data driven focus on identifying unwarranted variation and addressing health inequalities. And all this whilst maintaining the important systems that protect people's health and wellbeing from infections and environmental harms. This must be at the heart of the new public health system we are committed to developing in Scotland.

As we learn more about our progress through better measurement and availability of data, such as the publication of our 'Atlas of Variation', it is essential that the expertise of colleagues from across the professions – public health, clinicians, social care, management and all our supporting infrastructure – pull together with our citizens to ensure high value, high quality care that is consistent with Realistic Medicine.

Having read 'Realising Realistic Medicine', I ask that you consider these questions:

- **How would you explain Realistic Medicine to your family or your friends? Would you explain it to the people who you care for differently, and if so, how will you know whether they understand it?**
- **How will you know when you and your teams are practising Realistic Medicine?**
- **What opportunities can you create to share and learn from others across the health and social care professions, in Scotland and further afield?**
- **What will you commit to doing that will help me realise Realistic Medicine in Scotland?**



## CONCLUSION

Realistic Medicine can only be realised if it is embraced by the professionals delivering care to the people of Scotland everyday. As part of the consultation process I asked for feedback from around the country about approaches to Realistic Medicine. This was collated in a feedback report published in December 2016. It was clear from the feedback that varied and interesting work was being undertaken across the country, inspired by or further informing the Realistic Medicine philosophy.

To this end I asked for further written feedback and my team undertook a series of short interviews with people involved in Realistic Medicine initiatives in areas around Scotland. These interviews and written feedback are collated in an appendix providing practical examples of work being undertaken. This can be found at [www.gov.scot/ISBN/9781786526779](http://www.gov.scot/ISBN/9781786526779). Many fit closely with multiple aspects of Realistic Medicine – from new innovations to changing approaches to variation. This appendix is not intended to provide a full compendium of all the work being undertaken, it aims to provide ‘snapshots’ that contributors have agreed to share more widely. I am aware that there are many other pieces of work going on around the country which are not detailed. However I hope that this appendix can provide a flavour of the breadth and variety of innovations that Realistic Medicine has influenced – and perhaps provide some inspiration and connections for those wanting to incorporate Realistic Medicine into their own practice in future.

I want to thank all who have contributed to ‘Realising Realistic Medicine’ in so many varied ways, from those who have helped me to write this Annual Report to those who have and are engaging with the philosophy. Without that backing we would not have been able to shape ‘Realising Realistic Medicine’ as well as I believe we have. We now have a vision, strategic initiatives and priorities shaped by you to help take forward the concept. I welcome the multi-professional, national and international alliance we have built and look forward to working together to ensure we build the right environment to realise Realistic Medicine through shared learning and engaging properly with the public so they too welcome its principles.

It is a huge privilege to be Chief Medical Officer and in that capacity to have championed this agenda. I have been humbled by the support received and in seeing all the wonderful work taking place across Scotland. It inspires me to see what is happening locally, including in my own clinic in my role as a doctor in NHS, and the impact it has on the people of Scotland.

I look forward to continuing to work with you to champion Realistic Medicine so we can deliver a high quality, high value health and care system for all the people of Scotland.

PART 2

# THE HEALTH OF THE NATION SUMMARY

This chapter provides some key data on public health. It is intended as a snapshot summary. I hope it serves a useful purpose to make you aware of some key trends.

Scotland's health data is available online and the Public Health Information Network for Scotland (PHINS) is a useful source for professionals to share intelligence and expertise.

<http://www.scotpho.org.uk/about-us/public-health-information-network-for-scotland-phins>

## COMMUNICABLE DISEASES

### TRAVEL AND INTERNATIONAL HEALTH

As part of its remit to protect the health of the Scottish public, Health Protection Scotland (HPS) supports service provision covering the following areas:

- Risks and interventions related to travelling abroad
- New and emerging risks abroad and imported infections
- Migrant health, port health and International Health Regulations
- Yellow fever vaccinating centres.

In 2015<sup>21</sup>, there were approximately 3.96 million journeys abroad from Scotland, representing 6% of total journeys from the UK. This was a very slight increase over the previous year's figure of 3.9 million.

### RISKS AND INTERVENTIONS RELATED TO TRAVELLING ABROAD

With respect to travellers going abroad, HPS continue to maintain two evidence-based, travel health advice websites. TRAVAX ([www.travax.nhs.uk](http://www.travax.nhs.uk)) is aimed at health professionals and assists with pre- and post-travel assessment, and fitfortravel ([www.fitfortravel.nhs.uk](http://www.fitfortravel.nhs.uk)) is directed at the travelling public. Both sites highlight developing issues and rely on competent assessment of real-time data on risks abroad, along with clinical and epidemiological evidence, to produce timely and appropriate advice and recommendations for actions. Travellers are strongly advised to consult the fitfortravel website in advance of their journey for information on how to stay healthy abroad.

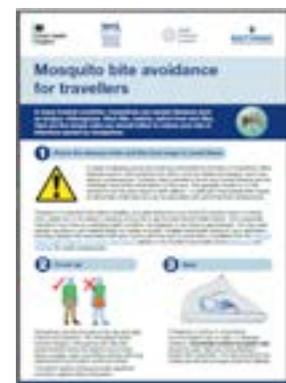
Key pieces of advice and guidance which were written or updated during 2015-16 included: mental health for travellers; diabetes advice; female genital mutilation; Zika virus guidance; and country-specific vaccine

recommendations for TB, tetanus, typhoid, hepatitis B, cholera, meningococcal, Japanese encephalitis, yellow fever, tickborne encephalitis and poliomyelitis. In addition, the Scottish Malaria Advisory Group (SMAG) continued to develop its methods and provide up-to-date advice, guidance and malaria maps.

### IMPORTED INFECTIONS

Those infections which are reported to HPS as imported are included in the annual totals of travel-related infection published in January each year<sup>22</sup>. A separate malaria report is published in July<sup>23</sup>.

As in previous years, organisms causing traveller's diarrhoea (TD) were most frequently reported in 2015. Notably there were outbreaks of cyclosporiasis, linked to travel to Mexico, in both 2015 and 2016 with a large number of Scottish travellers affected. Travellers to the Riviera Maya coast in Mexico were being advised to take careful precautions with food, water and personal hygiene and a leaflet for travellers was produced in collaboration with Public Health England<sup>24</sup>.



### NEW AND EMERGING DISEASES

HPS continually and systematically carries out risk assessments of new and emerging hazards, including non-infectious hazards. In the context of travel abroad assessments highlighted the continued need to be vigilant with respect to viral haemorrhagic fevers. Even as the West African Ebola outbreak began to decrease, new observations of Zika virus required an evidence-based and co-ordinated response to ensure risk to travellers and particularly developing fetuses was reduced to a minimum.

## EBOLA

From the beginning of the West African Ebola virus disease (EVD) outbreak at the end of 2013, Health Protection Scotland provided straightforward, evidence-based guidance both on the realistic risk of imported cases of Ebola as well as guidance and infrastructure required to deal with the identification, care and follow-up of any potential case. Critically HPS was involved in helping co-ordinate follow-up of volunteers returning to Scotland from the affected area. There is increasing literature on Ebola persistence and recrudescence that suggests that West African health systems will be required to cope with apparently healthy individuals who unexpectedly become unwell.

## ZIKA

In early 2015 the first outbreaks of Zika virus (ZIKV) infection were reported from South and Central America; since then cases have been reported from more than 65 countries, notably most of the Caribbean Islands. Of concern was the strong evidence of causation between ZIKV and neuro-developmental defects, in particular microcephaly in newborns. ZIKV was declared a Public Health Emergency of International Concern (PHEIC) by WHO on 1 February 2016.

In the UK there have been more than 250 cases of ZIKV diagnosed since 2015, the majority associated with travel to South, Central America and the Caribbean. The risk to Scotland is considered very low due to the absence of the *Aedes* mosquito vector and the low risk associated with sexual transmission. For pregnant travellers or for women who may become pregnant during or soon after travel, however, the risk is considered higher<sup>25</sup>. HPS has issued specific travel advisories for this group and stress the importance of avoiding mosquito bites in areas where the virus is present. HPS will continue to monitor the situation and work collaboratively with colleagues across the UK, including primary care, obstetrics, midwifery and infectious diseases to ensure appropriate and timely advice and guidance is produced in response to this emerging threat.

## MIGRANT HEALTH

HPS has been collaborating with other national and international colleagues to develop resources and provide support, in this area<sup>26</sup>. From a European perspective the ongoing mass immigration of people from Africa and the Middle East has presented challenges for health and social services. Throughout 2015, migrants continued to arrive in Europe via Turkey and Italy, with many seeking to settle in Germany and Northern Europe. In late 2015, Scotland began to receive refugees from the conflict in Syria under the UK Vulnerable Persons Relocation scheme. While it has been reported that a large proportion of migrants from the Middle East are young men, the majority arriving in Scotland are families who have been accommodated in various parts of the country.

Immigrants to Scotland and the wider EU are usually in good health, although migration renders some vulnerable to illness and injury, depending on their circumstances of travel and subsequent accommodation. The current migration brings few, if any, unfamiliar infections to Europe and there is no strong association between migration and the importation of infectious diseases that pose a serious risk to the resident population of Europe. In the context of migration, health professionals seeing newly arrived migrants presenting with infectious disease are encouraged to liaise appropriately with laboratory staff, infectious disease clinicians and health protection teams.

## HAI AND AMR SUMMARY

Healthcare-associated infections (HAI) and antimicrobial resistance (AMR) pose a real threat to the health of the people of Scotland. The European Centre for Disease Control (ECDC) has recently estimated that HAI account for twice the burden of 32 other communicable diseases<sup>27</sup>. Similarly, the World Health Organization (WHO) Global Health Observatory data repository demonstrates that HAIs in high-income countries have a greater effect on health than most other communicable diseases.

## GRAM-NEGATIVE BACTERAEMIA

Gram-negative bacteria are now emerging as a substantial risk to health worldwide. In Scotland, *Escherichia coli* (*E. coli*) are the most common Gram-negative pathogens causing bacteraemia in community and healthcare settings. During 2015, there were 4,596 cases of *E. coli* bacteraemia (ECB), approximately half of which were healthcare-associated (Figure 1).

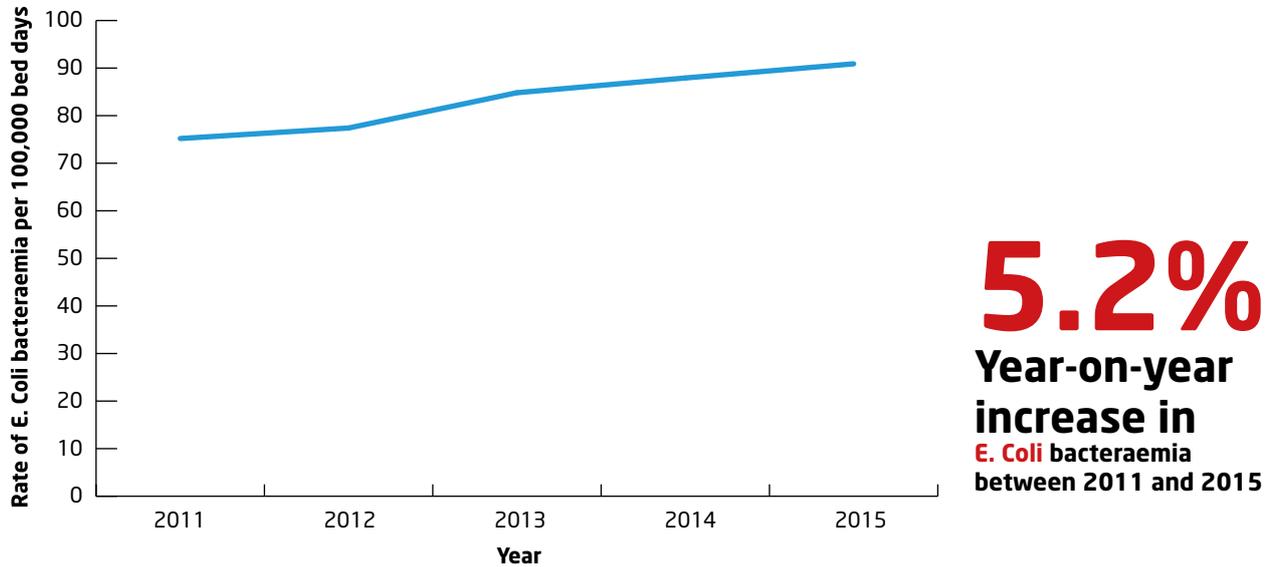


Figure 1: Annual incidence of ECBs per 100,000 acute bed days, for all ages

In response, Health Protection Scotland (HPS) working with NHS Board infection control teams implemented mandatory ECB enhanced surveillance in April 2016 to inform the future infection prevention interventions required in Scotland to control these serious infections. Bacteraemia typically develops as a complication of infections such as: i) urinary tract infections (UTIs), ii) infections following surgery, and iii) infections associated with medical devices (e.g. central venous catheters). Therefore, reducing rates of ECB involves prevention of UTIs, surgical site infections (SSIs) and catheter-related infections (CRIs).

Whilst SSIs and CRIs are predominantly hospital-based, the prevention of UTIs requires collaboration across the entire healthcare service. The Scottish UTI Network (SUTIN) works with primary care, community healthcare workers, care homes, infection prevention and control teams, and health protection teams to ensure that catheters are only used when, and for as long as, they are absolutely necessary; and are inserted, managed and withdrawn with strict adherence to infection prevention control measures.

## ANTIMICROBIAL RESISTANCE

Multidrug resistance among Gram-negative bacteria is a major concern for public health and patient safety. Carbapenems are a group of broad-spectrum antibiotics which are used in the hospital setting to treat multidrug-resistant infections. The emergence of organisms which have developed resistance to these antibiotics, for example carbapenemase-producing organisms (CPOs), are of particular concern as few other treatments are available for these infections. In 2015, a total of 66 CPOs were reported to HPS: an increase of 40% from 2014. This change mirrors the steady rise in secondary care use of carbapenems over recent years (Figure 2).

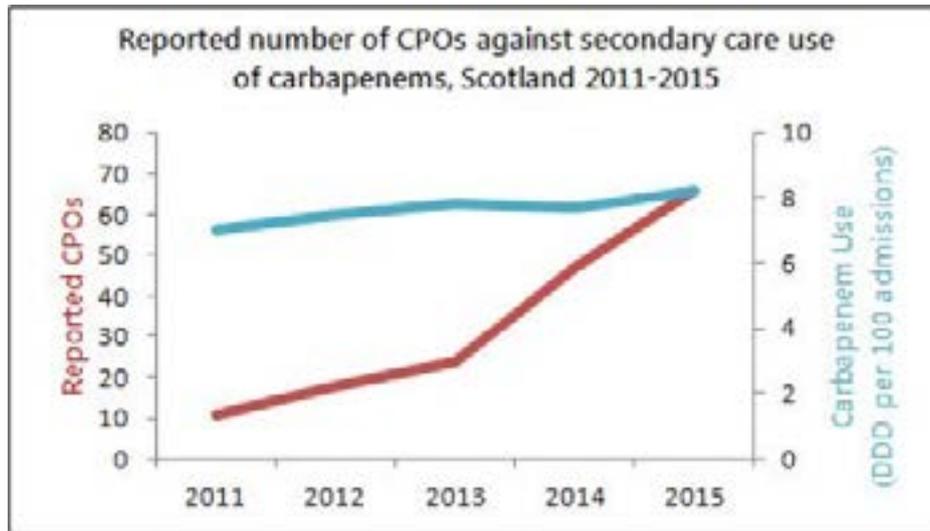
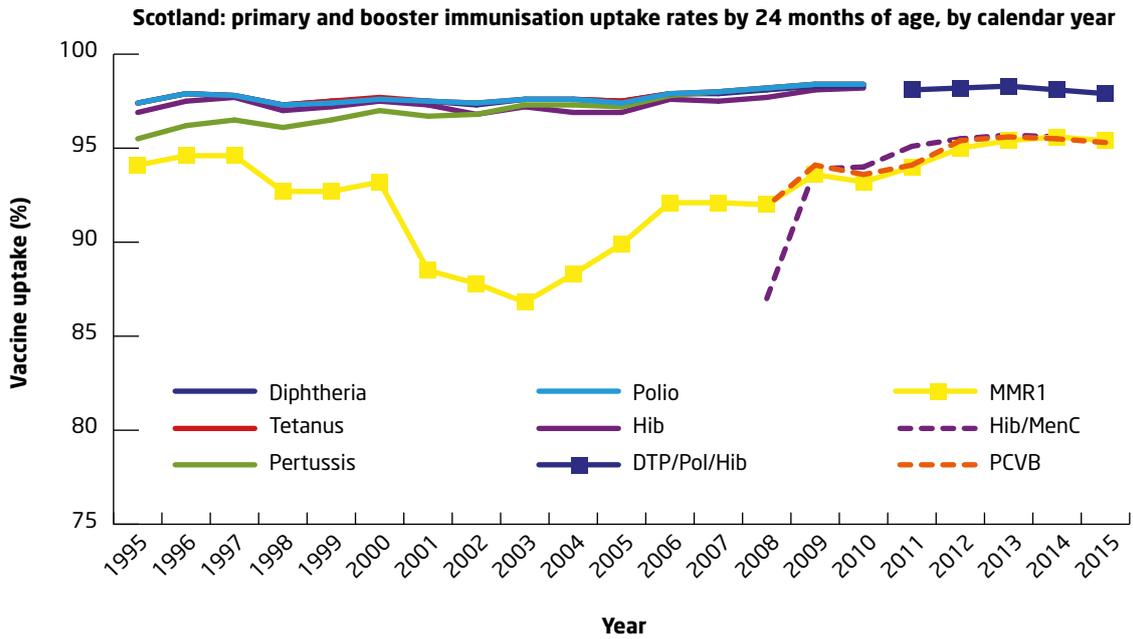


Figure 2: Reported numbers of CPOs against secondary care use of carbapenems Scotland 2011-2015

It is critical to preserve the use of carbapenems due to a lack of new antibiotics currently under development. The Scottish Antimicrobial Prescribing Group (SAPG) has developed guidance to support the clinical management of infections caused by Gram-negative bacteria, aiming to restrict the use of carbapenems for the treatment of those infections which cannot be treated using other antibiotics.

There is a need for members of the public to play their role in tackling antimicrobial resistance by only taking antibiotics as advised by healthcare professionals. The Control of Antimicrobial Resistance in Scotland (CARS) team in HPS has adopted a 'one health' approach, ensuring that those prescribing antibiotics for humans, animals or in agriculture all understand the risk from AMR and work together to preserve antibiotics.

IMMUNISATION



Source: SIRS

**SUMMARY POINT:**

At Scotland level, uptake rates by 24 months remained high and exceeded 95%. This includes primary courses of immunisation against diphtheria, tetanus, polio and Hib (the five-in-one vaccine), measles, mumps and rubella (MMR), and booster doses for immunisation against pneumococcal disease (PCV), meningococcal C disease and *Haemophilus influenzae* type b (Hib/MenC).

## BLOOD BORNE VIRUSES AND SEXUALLY TRANSMITTED INFECTIONS

### HIV

- HIV remains a public health challenge with evidence of ongoing transmission in the population. During 2015/2016, one-third (34.8%) of men who have sex with men newly diagnosed in Scotland had laboratory markers consistent with recent acquisition of infection, that is within the previous three to four months. A Short Life Working Group (SLWG) met during 2016 to deliver recommendations to the Scottish Government (Sexual Health and Blood Borne Virus Executive Leads) on the use of HIV pre-exposure prophylaxis (PrEP) in Scotland. A number of clinical trials have now reported that PrEP is highly effective in preventing HIV transmission. The SLWG strongly recommends the provision of PrEP, for those at the highest risk of infection, as part of a wider targeted national prevention programme. This is recommended to be delivered by the NHS in sexual health services, subject to cost-effective delivery of the programme.
- An outbreak of HIV among people who inject drugs in Greater Glasgow & Clyde (GGC), originally identified in 2015, continued in 2016. GGC typically records around 10 new diagnoses of HIV associated with injecting drug use each year; 42 new diagnoses with this risk were reported in 2015 and a further 18 by September 2016, the majority with subtype-C virus. Data indicates that this increase in diagnoses is related to transmission among a population who mainly inject heroin with or without cocaine in Glasgow city centre, many of which are homeless. This outbreak is being managed through increasing awareness of the risks of HIV, education of the at-risk population and addiction services regarding HIV, increasing provision of needle and syringe programmes (e.g. greater evening availability), improving the frequency of HIV testing and its accessibility, and proactively supporting the early treatment of those newly diagnosed so as to reduce the risk of onward transmission.

### HEPATITIS C

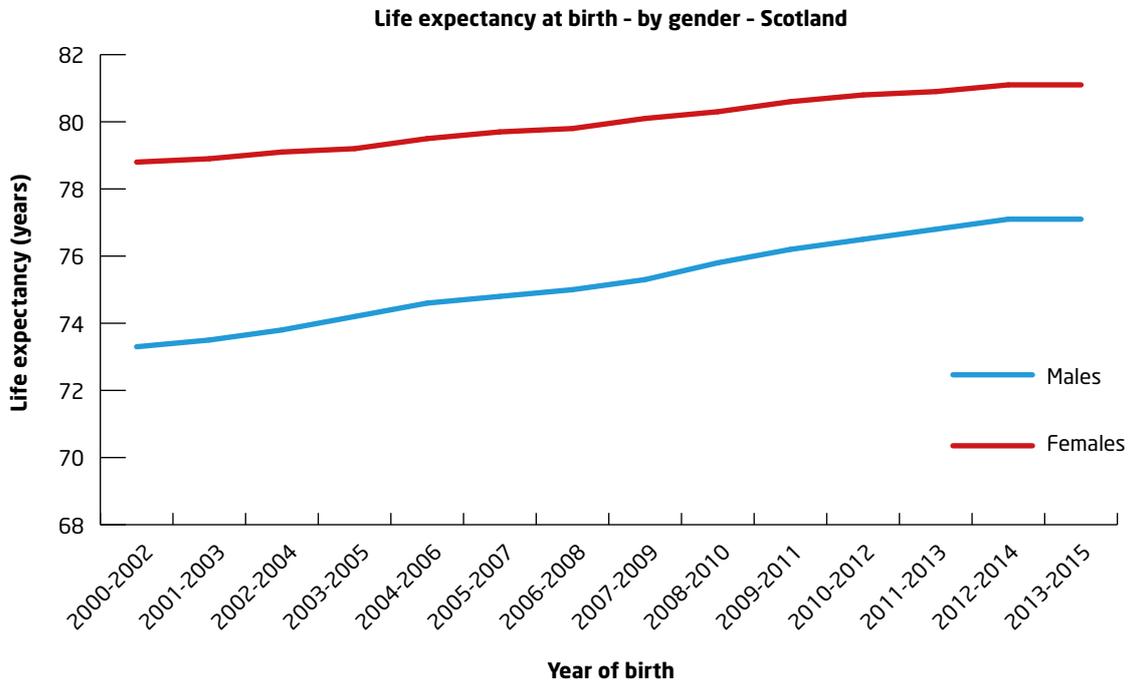
- A 36% increase (from 1,271 in 2014/15 to 1,724 in 2015/16) in the number of Hepatitis C virus (HCV) infected people initiated onto Hepatitis C treatment was observed. With the majority being administered the new direct acting antiviral therapies, it is estimated that nearly 90% of the 1,724 cleared their infection. Accordingly, the Scottish Government target of 1,500 treated persons for 2015/16 was well exceeded.
- With most of those treated for Hepatitis C virus having moderate to severe liver disease, in accordance with Scottish Government guidance, it is encouraging that the upward trend in new presentations of HCV-related severe liver disease, observed over the last two decades, has halted. Indeed, in 2015, a 22% reduction from 156 to 121 was seen – a change consistent with the Scottish Government target of a 75% reduction in such morbidity during 2015-2020.
- In response to recommendations from a Short Life Working Group led by Health Protection Scotland, in September 2016 the Scottish Government launched a Hepatitis C testing campaign targeted at people who had a blood transfusion before September 1991 but who had not previously been tested for Hepatitis C. It is estimated that less than 50 people who belong to this group are alive and infected.

### IMMUNISATION

Since the beginning of 2015, immunisation programme achievements include:

- Latest quarterly figures for December 2016 indicate that uptake of the Meningococcal B vaccine by 12 months for children born between July and September 2015 was high at 94.5%. This is the first published data for the Meningococcal B immunisation programme, which was introduced in September 2015.
- Offering vaccination against Meningococcal ACWY for new university entrants (from August 2015) and all those 14-18 years. The schools programme concluded in March 2016 with high uptake (82.1% in S3).
- Early evidence of eliminating the steep cervical cancer deprivation gradient among young women who received HPV vaccine.
- Demonstrating effectiveness of seasonal nasal flu vaccine offered to all children from the age of two years to the end primary school.
- Maintaining high uptake of established childhood immunisations across all deprivation categories.

## LIFE EXPECTANCY AND HEALTHY LIFE EXPECTANCY

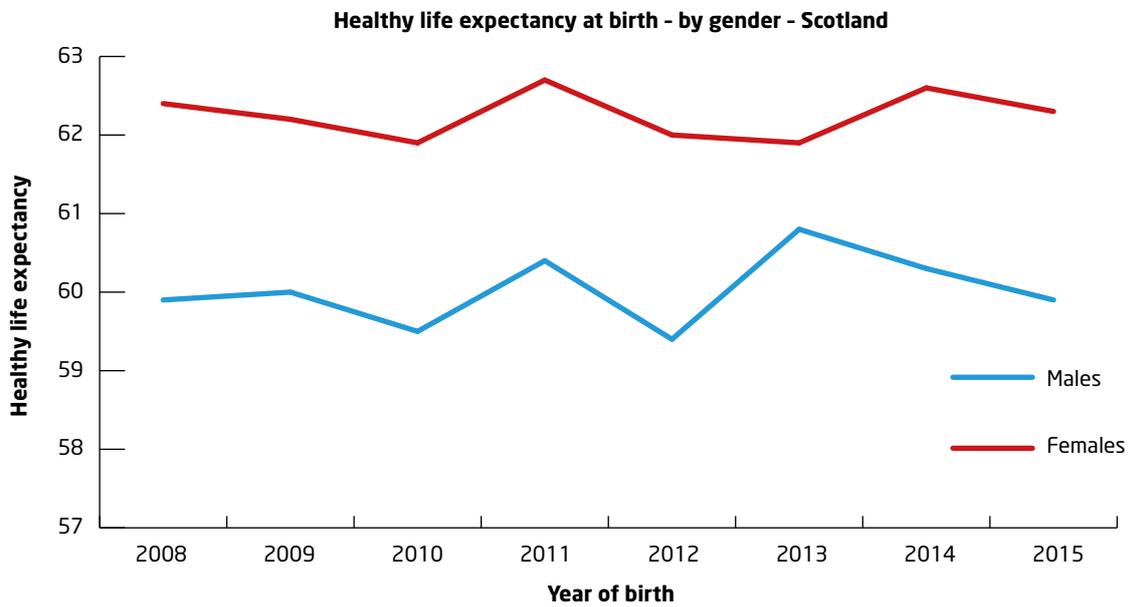


Source: National Records of Scotland

### SUMMARY POINTS:

Since the start of the century, life expectancy at birth for men has increased from just over 73 years to just over 77 years. For women, the increase has been from just under 79 years to just over 81.

We continue to see a significant gap in life expectancy between men and women. Indication of a slight reduction over the last 15 years from a gap of five and a half years to a gap of four years.

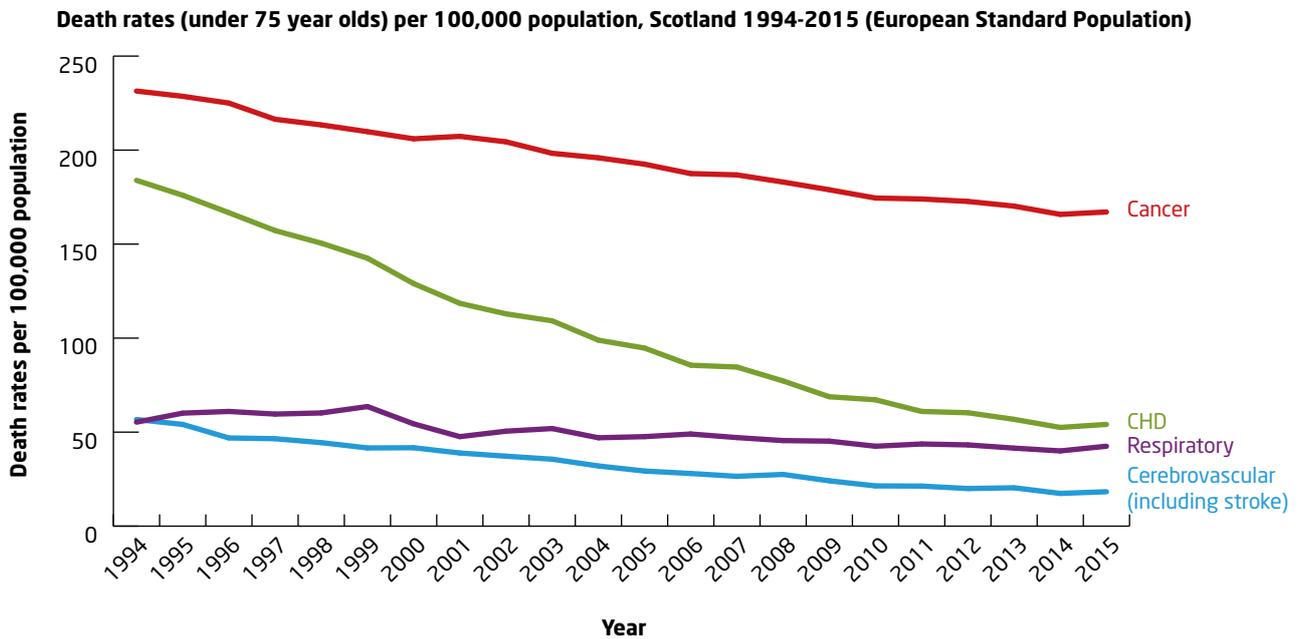


Source: National Records of Scotland

**SUMMARY POINT:**

There continues to be a significant gap in healthy life expectancy (HLE) (at birth) between men and women. Women's HLE at birth over the last few years is currently around 62 ½ years, compared with an average for men of around 60 years.

## PREMATURE MORTALITY

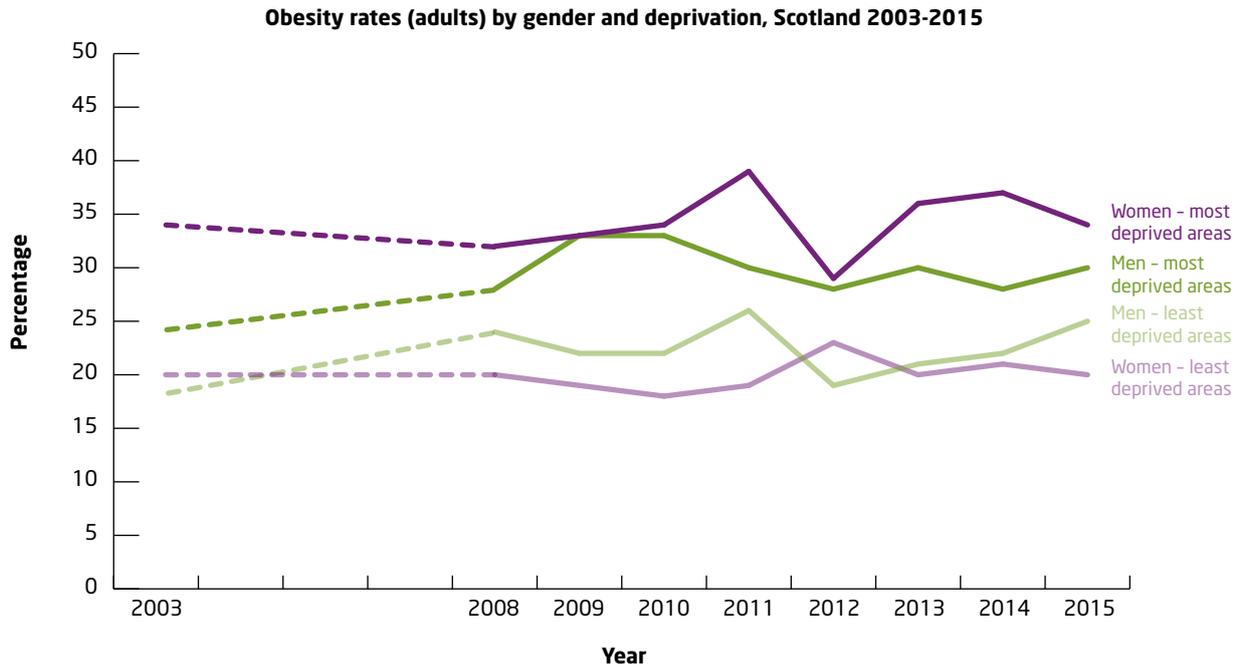


Source: Information Services Division, NSS

### SUMMARY POINT:

The reduction in premature mortality (all causes) has been 36% between 1994 and 2015. This drop has been driven by the 28% drop in premature deaths caused by cancer, the 71% drop due to coronary heart disease, and the 68% drop due to cerebrovascular disease.

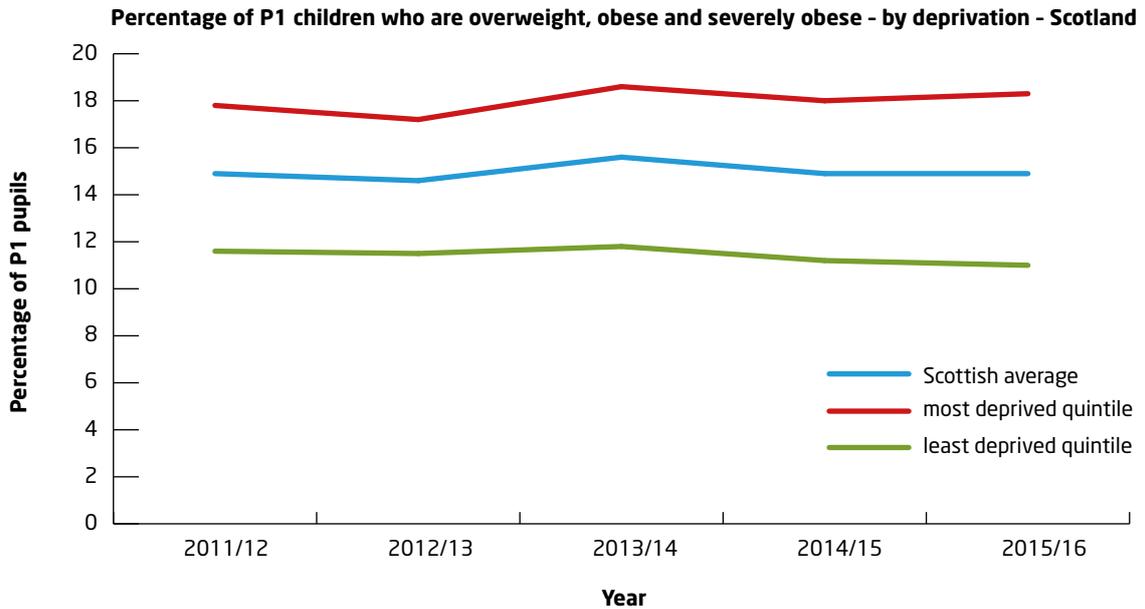
OBESITY



Source: Scottish Health Survey

**SUMMARY POINT:**

Across the adult population 65% of adults are overweight, with 29% of adults being assessed as obese. There has been little change since the start of the millennium. There continues to be a clear link to deprivation with men and women living in Scotland's more deprived communities being more likely to be assessed as obese. This gap appears more significant for women than for men.



Source: Information Services Division

#### SUMMARY POINT:

Amongst Scotland's P1 pupils, around 15% are classed as being overweight, obese or severely obese. There is also a sustained link with deprivation with over 18% of P1 pupils in Scotland's most deprived communities being overweight, obese or severely obese compared with around 11% in Scotland's least deprived communities. The 4 UK Chief Medical Officers jointly published the infographics below in 2016 building on the success of the adult infographic in 2015.

### Physical activity for children and young people (5-18 Years)

**BUILDS CONFIDENCE & SOCIAL SKILLS** | **MAINTAINS HEALTHY WEIGHT**  
**DEVELOPS CO-ORDINATION** | **STRENGTHENS MUSCLES & BONES** | **IMPROVES SLEEP**  
**IMPROVES CONCENTRATION & LEARNING** | **IMPROVES HEALTH & FITNESS** | **MAKES YOU FEEL GOOD**

#### Be physically active

Spread activity throughout the day | All activities should make you breathe faster & feel warmer

**Aim for at least 60 minutes everyday**

Include muscle and bone strengthening activities **3 TIMES PER WEEK**

**Sit less** | **Move more**

Find ways to help all children and young people accumulate at least 60 minutes of physical activity everyday

UK Chief Medical Officers' Guidelines 2011 Start Active, Stay Active: [www.bit.ly/startactive](http://www.bit.ly/startactive)

### Physical activity for early years (birth - 5 years)

Active children are healthy, happy, school ready and sleep better

**BUILDS RELATIONSHIPS & SOCIAL SKILLS** | **MAINTAINS HEALTH & WEIGHT** | **CONTRIBUTES TO BRAIN DEVELOPMENT & LEARNING**  
**IMPROVES SLEEP** | **DEVELOPS MUSCLES & BONES** | **ENCOURAGES MOVEMENT & CO-ORDINATION**

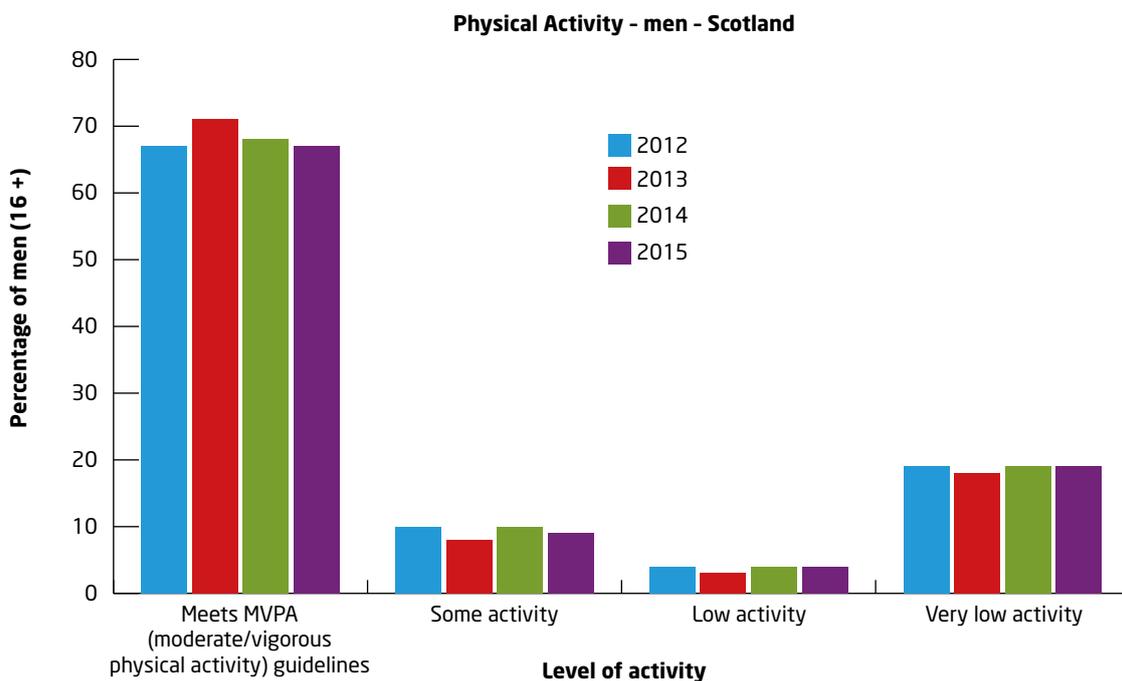
#### Every movement counts

**Aim for at least 3 Hours across everyday**

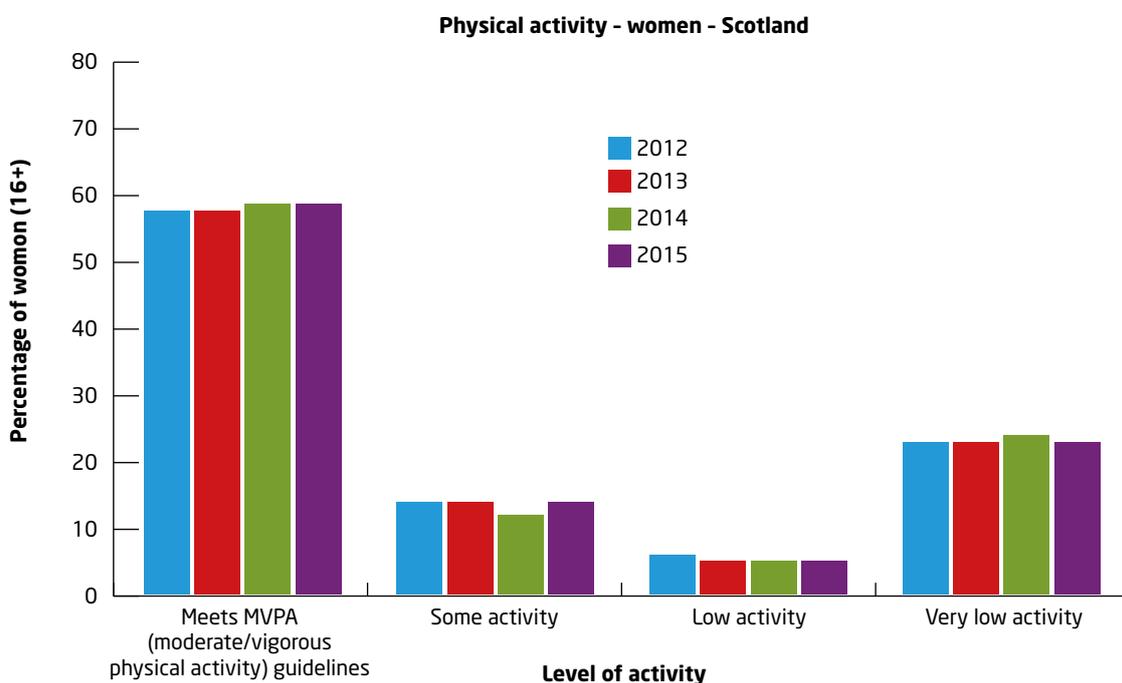
**Move more. Sit less. Play together**

UK Chief Medical Officers' Guidelines 2011 Start Active, Stay Active: [www.bit.ly/startactive](http://www.bit.ly/startactive)

PHYSICAL ACTIVITY



Source: Scottish Health Survey

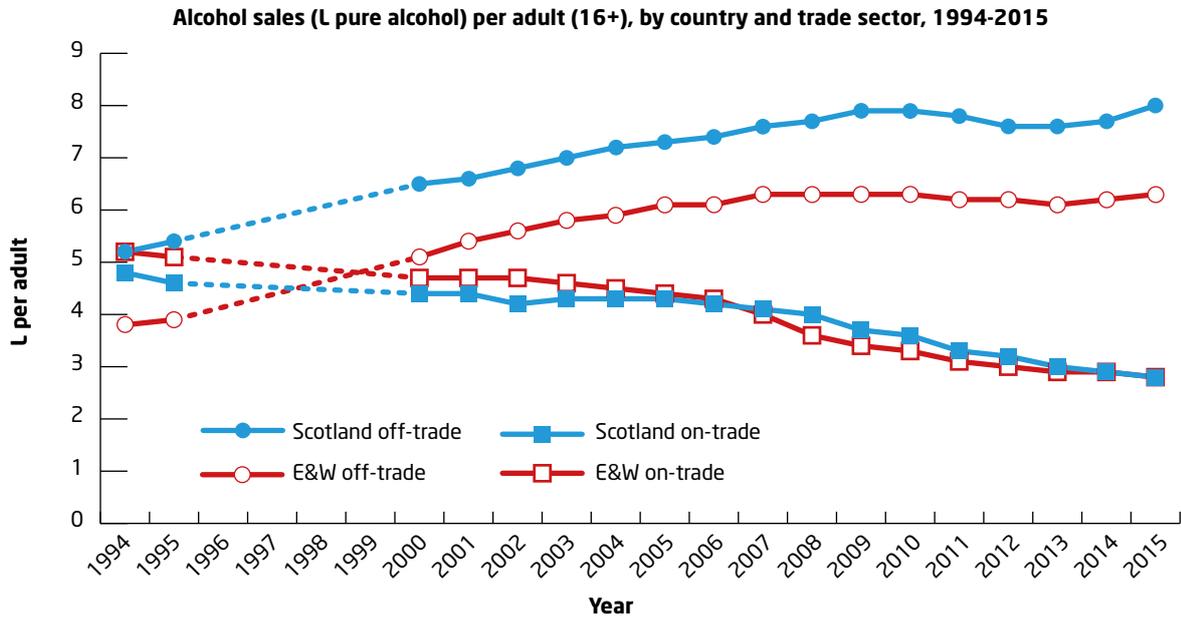


Source: Scottish Health Survey

**SUMMARY POINTS:**

There has been relatively little change in physical activity levels (16 years and over) over the last few years, and there continues to be a difference by gender. Whilst over two-thirds of men meet physical activity guidelines, less than 60% of women do. Additionally, just under one in five men have very low levels of activity, this is closer to one in four women.

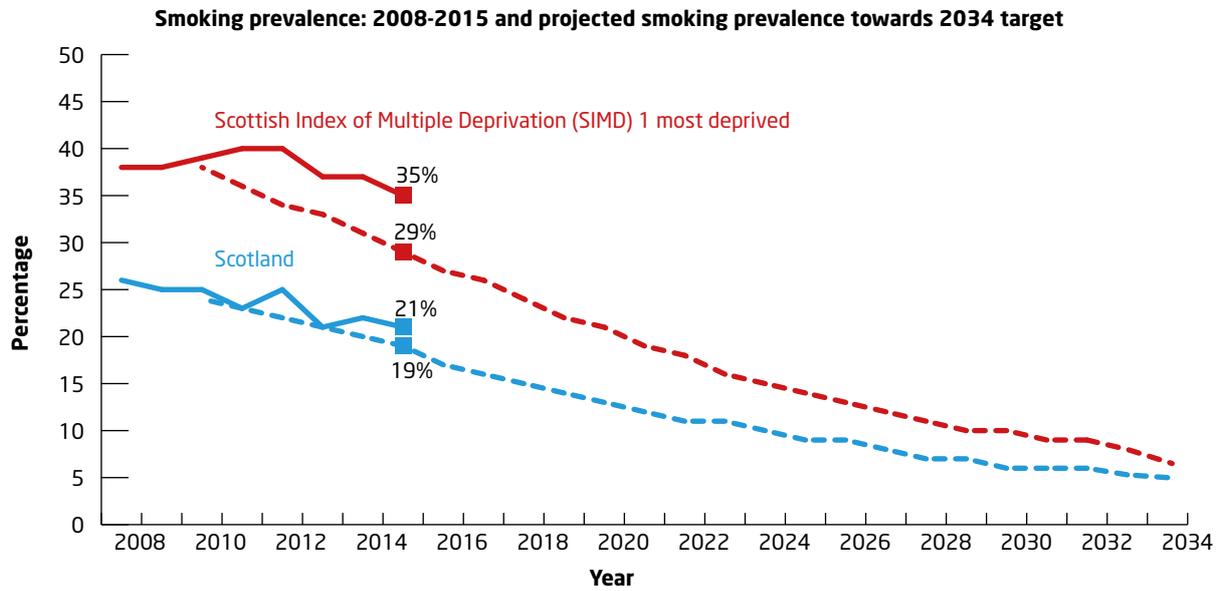
ALCOHOL



**SUMMARY POINTS:**

Scotland continues to consume high quantities of alcohol when compared to other countries. For example, alcohol sales are around 20% higher in Scotland than in England and Wales. Sales have also increased in Scotland over the last two years, after a fall between 2009 and 2013. In 2015, 10.8 litres of pure alcohol was sold per adult; that is equivalent to 20.8 units per adult week. To put this into perspective, the UK Chief Medical Officers recommend that you do not regularly consume more than 14 units per week to keep risks from drinking alcohol to a low level. Sales of alcohol are dominated by the off-trade where the price is comparatively cheap. In 2015, 74% of alcohol was sold in supermarkets and off-licences; this was a record high. Levels of alcohol-related harm remain unacceptably high in Scotland: there are around 22 deaths on average per week due to alcohol misuse, and an average of 674 hospital admissions per week. Both deaths and hospital admissions remain many times higher than in the 1980s.

**SMOKING**

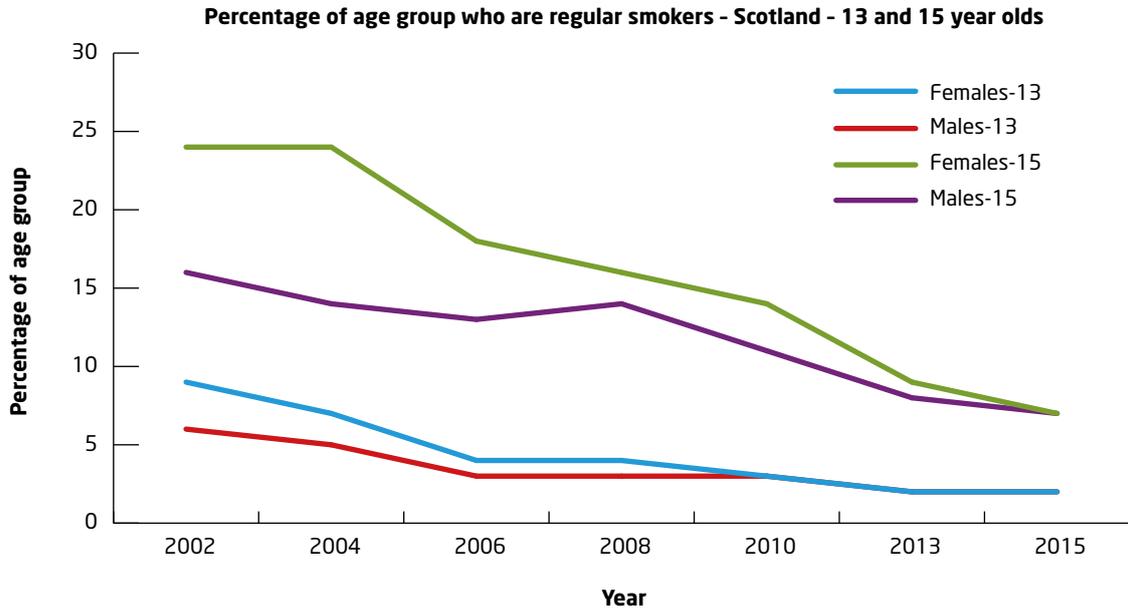


Source: Scottish Health Survey

**SUMMARY POINT:**

Overall the levels of smoking by adults has fallen to 21% of the adult population in Scotland. However there continues to be a significant link to deprivation, with more than one in three adults in Scotland’s most deprived communities smoking.

## YOUNG SMOKERS

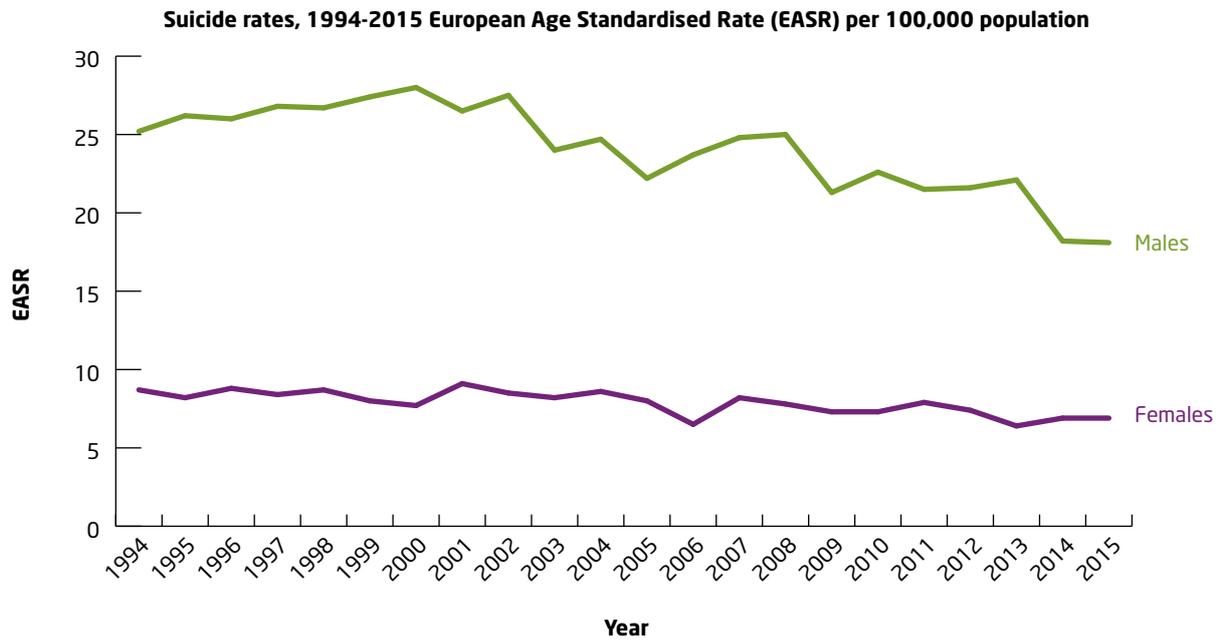


Source: SALSUS 2015

### SUMMARY POINT:

There continues to be a significant fall in the level of young people who are regular smokers. Currently around 2% of 13 year olds, and 7% of 15 year olds are regular smokers. This compares with close to one in four 15 year old girls smoking regularly in 2002.

SUICIDE

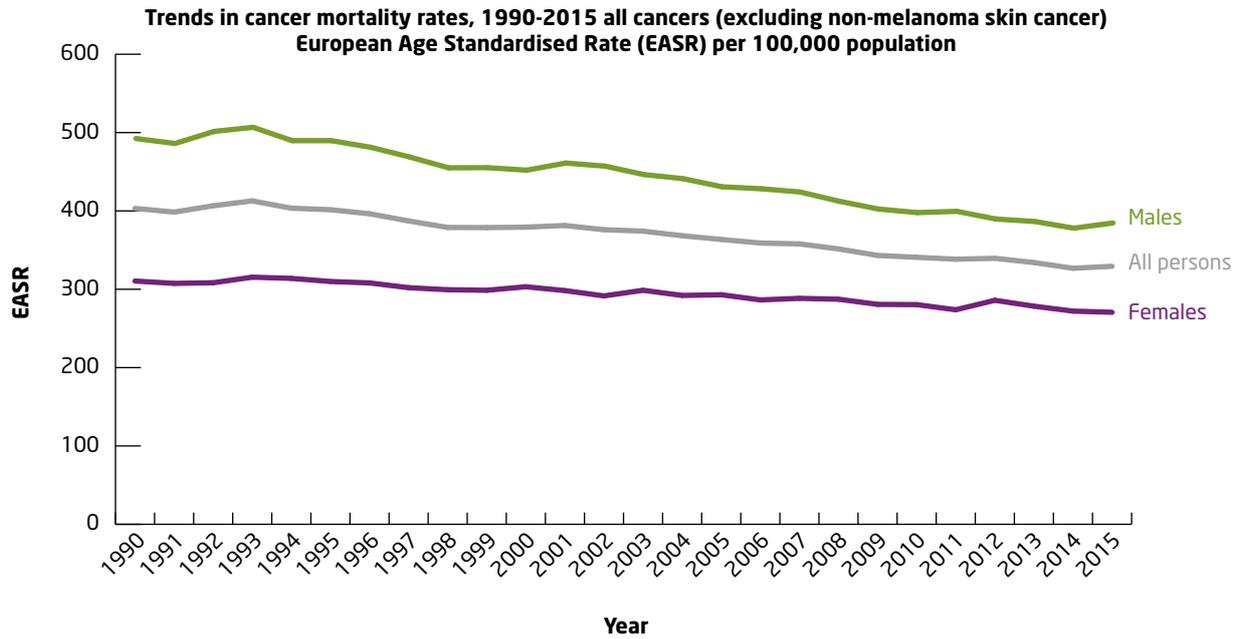


Source: National Records of Scotland

**SUMMARY POINT:**

There continues to be a significant difference between the suicide rates for males and females. Recent data shows that suicide rates for males are two and a half times those for females. Since the mid 1990s, the suicide rate for men has fallen by just under 30%, compared with a fall of just over 20% for females.

## CANCER



Source: Information Services Division, NSS

### SUMMARY POINT:

Over the last decade the number of deaths due to cancer has continued to slowly rise – from just over 15,000 to closer to 16,000, with the number of males being slightly higher than females. However, once age has been accounted for, the mortality rates for males has fallen 10% in the last decade, and 7% for females.

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