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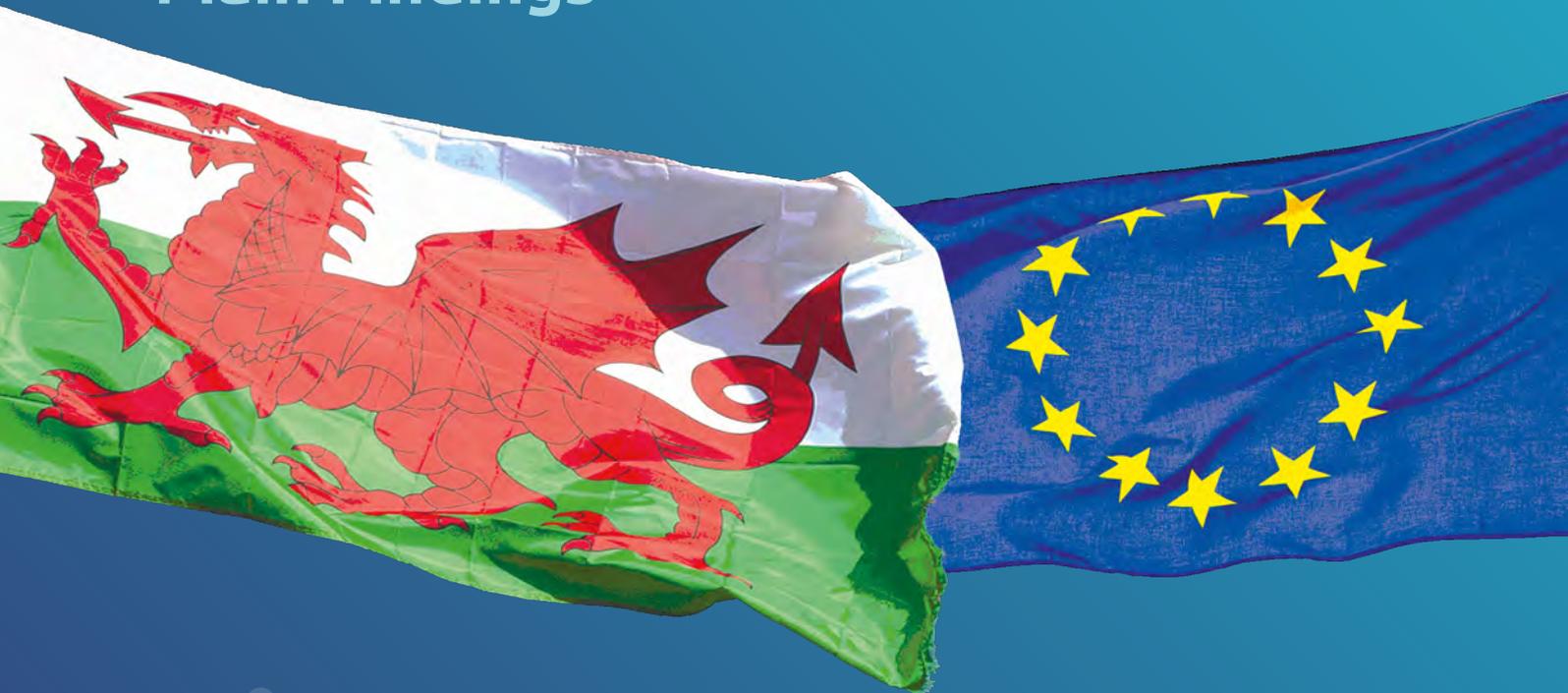


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The Public Health Implications of Brexit in Wales: A Health Impact Assessment Approach

Main Findings



Authors

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This Health Impact Assessment is in three parts:

1. **The Public Health Implications of Brexit in Wales:
A Health Impact Assessment Approach. Executive Summary**
2. **The Public Health Implications of Brexit in Wales:
A Health Impact Assessment Approach. Main Findings (this document)**
3. **The Public Health Implications of Brexit in Wales:
A Health Impact Assessment Approach. Technical Report**
 - a. Technical Report: Part 1
 - b. Technical Report: Part 2

This Health Impact Assessment (HIA) has been undertaken at a time of ongoing uncertainty and a rapidly evolving Brexit agenda. The HIA will continue to be reviewed and monitored post publication to reflect changing context, evidence and events, and where possible updated.

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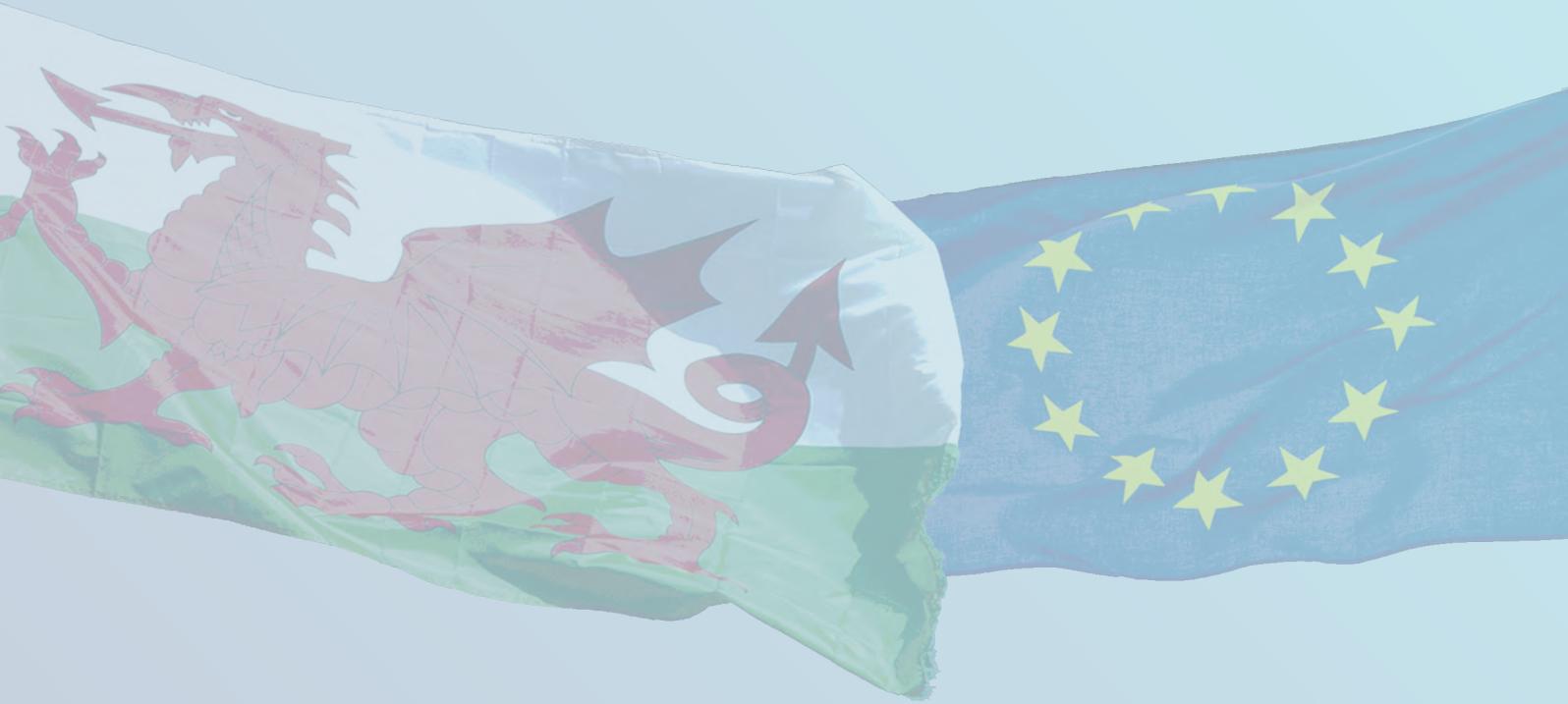
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Setting the scene

The United Kingdom's withdrawal from the European Union (EU) (informally referred to as "Brexit") is an unprecedented event in UK history, and evidence of the impact of Brexit on a wide range of policy areas is either unknown or highly contested. The Wales Health Impact Assessment Support Unit, Public Health Wales, has carried out a Health Impact Assessment (HIA) to better understand the potential implications of Brexit for future health and well-being in Wales. HIA is an evidence based systematic, flexible process, which supports organisations to assess the potential consequences of their decisions, policies, plans or proposals on population health and well-being. This report focuses on the distinct Welsh political, social, cultural and economic context and aims to support and enable key stakeholders to plan for and respond to Brexit.

In order to provide timely evidence, the HIA was undertaken in a tight timescale over a six month period (July to December 2018) and is based on evidence available to the end of this period. It is a 'snapshot' of the impacts of Brexit for Wales at a particular point in time and is set against the ever changing and evolving environment leading up to the anticipated withdrawal process. It is a time of intense political activity with journal papers, stakeholder opinion reports and plans being published on an almost daily basis, with more likely to become available in the lead up to 29th March 2019. As a result, there is limited evidence on the precise actual impacts of any Brexit scenario. Therefore this HIA has not appraised specific Brexit scenarios (for example 'soft' versus 'hard' Brexit) but has focused primarily on the potential impacts for the Welsh population of the UK leaving the existing framework of the EU.

The exact impacts of the UK leaving the EU are unknown. These will only become clear over coming years and consequently, this report examines the spectrum of potential impacts as well as drawing on information describing impacts identified since the referendum. The scale and complexity of the impacts of Brexit means that the HIA has focused on the major potential direct and indirect impacts. However, it is recognised that there may be other impacts that are, as yet, unidentified and which may ultimately be of equal significance to health and well-being. Any assumptions contained in the evidence used within this report have been accompanied by a rationale for their inclusion.

The HIA has captured the best available evidence utilising qualitative and quantitative sources from literature (both academic and 'grey'), expert knowledge and health intelligence. Literature has been identified through a robust research protocol (with clear inclusion and exclusion criteria), with greater weight given to peer reviewed evidence. Where expert knowledge has been the only source available to the authors, this has been clearly stated. The authors have identified limitations within the report. It is recognised that assessing and responding to the impacts of Brexit is a work in progress. However, during the HIA process, the authors have endeavoured to ensure that the latest evidence is included, with amendments made where possible up to publication.

It is hoped that this HIA will be a useful resource for organisations to rapidly identify the wide-ranging nature of the impacts which may be relevant to them, as well as the breadth of population groups who may be affected in Wales when the UK exits the EU. It is evident that further work may be required as future developments may alter the impacts identified in this report and their implications for health and well-being. Therefore, this HIA will continue to be reviewed and monitored to reflect changing contexts, evidence and events.

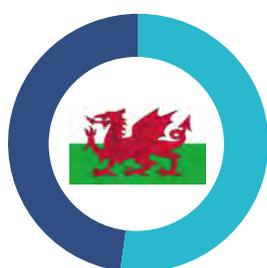
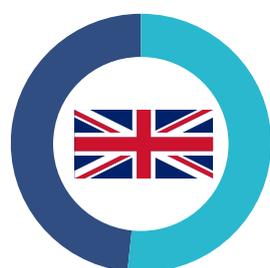
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1 Introduction

On the 23rd June 2016, citizens in the United Kingdom (UK) took part in a referendum on the UK's future relationship with the European Union (EU). The outcome was that the "leave" campaign won by 51.9% to 48.1%. The referendum turnout was 71.8%, with more than 30 million people voting (Hunt A, 2018). In Wales, the referendum result was 52.5% for leaving the EU and 47.5% for remain, and 17 out of 22 local authority areas voted "leave" (The Electoral Commission, 2018)



REFERENDUM TURNOUT WAS 71.8%

Since this time, plans and negotiations have been ongoing as to how the UK leaves the EU. Within the UK, there has also been discussion about the nature of any subsequent future trade and partnership agreements and the impacts of Brexit on a very wide spectrum of policy areas.

The Conservative Prime Minister, Edward Heath, took the UK into the European Economic Community in January 1973 (UK Parliament, 2013). Over a period of over 40 years, the policies and legislation developed by the EU have integrated into a very wide range of areas of policy, regulation, law and trade relevant to health and well-being. These include many areas that influence health outcomes such as environmental regulations, medical research, working conditions, agriculture policy, trade agreements, and economic and social development across the UK.

Both the process of leaving, and final withdrawal from, the EU has wide ranging implications for the populations of the four UK nations – England, Northern Ireland, Scotland and Wales.

Brexit has implications for the economic, social, environmental, cultural and health sectors and systems in Wales. This is set against the context of devolution and the transposition of EU legislation via the European Union (Withdrawal) Act 2018 to support a seamless transition and withdrawal process. At the time of researching and writing this Health Impact Assessment (HIA), despite a withdrawal agreement being reached with the EU, considerable uncertainty continues regarding the basis upon which the UK will leave

the EU as well as the nature of any future trade agreement or partnership arrangements. The possibility of a “no deal” scenario, where the UK will exit the EU on March 29th 2019 without any agreement on a future relationship has led the UK Government to develop a range of guidance for the public sector, business and citizens on preparing for a “no deal” scenario (Department for Exiting the European Union, 2018).

This HIA focuses on the potential impacts of the UK’s withdrawal from the EU on population health and well-being, and the social determinants of health in Wales. A number of options are being explored in the public domain in terms of the nature of the type of withdrawal agreement, i.e. “soft Brexit”, “hard Brexit”, “no deal” (See Glossary). This, together with the high degree of uncertainty, means that it has not been possible to evaluate in detail each specific scenario. Therefore, this HIA will focus in general terms of the potential opportunities and risks to health and well-being of the UK leaving the EU.

The withdrawal of the UK from the EU (informally referred to as “Brexit”) is recognised by Public Health Wales (PHW) as a major policy change which has the potential to impact on the health and well-being of the current and future population of Wales. PHW has a leading role in enabling and mobilising others to improve health and well-being across Wales. For example, it makes information about matters related to the protection and improvement of health in Wales available to the public and both undertakes and commissions research into such matters. As a public body, PHW also has a duty under the Well-being of Future Generations (Wales) Act 2015 to promote sustainable development and take a long term, preventative, collaborative, and integrated approach to population health that involves key stakeholders.

As part of these responsibilities, the Wales Health Impact Assessment Support Unit (WHIASU) within PHW has carried out a HIA of the public health implications of Brexit in the short, medium and long term. This aimed to support organisations (across sectors) and decision makers in Wales, inform the overarching policy making environment to ensure that any opportunities for health gain as a result of Brexit are maximised and any potential negative impacts or unintended consequences are prevented or mitigated and to inform the development of PHW’s future strategic plans.

This HIA is a unique analysis, which assesses the population health and well-being impacts of Brexit from a Welsh perspective, using the public health “lens” of the social determinants of health.

This HIA consists of an Executive Summary, Main Findings report (this document), and an accompanying Technical Report (in 2 parts, Part 1 and Part 2), which provides further information on the methodology used as well as the full evidence on which the findings of the HIA are based. Assessing and responding to the impacts of Brexit is a work in progress and this HIA will continue to be reviewed and monitored to reflect changing contexts, evidence and events.

2 Methodology

2.1 Health Impact Assessment

The European Centre for Health Policy (European Centre for Health Policy, 1999) Gothenburg Consensus is widely accepted internationally as the seminal definition of HIA, and defines it as:

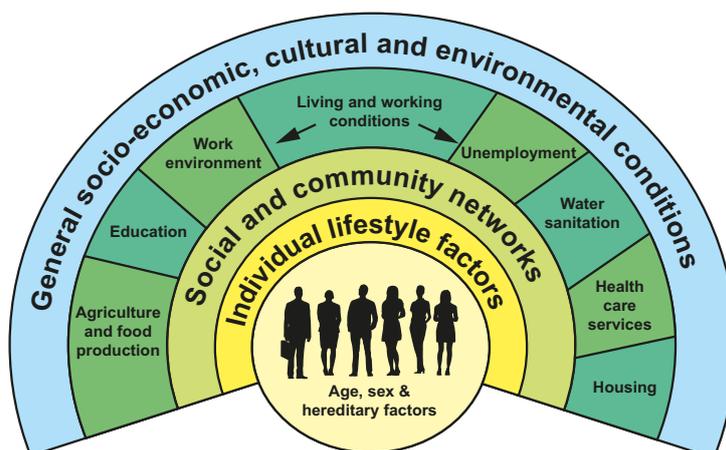
“A combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.”

HIA is a process which supports organisations to assess the potential consequences of their decisions on people’s health and well-being. It provides an evidence based systematic yet flexible and practical framework that can be used to consider the wider effects of local and national policies or initiatives and how they, in turn, may affect people’s health and well-being – in the present and in the future. A major objective or purpose of an HIA is to inform and influence decision-making or policy. However, it is not a decision-making tool per se.

HIA, as practised in Wales, is grounded in the World Health Organization (WHO) definition of health and well-being (World Health Organization, 1948) which encompasses physical, mental and social health and well-being. HIA also views population impact through the lens and framework of the social determinants of health. This framework considers not just the biophysical and environmental health impacts, which can be derived from policies, proposals and plans but also assesses the social factors, which can have an impact and the population groups which are affected. These factors, such as environment, transport, housing, access to services and employment can all interact to a greater or lesser extent with an individual’s lifestyle choices and genetic makeup to influence health and well-being. The diagram below summarises the relationship between these determinants.

Figure 1: A social determinants framework

(Dahlgren and Whitehead 1991)



HIA works best when it involves people and organisations who can contribute different kinds of relevant evidence, contextual knowledge and insight. The information is then used to identify measures to maximise opportunities for health and to minimise any detrimental impacts and identify any 'gaps' that need to be filled. HIA can be used to help address the inequalities in health that continue to persist in Wales by identifying any groups within the population who may be particularly affected by a policy, plan or proposal.

HIA is based on a triangulation of health intelligence, review of the literature and stakeholder knowledge and evidence. As practised in Wales, HIA is grounded on this mixed methodological approach and embraces community, expert and lay knowledge. Wales emphasises the inclusion of all stakeholders including local community citizens as part of the process. Including this type of qualitative evidence is important to assess individual and community concerns, anxiety and fears. It can be quantified for use in decision-making and / or mitigation and can give a more holistic, contextual view of impacts.

There are five main steps to HIA (see Box 1) and, while some may regard it as a linear process, HIAs are most useful and effective when the process is iterative. It is systematic yet flexible to particular timescales and circumstances.

Box 1. HIA Process

1. **Screening:** does the proposal or plan have an impact on population health?
2. **Scoping:** what resources, timeframes, policy windows, evidence need to be considered? Does a Steering Group need to be established? Roles and responsibilities of any Steering Group
3. **Appraisal / Assessment of evidence:** triangulation of qualitative and quantitative evidence and health intelligence
4. **Reporting and recommendations:** construction of HIA report and any non-technical summary
5. **Review and reflection:** including monitoring and evaluation – did the HIA and any findings have an impact on health and well-being or decision making process

2.2 Methodology for the Brexit HIA

This HIA on the public health implications of Brexit is a prospective and comprehensive HIA. It was undertaken between July and December 2018. This section provides a brief overview of how the HIA was carried out and the methodological approach taken. Box 2 below summarises the process followed. A full account of the methodology is located in the Technical Report: Part 1. Membership of the Working Group (WG) and Strategic Advisory Group (SAG) can be found in the Acknowledgements.

Box 2. Brexit HIA Process

Scoping

Define scope, resources and type of HIA
 Working Group (WG) established to carry out the work.
 Strategic Advisory Group (SAG) established to provide steer, advice and governance

Screening

Carried out through two sessions with the WG
 Revisit scoping stage – clarified any questions and roles and responsibilities

Evidence gathered

Literature review: Research protocol for robust literature review, utilising protocol developed with the Evidence and Knowledge Service (PHW)
 Qualitative evidence: Topic sheet prepared for interviews, using the Health and well-being determinants and population groups checklist.
 25 people interviewed and notes transcribed
 Participatory workshop held – notes transcribed, circulated and agreed by participants
 Health intelligence and data: Demographic and health profile compiled
 SAG held – provided steer, advice on approach and governance

Appraisal

Collation, synthesis and analysis of all the information carried out by the WG
 SAG held – provided steer, advice on emerging documents and papers and governance
 Matrix compiled of the impact/scale/significance/duration of Brexit impacts
 SAG held – provided steer, advice and governance. Discussed and agreed key findings and themes

Reporting and Recommendations

Draft report, highlighting key findings and themes of evidence gathered, shared with SAG and wider stakeholders to identify potential Brexit impacts for the population of Wales.
 Report finalised and disseminated, informing PHW and stakeholder organisations.

Reflection and Evaluation (Future work to be carried out)

Follow up, monitoring and evaluation

The SAG provided guidance on and oversight of the process, the findings and the development of the HIA report. The SAG also advised on a prioritisation process to narrow the scope of the HIA. Prioritisation was based on the following criteria:

- Evidence of direct impact
- Non-ambiguous or less ambiguous evidence
- Pertinent to Wales
- Potential extent of impact and / or intensity of impact is high
- Opportunity to influence policies and decision making
- Opportunities for health gain

Using these criteria, the SAG prioritised the following areas:

- Access to services: Health care including – staffing, medicines, research and development, health protection, reciprocal health care, rare diseases
- Access to services: Social care - staffing
- Lifestyles: Food safety, standards, supply and affordability
- Living environment: Environmental regulations
- Living environment: Working conditions
- Economic conditions: Employment and skills
- Economic conditions: EU funding

The following were added as direct impacts following evidence identified in the literature and HIA workshop:

- Lifestyles: Alcohol and tobacco
- Macro policy: Human rights

In addition, the following areas were identified as being priorities due to their importance for population health, although it was recognised that there was less evidence available:

- Mental well-being
- Community resilience and cohesion
- Impacts on health via any potential economic decline

The use of evidence in the HIA

As noted above, HIA is based on a triangulation of health intelligence, review of the literature and stakeholder knowledge and evidence. This HIA has involved collection, analysis and triangulation of each of the required sources of evidence and more details on both the methodology and evidence collected can be found in the Technical Reports, Part 1 and Part 2.

The following evidence was gathered in the HIA:

- **A literature review:** to ensure that this was high quality in nature, a research protocol was constructed with support from the PHW Evidence Service to rapidly identify relevant published evidence. The protocol can be found in the Technical Report: Part 2. This included both grey literature and peer reviewed journal papers. Whilst editorial and opinion pieces from individual authors have not been utilised, it was recognised that the literature contains a significant pool of analysis of the potential impact of Brexit from stakeholder groups with expertise in key sectors relevant to health for example, life sciences, NHS, children's rights. Therefore, it was agreed that this type of evidence would be used as stakeholder evidence in the HIA and it is labelled in this way in the appraisal. The Joanna Briggs Institute checklist for text and opinion pieces¹ has been widely applied to grey literature and articles to ensure quality and check for bias. The literature review also included searches using databases such as Medline and Embase to identify peer reviewed research and literature on: trade agreements and health; Brexit; health; and other macroeconomic scenarios where economic relations are significantly changed, for example sanctions.
- **Qualitative evidence:** the HIA captured knowledge and information held by stakeholder organisations and individuals. In total, 25 stakeholders were interviewed across 17 interview meetings and the notes from these were transcribed and analysed using thematic analysis. A multi-sector and multi-disciplinary participatory stakeholder workshop was also held to gather additional qualitative evidence and knowledge. The workshop took place on 3rd October 2018.
- **Health Intelligence and data:** a community and demographic profile of Wales was developed utilising recognised Welsh and UK sources such as the Public Health Wales Observatory, and National Survey for Wales (see Technical Report: Part 2) to provide an insight into the different priority population groups and to identify any potential impacts to these groups, following departure of the UK from the EU.

¹ Joanna Briggs Institute. Critical Appraisal Tools. Available at: <http://joannabriggs.org/research/critical-appraisal-tools.html> (last accessed 28.11.18)

How evidence has been used

Brexit is an unprecedented situation, and there are no systematic reviews or randomised control trials (RCTs) to help inform decision-making and policy makers. This is also a prospective HIA, and therefore the majority of impacts highlighted are potential as it is not possible as yet to identify the actual impact of Brexit.

Health determinants have been described as “*the bridge between policies and health outcomes*” (Wismar, Lahtinen, Ståhl, Ollila, & Leppo, 2006). Therefore, this HIA has used a wide range of evidence gathered to develop a series of policy pathways through which health determinants may be impacted directly and indirectly by Brexit. The assessment has used evidence of the impact of trade, the economy and health to inform this “*theory of change*”, alongside analysis of the potential impact of Brexit on a range of policy areas.

In terms of weighting the evidence, peer reviewed journals and other evidence identified as part of the literature review has formed the basis of the HIA. This has been supported by Welsh population data and health intelligence to demonstrate whether a potential impact of Brexit is relevant to the Welsh population and the likely scale or vulnerability of the population to the impact. For example, Wales has an extensive coastline and seven major ports, making any impact on bathing water quality and / or port infrastructure highly relevant. These impacts may be of less significance to other parts of the UK.

Stakeholder evidence from interviews and the HIA workshop has also been used to highlight issues and impacts that key sector agencies in Wales believe are important for population health and well-being either in the short or long term and overlays the above sources and provides key contextual knowledge and evidence. Where these impacts are supported by further analysis and evidence in the literature, this is noted in the appraisal. It has been made explicit in the appraisal where an impact is possible, but there is not enough evidence to define the impact, for example ports.

Where the only evidence available is from stakeholders, this is clearly stated in the HIA. For example, potential impacts of Brexit on the mental well-being of individuals and communities were identified by stakeholders. The potential mechanisms through which mental well-being could be affected are supported by the literature, however the HIA has not identified any analysis of health surveillance data or qualitative research carried out to date on the impact of Brexit on population mental health and well-being.

Note on Referencing

In the text, any evidence from interviews carried out for the HIA is referred to as “INT”, with the number of the relevant interview e.g. INT6.

Evidence from the HIA participatory workshop is labelled “HIA workshop”.

3 Setting the Context for the Public Health Implications of Brexit: Trade, the Economy and Health

This section contains findings from a rapid review of literature on the theme of trade, the economy and health. The HIA draws upon the evidence in this section throughout subsequent chapters and in the development of policy pathways (described in Section 4.1) through which we suggest Brexit could impact on health. Findings from a comprehensive literature review focused on the identified direct impacts on health and well-being (including areas such as health protection, health and social care, the environment and agricultural policy) and can be found in the accompanying Technical Report: Part 1.

3.1 The potential impact of Brexit on the economy in the UK as a determinant of population health and well-being

Economic factors influence the determinants of health including access to good work, income levels, living standards, affordability and quality of food, housing, and investment in community, transport and public services and infrastructure.

"...the largest impact on the health system is likely to come from Brexit's impact on the wider economy".

Analysis of the impact of three Brexit scenarios on health services (Fahy, et al., 2017) (p.2117)

The potential ramifications of leaving the EU on the UK economy is a contested area and challenging to predict accurately. However, there is now a growing consensus among leading economists that Brexit will likely lead to losses in average national income (Breinlich, Dhingra, Sampson, & Van Reenan, 2016) (H M Government, 2018) (Bank Of England, 2018). Rising inflation, lower growth and business investment, the risk of higher unemployment and the related impact on public finances are all key concerns. There are also concerns about loss of EU funds that contribute to addressing socioeconomic and health inequalities across the UK (British Medical Association, 2018a) (Welsh NHS Confederation, 2018). Levell and Stoye (2018) also conclude that there are likely to be further pressures on public-service funding from a reduction in economic growth caused by Brexit (Levell & Stoye, 2018).

The UK Government's Cross Whitehall Briefing (House of Commons Exiting the EU Committee, 2018) published in January 2018 states that "a number of factors make any analysis highly uncertain" (p.2) including:

"Economies anyway facing an unusually uncertain path due to:

- *Ongoing adjustment from the financial crisis*
- *New technologies and sectors*
- *Next phase of globalisation*

In addition:

- *The exact nature of any future exit scenario is difficult to predict*
- *Uncertainty around the impact and timing of any given policy scenario is compounded by no precedent of leaving a major trading bloc" (p.2)*

In this cross government briefing paper (House of Commons Exiting the EU Committee, 2018), the key assumptions underlying the analysis are stated, the findings on the impact on growth from a range of authors compared, and results reported across sectors and regions. The briefing paper summarises analysis conducted by fourteen economic organisations, with eleven predicting lower Gross Value Added (GVA)² (also see Glossary) for the UK in any of the exit scenarios.

Analysis of three different exit scenarios (EEA high access, a standard free trade agreement (FTA) or "smooth no deal" on World Trade Organization (WTO) rules) include a potential reduction in GVA for Wales of around -2% in a EEA exit scenario to around -10% from a World Trade Organization rules exit. On a UK wide basis, the sectoral analysis suggests that the agriculture sector in the UK could benefit by 1% from a FTA scenario, but that all other sectors across the UK are predicted to have a negative change in GVA in all three exit scenarios.

A more recent analysis published in November 2018 (H M Government, 2018) models economic impacts based on four Brexit scenarios (no deal, average Free Trade Agreement (FTA), EEA type, White Paper) and isolates relative changes due to Brexit from other factors (for example, demographics and wider global trends). The analysis does not estimate the absolute increase or decrease in economic output compared to today, and states that in all scenarios the economy "would be expected to grow". For Wales, in a White Paper withdrawal scenario the analysis suggests no change in GVA. An EEA type deal is expected to reduce GVA by between 1-2%. An average FTA is expected to decrease GVA by 4-5%, and "no deal" would see a reduction of almost 8%.

2 In economics, gross value added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy. In national accounts GVA is output minus intermediate consumption; it is a balancing item of the national accounts' production account.

An International Monetary Fund (IMF) mission (visit) (International Monetary Fund, 2018) to the UK in September 2018 reports that:

- Growth has moderated since the EU referendum
- All likely Brexit outcomes will entail costs for the UK economy by departing from the frictionless single market that now prevails
- Above-target inflation following the sharp post-referendum sterling depreciation has slowed real income and consumption growth
- Business investment has been lower than would be expected. Investment is also likely to remain constrained as long as Brexit uncertainty weighs on firms
- The employment rate³, however, continues to reach record highs

The Bank of England analysis (Bank Of England, 2018) of financial and monetary stability in relation to Brexit published on 29th November 2018 reinforces the IMF finding above, and states that *“EU withdrawal has already had consequences for the economy, providing some evidence of the nature of the Brexit adjustment”* (p. 4).

Analysis by the London School of Economics (Breinlich, Leromain, Novy, & Sampson, 2017) also reports an increase in inflation following the EU referendum linked to the falling value of the pound. Based on an analysis of nominal and real wage growth from January 2015 (pre referendum) to July 2017 the authors conclude that:

*“Higher inflation has (also) reduced the growth of real wages. The impact of the referendum is equivalent to a £448 cut in annual pay for the average worker. Put another way, the Brexit vote has cost the average worker almost one week’s wages due to higher prices. The rise in inflation due to the referendum has been lowest for households in London, while Scotland, **Wales** and especially Northern Ireland have been worst hit”* (Breinlich, Leromain, Novy, & Sampson, 2017)(p.1).

A separate analysis on the impacts of an EEA type “soft Brexit” and a WTO type “hard Brexit” on the cost of living was carried out by the London School of Economics (Breinlich, Dhingra, Sampson, & Van Reenan, 2016). They identify the potential for highest price rises on transport, food, alcohol and clothing as these products rely more significantly on imports. The analysis compares potential cost increases in an EEA type “soft Brexit” and a WTO rules “hard Brexit”. They report potential price rises in transport of between 4% (EEA type) and 7.5% (WTO rules), alcohol price rises of 4% (EEA type) to 7% (WTO rules), food price rises of 3% (EEA type) to 5% (WTO type) and clothing 2% (EEA type) to 4% (WTO rules).

Summary

Whilst there is no certainty regarding how Brexit will impact on the economy, existing evidence and expert consensus point to a likely negative impact on UK economic growth, a rise in inflation and consequent pressures on public spending budgets for services and infrastructure. The nature, scale and duration of any economic impact is not clear, although an overall negative impact is probable. The impact of any economic decline, rising inflation and possible reductions in public spending are key mechanisms through which health impacts may occur.

³ This does not include a measure of the quality of employment.

3.2 Trade agreements and health

The public health literature contains growing evidence of the role of international trade agreements in influencing key determinants of health such as access to healthy food, medicines, health care, working conditions, alcohol and tobacco regulation and environmental protections (Barlow, McKee, Basu, & Stuckler, 2017) (Hirono, Haigh, Gleeson, Thow, & Friel, 2016) (Sy & Stumberg, 2014) (Crosbie, Eckford, & Bialous, 2018) (Friel, Gleeson, Thow, et al., 2013) (Grieshaber-Otto, Sinclair, & Schacter, 2000). A recent Faculty of Public Health (2018a) paper on Brexit, trade and health states that:

“Stakeholders view policy coherence on health and trade in particular as essential to long-term, sustainable, economic growth”

(Faculty of Public Health, 2018a) (p1)

Studies of existing trade agreements in terms of their potential and actual impact on health have highlighted the following examples:

- Many provisions proposed for the Trans Pacific Partnership Agreement (TPPA) had the potential to increase the cost of medicines (Hirono, Haigh, Gleeson, Thow, & Friel, 2016)
- The five TPPA areas identified as posing significant threats to tobacco control measures were: Investment, Regulatory Coherence, Services, Intellectual Property and Technical Barriers to Trade (Sy & Stumberg, 2014)
- Crosbie et al (2018) report on the tactical use of trade agreement provisions by tobacco companies to resist standardised packaging (a public health measure) (Crosbie, Eckford, & Bialous, 2018)
- The North America Free Trade Agreement (NAFTA) increased imports of corn, soybeans, sugar, snack foods and meat to Mexico, which some authors have linked to a rise in obesity in Mexico (Clark, Hawkes, & et al., 2012)
- Improved market access via trade agreements can improve supply of food and the range of choice. However, trade liberalization can also result in increases in imports of highly processed foods, which can shape food preferences and affect diet-related health (Friel, Gleeson, Thow, & et al., 2013)
- An analysis of free trade agreements and alcohol by Grieshaber-Otto et al (2000) found that *“treaties have already forced changes to many government measures affecting alcohol availability and control, primarily by constraining the activities of government alcohol monopolies and by altering taxation regimes”* (p S491). The authors highlight the example of the impact of joining the European Economic Area on Nordic countries with previously tighter alcohol control measures. (Grieshaber-Otto, Sinclair, & Schacter, 2000)
- Walker (1997) documents challenges to Canadian working conditions and health and safety regulations as a result of NAFTA (Walker, 1997)
- Medical and public health professionals have identified risks to state funded health care and medicines from free trade agreements and World Trade Organization (WTO) rules (Ostry, 2001) (Price, Pollock, & Shaoul, 1999)

The Faculty of Public Health has highlighted that:

“The EU currently requires trade negotiations to promote sustainable economic development by embedding social justice, human rights, high labour and environmental standards”

(Faculty of Public Health, 2018a; Faculty of Public Health, 2018b) (p 1).

In October 2018, the NHS Confederation European Office responded to a consultation from The Department for International Trade (DIT), who had issued four public consultations relating to bilateral Free Trade Agreements between the UK and the United States, Australia, and New Zealand as well as the UK, potentially seeking accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). The NHS Confederation response states a number of concerns about a free trade agreement or trade talks, which included:

- *“The impact of trade policies on the health of citizens is not routinely assessed when negotiating trade agreements, and health interests are not represented at the negotiating table*
- *The extent to which trade negotiations / talks will be subject to Parliamentary and public scrutiny and challenge*
- *Eagerness to secure agreements could tempt negotiators to “trade away” the longer term prize of a healthy and more productive population, in return for short-term economic advantages*
- *For example, regulatory standards relating to food, the environment etc could be lowered if they are seen merely as non-tariff barriers to free trade. Any detrimental impact on public health would, as a result, increase pressure on health and social care services*
- *Possible pressure from the pharmaceutical industry to restrict the use of generic medicines in favour of branded drugs for which they hold the patent, leading to supply and cost pressures for health and social care services*
- *The importance of UK and devolved governments retaining control of the market in health and social care services, by deciding which services they wish to open to competition in the domestic and / or international market*
- *Where services are open to competition from international providers, investor protection provisions in an FTA could restrict the ability of future governments to regulate in the public interest (precedents exist in the field of public health measures that could impact on company profits by, for example, discouraging consumption of unhealthy products)*
- *Shortages or delays in importing goods such as medicines and medical devices could result from failure to agree robust mutual recognition / equivalence of manufacturing, transport / storage and inspection regimes*
- *We are concerned that this could result in additional costs that would be passed on to buyers in the health care sector and ultimately to taxpayers and patients”*

(NHS Confederation European Office, 2018a)

Summary

There is strong evidence that the provisions of international trade agreements have significant influence on the determinants of health. There may be risks and opportunities for health in future trade agreements post Brexit and these will require scrutiny and advocacy by public health experts to ensure that population health and well-being are protected and promoted. This is likely to be a complex and large-scale task for public health, given the potential increased volume of bilateral trade agreements that may occur post Brexit. This will also have workforce development implications for public health, given that internationally there has been little focus within public health practice, education and research perspectives on engaging with globalised trade policy (Greenberg & Shiau, 2014).

3.3 Economic downturns and health



Economic downturns can have major effects on health and social well-being (for example Box 4: The Ireland Experience, Box 5: The impact on health of the 2008 economic downturn in Wales) and the wider impact of Mass Unemployment Events on health has been recently reviewed and published by PHW (Davies, Homolova, Grey, & Bellis, 2017). In addition, WHO (2011) reviewed the mental health impacts of the 2008 economic crisis (WHO, 2011).

Box 4: The Ireland Experience

A report by Nolan et al. (Nolan, Barry, Burke, & Thomas, 2014) sought to establish the impact of the 2008 economic crisis on the health system and health in Ireland. The crisis, which led to the collapse of Ireland's banking and construction sectors, saw a large increase in levels of unemployment and a reduction in household incomes.

As a result of the crisis unemployment increased sharply, from under 5% at the end of 2007 to just under 14% at the end of 2012 (Central Statistics Office, 2013a). Rates of unemployment among the younger population were higher still, at over 30% for males aged 15–24 years in 2012, while at the end of that year, long term unemployment (defined as out of work for more than a year) accounted for nearly 60% of total unemployment (Central Statistics Office, 2013a).

Rates of poverty and deprivation increased with household incomes falling by over 12% in nominal terms, the "at risk of poverty" rate increased from 14.4% to 16.0% and the proportion of the population experiencing two or more types of enforced deprivation such as lack of heating and food increased from 13.8% to 24.5% over the period 2008 to 2012 (Central Statistics Office, 2013b).

Although they conclude that it is extremely difficult to infer causal relationships between economic crises and health outcomes, behaviours or inequalities at the population level, the authors identify data showing an increase in suicide rates between 2007–2012 (although the rate fell between 2011 and 2012) (Central Statistics Office, 2013c); this relationship has also been observed in another study examining the association between the impact of the economic crisis and suicide (Arensman & et al., 2012). Other studies quoted by Nolan et al. (Nolan, Barry, Burke, & Thomas, 2014) have analysed the impact of economic crises (and particularly the experience of unemployment) on both physical and mental health, as well as health behaviours (Delaney, Egan, & O'Connell, 2011) (Institute of Public Health in Ireland, 2011). The authors report a consistent increase in calls to mental health support services in the five years that immediately followed the 2008 crisis (2009-2014).

The authors claim the trends observed are consistent with those found in previous analyses for other countries and that there is 'no simple answer' to the question of how economic crises impact on health outcomes, behaviours and inequalities (Suhrcke, Stuckler, & Leone, 2009) (Suhrcke & Stuckler, 2012).

In response to the crisis, although health spending as a proportion of public spending increased, actual public expenditure on health fell by about 9%, and substantial efficiencies were made to the public health care system via lowering unit costs, increasing productivity and reallocating services across levels of care. However, there was an *"increasing burden on households to pay for health care at the same time that disposable income has (sic) fallen"* p.30. Progress towards a universal health care system in Ireland was delayed, and the authors report that whilst further efficiencies were possible, the *"easy cuts"* had been made.

Box 5: The impact on health of the 2008 economic downturn in Wales

A report by Elliott et al (Elliott et al., undated) on the impact of the 2008 economic downturn on health in Wales makes the distinction between an economic recession, which may be over a relatively short period of time, and the longer term consequences of recession which may have negative effects on particular people and places over a much longer timeframe. They conclude that the crisis is likely to have impacted on mental and physical health. However, the effects have manifested themselves in a number of different ways, with their shape and extent dependent on decisions taken by national and local governments as well as employers.

The authors identify evidence that people with low socio-economic status are more likely to become unemployed during economic downturns than people with high socio-economic status, with men more likely to be affected by job loss than women (although they acknowledge that this may now be less relevant in countries where women are also in high levels of employment). However, there is little evidence of the way in which ethnicity shapes the impact of unemployment on health, with more research needed in this area. In addition, the relationship between age and health is complex and sensitive to wider shifts in the social and economic environment.

According to the report, the main effects of job loss and employment on health are insecurity and uncertainty associated with loss of control or mastery; financial strain with impacts on areas ranging from access to basic needs such as nutrition through to secondary impacts such as housing repossession, loss of social networks and increased family strain. The strongest negative effect of the economic downturn appears to have been on mental health with evidence of impact on some physical health problems. However, their evidence also suggests some health improvements including fewer road traffic accidents and some reductions in alcohol consumption and smoking, increases in physical activity levels and improved diet although they also acknowledge that some of the data regarding health behaviours, particularly in relation to alcohol, are contested. However, like Nolan et al, they also conclude that the research evidence for assessing the likely health impact of the recent recession and its aftermath in Wales is complex and contested. Thus, the way in which economic downturns impact on people's health depends on a range of factors including the nature, depth and extent of any particular recession, on monetary, fiscal and social policies, socio-cultural values, the level of formal and informal welfare and on demographic changes in the labour market.

Mass Unemployment Events (MUE)

Mass unemployment events (MUE) are defined as a high number of actual or potential job losses from a single large employer, following large industry closure or downsizing. There is the potential for detrimental consequences for those employees made redundant; a marked impact on the local or regional economy and labour market; and a social shock to the local or regional community (Davies, Homolova, Grey, & Bellis, 2017).

The effects of MUE on health and well-being include (Davies, Homolova, Grey, & Bellis, 2017):

- Exacerbation of pre-existing poor health behaviours, such as increased alcohol consumption, tobacco smoking, illegal and prescription drug misuse, and being overweight
- A decline in overall health and well-being, including circulatory and cardiovascular health
- Creation or exacerbation of health inequalities, detrimental impact on an individual's mental health and well-being, including loss of self-esteem and increased anxiety
- Increased risk of mortality, immediately following redundancy

In addition, MUE can also have a wider impact on the household and family members, including: increased conflict and domestic violence; increased unplanned pregnancy; and reduced infant growth. Also, financial hardship has been shown to contribute to spousal and child ill health, affect parenting and result in poorer child mental health and reduced educational attainment. MUEs can also lead to the loss of community networks, contact with colleagues and friends, and can contribute to feelings of grief and social isolation (Davies, Homolova, Grey, & Bellis, 2017).

Mitigating the impact of economic crises on mental health

A report from the WHO (World Health Organization, 2011) states that:

'It is well known that mental health problems are related to deprivation, poverty, inequality and other social and economic determinants of health. Economic crises are therefore times of high risk to the mental well-being of the population and of the people affected and their families'. (p.1)

Like Elliott et al. (Elliott & et al., undated) the authors state that policy choices determine whether an economic recession will significantly affect mental health and that recent data suggests that the implementation of active labour market programmes, family support measures, restrictions in the availability of alcohol, debt relief programmes and access to mental health services can help prevent or mitigate the adverse effects of recession on mental health.

Summary

Evidence from the literature suggests that economic downturns and crises significantly affect the determinants of health such as income, employment and living standards. However, predicting health outcomes is complex and difficult. The strongest evidence is in relation to negative impacts on mental health. Evidence regarding previous economic crises highlight that policy interventions can be effective in reducing or mitigating the impacts on mental health and well-being.

4 Appraisal – Evidence Summary of the Potential Impacts of Brexit on Health and Well-Being

This chapter brings together the key findings from the three strands of evidence collected in the HIA:

1. Literature review
2. Qualitative evidence from stakeholders
3. Community health intelligence profile data on population groups impacted

The full findings of each evidence strand can be found in the accompanying Technical Report (Part 1 and Part 2).

The chapter includes four sections:

4.1 Key policy pathways and mechanisms through which Brexit directly and indirectly impacts on the determinants of health and therefore population health and well-being.

4.2 Appraisal of the evidence on direct impacts of Brexit on the determinants of health, covering the following areas (in no particular order):

- Access to services: Access to safe and timely health and care services: staffing; medicines; research and development; health protection; rare diseases, reciprocal health care
- Lifestyles: Food safety, standards, supply and cost
- Lifestyles: Alcohol and Tobacco⁴
- Living environment: Environmental regulations: air quality and bathing water
- Living environment: Working conditions
- Economic conditions: Employment and skills
- Economic conditions: EU funding for community and economic investment, agriculture and research
- Human rights⁵

4.3 Appraisal of evidence of the key potential indirect impacts of Brexit on health and well-being, with a focus on:

- Mental well-being
- Social and community: family life
- Social and community: community resilience and cohesion

4.4 Appraisal of the evidence of impact on the key population groups at higher risk of negative impacts, as identified during the HIA screening process and by stakeholders.

⁴ These were added as direct impacts following evidence identified in the literature and HIA workshop

⁵ As above

In each section, key data and evidence are included concerning how the impacts are relevant to the Welsh Population. This chapter concludes with a short narrative section exploring some of the key findings in relation to the unique policy context in Wales.

Terminology

The HIA uses specific terminology to describe the impact, using the following descriptors throughout:

Type of impact		
Positive / opportunity		Negative
Impacts that are considered to improve health status or provide an opportunity to do so		Impacts that are considered to diminish health status

Likelihood of impact		
Confirmed	Strong direct evidence e.g. from a wide range of sources that an impact has already happened or will happen	Confirmed
Probable	More likely to happen than not. Direct evidence but from limited sources	Probable
Possible	May or may not happen. Plausible, but with limited evidence to support	Possible

Intensity / severity of impact		
Major	Significant in intensity, quality or extent. Significant or important enough to be worthy of attention, noteworthy	Major
Moderate	Average in intensity, quality or degree	Moderate
Minimal	Of a minimum amount, quantity or degree, negligible	Minimal

Duration of impact		
Short term (S)	Impact seen in 0 – 3 years	Short term (S)
Medium term (M)	Impact seen in 3 – 10 years	Medium term (M)
Long term (L)	Impact seen in >10 years	Long term (L)

4.1 Key policy mechanisms

Key policy pathways and mechanisms through which Brexit directly and indirectly affects the determinants of health and therefore population health and well-being involve areas both devolved and non-devolved to Wales.

The key policy mechanisms for **direct** impact of Brexit on health are (in no particular order of importance):

- Changing regulatory standards and legal frameworks (devolved and non-devolved)
- Terms of future trade policy and trade agreements (devolved and non-devolved)
- End of freedom of movement and changes to immigration policies (non-devolved)
- UK citizens will no longer be EU citizens (non-devolved)
- Loss of jurisdiction of the European Court of Justice (non-devolved)
- Reduced access to key coordinating public health systems (devolved and non-devolved) e.g. European Centre for Disease Prevention and Control, European Medicines Agency
- Reduced access to data, intelligence and evidence sharing mechanisms (devolved and non-devolved)
- Reduced access to EU funding (devolved and non-devolved)
- The loss of jurisdiction of the EU Charter of Fundamental Rights in the UK (non-devolved)
- Rights of EU Nationals to live and work in the UK (non-devolved)
- Leaving the single market and / or customs union (non-devolved)
- Regulatory divergence increasing customs requirements at borders (non-devolved)

Mechanisms for potential **indirect** impacts of Brexit on health are identified as (in no particular order of importance):

- Economic decline, inflation and linked reduction in funding for the public sector, infrastructure and key community assets
- Increased uncertainty over the future
- Increase in hate crime
- Increased political engagement and participation

It is recognised that there may be further, as yet, unidentified Brexit related mechanisms for direct and indirect impacts that are not captured in this HIA.

Flowcharts in Section 6 link these policy mechanisms to key health determinants, population health outcomes and the Well-being Goals for Wales.

4.2 Direct impacts on the determinants of health



4.2.1 Lifestyles: Access to healthy, safe and affordable food



Population context

Just under 16% of people living in Wales are currently unable to afford everyday goods and activities (Public Health Wales Observatory, 2018a). Between June 2010 and December 2015 the number of food banks in Wales grew by 141, bringing the total number to 157 throughout Wales alone (Wales Institute of Social & Economic Research, 2017).

The average share of total spending that households allocate to food is approximately 16%. However, the *“lowest-income tenth of households allocate 23% of their spending to food, compared with 10% for the highest-income tenth”*. Poor households are therefore, more affected by rises in the general level of food prices (Levell, O’Connell, & Smith, 2018).

An estimated 3.7 million children in the UK are part of families who earn less than £15,860 and would have to spend 42% of their after-housing income on food to meet the costs of the UK Government’s nutrition guidelines, making a healthy diet most likely unaffordable. Therefore, people on low incomes have the lowest intakes of fruit and vegetables and are far more likely to suffer from diet-related diseases such as cancer, diabetes, obesity and coronary heart disease (Scott, Sutherland, & Taylor, 2018).

Around 30% of food purchased by households in the UK is imported. The major source of total food imports is the EU (which accounts for 70% of gross food imports). This means changes in the costs of imports, for example, through changes to tariffs or movements in exchange rates, are likely to affect the cost of getting imported food products onto supermarket shelves and have a big impact on the price consumers pay for food (Levell, O’Connell, & Smith, 2018).

Food Safety

90% of food law in the UK today largely consists of directly applicable EU legislation (INT6) with much of the risk assessment and risk management decisions being undertaken at EU level by specialist agencies and mechanisms (Ainsworth, 2017). The Food Standards Agency (FSA) undertakes some of these functions at a limited scale, but at present there is no directly equivalent system in the UK. Key systems for providing rapid warning of food safety threats, sharing information on food crime and for notifying and tracking food imported from outside the EU are maintained by the European Commission (Ainsworth, 2017). It is unclear at this stage of Brexit negotiations whether the UK will remain a member of the European Food Safety Authority (EFSA) or have access to food safety systems (INT4).

Food currently imported from third countries has to be notified in advance to the port of arrival and, depending on the product, the food product will be required to have a full document check as well as undergo potential physical checks. These requirements will still be in place post Brexit.

After Brexit, the UK will need to establish its own regime for import controls, including sanitary (animal health) and phytosanitary checks (related to plant health including fruit and vegetables and the control of plant diseases) which are undertaken with Port Health Authorities, supported by scientific testing and veterinary examination, in addition to any customs and security checks. This could represent a significant increase in demand required for food inspections and testing (Kent County Council, 2018a).

The FSA is currently looking at the status of EU food following Brexit. The FSA's position on Day 1 following Brexit is that food from the EU will not be inspected because it does not pose an additional risk. As and when the risk level changes, the FSA will then determine whether checks are needed (INT6). The need for a physical infrastructure and workforce at ports to carry out any additional checks is an important issue and could have impacts on Welsh ports (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b) [HIA Workshop]. At present, there are no inspection facilities in Wales, for example border inspection points or designated points of entry (Food Standards Agency, 2018a). As any high-risk food will have to be checked on entry, without the right infrastructure trade may have to be diverted to other ports (INT).

The potential for major impacts of food related workforce shortages and gaps were highlighted in the HIA workshop and interviews. For example, currently in Wales all vets who certify 'origin of meat' (certificating officers) are EU citizens (INT6) and should some choose to return or move to the EU post Brexit, then this could lead to workforce gaps and thereby delays in certification and delivery. In turn, this could lead to increased perishability and food wastage. Loss of these key food safety staff is already being reported (Messenger, 2018). Other key workforces of concern are "Official Veterinarians" who check meat in slaughterhouses to make sure that contaminated meat does not enter the food chain (INT).

Stakeholders in the HIA identified an opportunity to change the role of "Official Veterinarian" to incorporate a certifying officer for meat inspection functions, which could address skilled labour shortages and offer local recruitment opportunities (HIA workshop, INT6).

The food safety system in the UK is highly exposed to Brexit related change and uncertainty and requires major short, medium and long term capacity building in relation to legislation, organisations, policies, and workforce (INT6). Health sector stakeholders also identify the importance of these systems for health and well-being and the risks

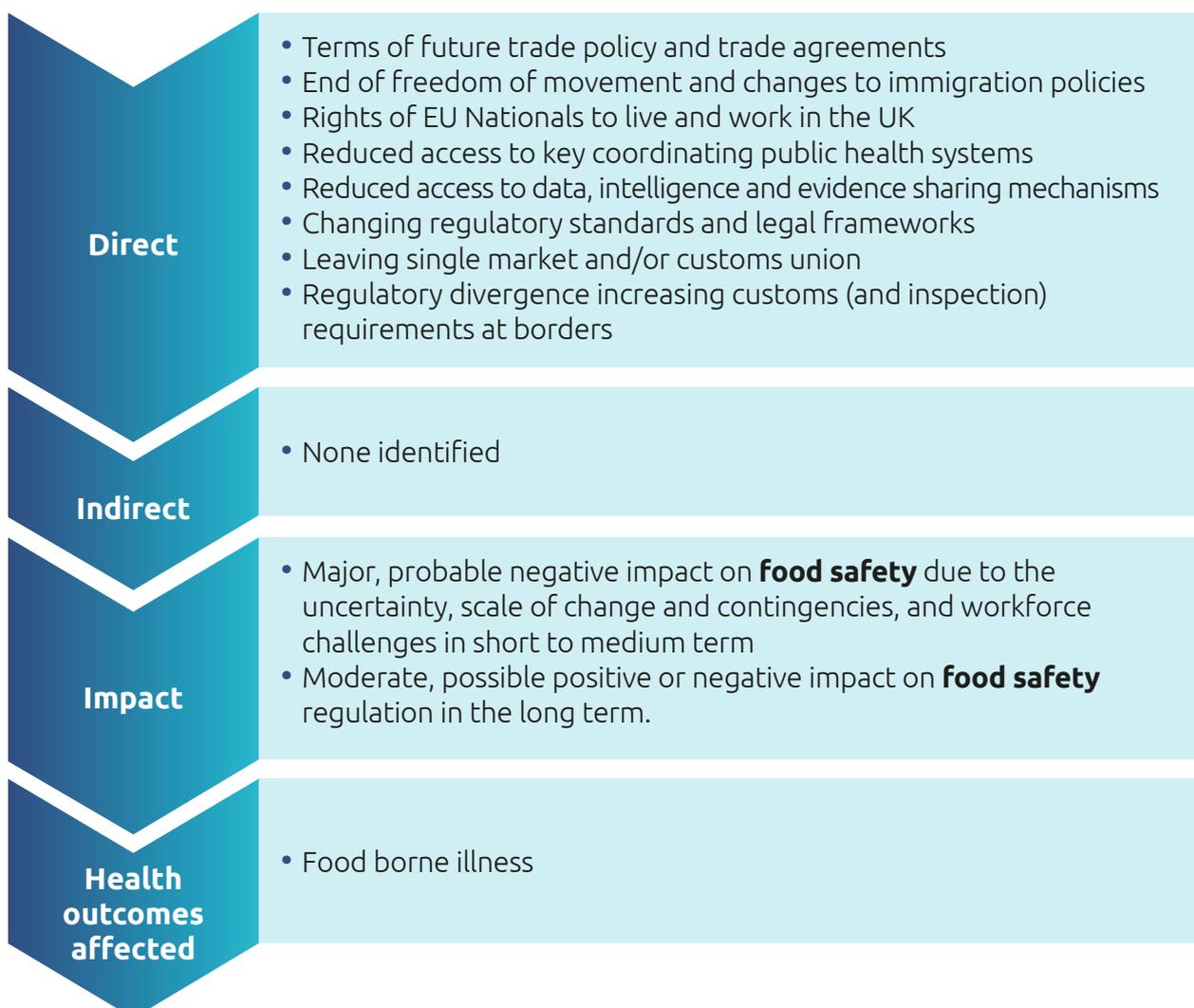
posed by Brexit to food safety discussed above (Brexit Health Alliance, 2018a) (See also Literature Review in the Technical Report: Part 1).

The FSA is working to prepare the necessary legislative instruments, in line with the passage of the EU Withdrawal Act 2018 process, to incorporate EU Food Safety Law directly into UK law. However, this is a significant challenge (Ainsworth, 2017). Replacing the regulatory systems and functions that happen today in EU institutions and the Commission is complex and the regulatory model must be ready from day one of withdrawal in 2019 (Hancock, 2018). Concurrently with Brexit related changes, the FSA is subject to a major change programme “Regulating our Future” (Food Standards Agency, 2017) which could have a cumulative impact.

Drinking water quality standards in the UK are derived from the European Union Drinking Water Directive (European Council, 1998). The Rt Hon Michael Gove MP, Secretary of State for Environment, Food and Rural Affairs, has also identified that mitigation measures are necessary and being taken to ensure a continued supply of key water purification chemicals to the UK in the event of a “no deal” (House of Commons Environment, Food and Rural Affairs Committee, 2018).

Summary of Key Impacts: Food Safety

The direct mechanisms by which Brexit could impact on food safety are summarised as follows:



Current Policy Statements: Food Safety

The FSA has stated that *“Leaving the EU doesn’t change our top priority which is to ensure that UK food remains safe and what it says it is. The FSA is working hard to ensure that the high standard of food safety and consumer protection we enjoy in this country is maintained when the UK leaves the European Union. We are taking key steps in our preparations for leaving the EU. We are working to transfer EU regulations into UK law, we have developed a clear plan for how we will manage risk, and are developing the systems and technology that will support how we regulate food businesses in the future”* (Food Standards Agency, 2018b).

The UK Government (HM Government, 2018) has proposed continued UK participation in key EU agencies, although the EFSA is not mentioned. There are also a number of “no deal” technical advice notes on producing and processing organic food, food labelling and safety (Department for Exiting the European Union, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states a single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

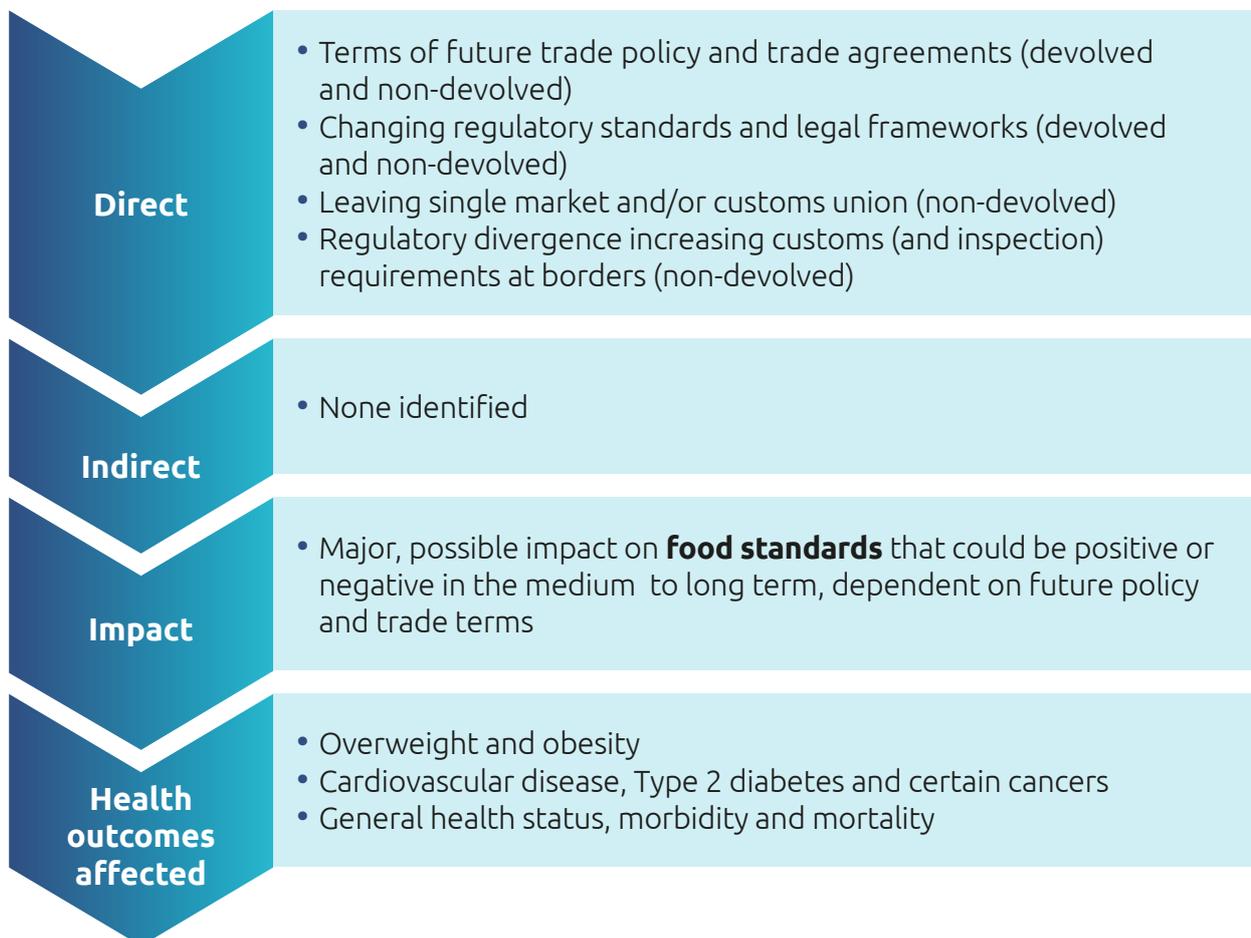
Food Standards

The legislation and regulation of the food sector is currently driven by EU law and regulation (INT6) (Ainsworth, 2017). Replacing the regulatory systems and functions that happen currently in EU institutions and the Commission is complex and the regulatory model must be ready from day one of withdrawal in 2019 (Hancock, 2018). Future food standards in the UK could be subject to change as a result of Brexit, new trade agreements and regulatory frameworks. The literature includes a number of sources which identify this change impacting on health (Lang, Lewis, Marsden, & Millstone, 2018) (The Health Foundation, 2018) (Which?, 2018). Peer reviewed literature on the public health implications of free trade agreements for food highlight risks for example, from increased processed food, and opportunities for example increased choice of food, that are important for key population health outcomes such as reducing obesity (Friel, Gleeson, Thow, & et al., 2013) (Clark, Hawkes, & et al., 2012).

It is argued that freedom from EU law will mean that the UK could improve food policy in the long term (House of Lords, 2017) and introduce tougher rules on the food and drink industry to protect health (Gallagher, 2018). This opportunity was also identified by stakeholders in the HIA workshop (HIA Workshop).

Summary of Key Impacts: Food Standards

The direct mechanisms by which Brexit could impact on food standards have been identified as follows:



Current Policy Statements: Food Standards

The FSA is working to prepare the necessary legislative instruments to incorporate EU Food Safety Law directly into UK law (Ainsworth, 2017). The FSA has stated that *“The FSA would apply a rigorous risk assessment to any potential change in the rules or any new food product to be placed on the market, with our absolute priority being the protection of public health”* (INT).

The UK Government (HM Government, 2018) is proposing the creation of a new free trade area for goods including agri-food goods. The proposals include a common rulebook for agri-food goods. Also included in its White Paper are proposals for UK participation in key EU agencies, although the EFSA is not mentioned. There are also a number of “no deal” technical advice notes on producing and processing organic food, food labelling and safety, farm payments, rural development funding, and developing genetically modified organisms (Department for Exiting the European Union, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that a single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

Food Supply and Affordability

The European Union Committee of the House of Lords identifies three key challenges to food supply following the UK leaving the EU: the labour market, the regulatory framework and the future of tariffs and trade (House of Lords, 2017). There are concerns about the loss of key agricultural and food sector workforces, many of whom come from the EU (Welsh Government, 2017a) (Lang, Lewis, Marsden, & Millstone, 2018). Security of food supply is a key concern raised by food policy experts, particularly in a “no deal” scenario (Lang, Lewis, Marsden, & Millstone, 2018) in which increased customs checks and port delays could lead to ‘just in time’ supply chain models being disrupted especially for fresh produce.

The Channel Ports form a significant transport route for food and animal feed products, with an estimated 5.48m tonnes of food from EU countries coming through each year. At present, very little of this traffic is subject to any kind of food or feed safety control and flows freely through the ports. Of note is that:

- 25% of all UK food imports come through the Channel Ports
- 27% of vehicles through Channel Ports are carrying food
- The UK exports about £8bn of fresh produce a year
- The UK imports £12-13bn of fresh produce a year

(Kent County Council, 2018a)

A Kent County Council update report released in December 2018 on Brexit Preparedness in the event of a “no deal” Brexit states that since August 2018, the planning scenario proposed by Government has increased from a predicted three to six months of disruption. As a result the Council has increased its transport contingency planning. The report refers to a forecast that, in a no-deal Brexit scenario, Kent will need to cope with holding up to 10,000 HGVs on a routine basis. It is anticipated that such congestion could exceed that of previous incidents experienced in Kent, including Operation Stack in 2015, which resulted in almost 7,000 HGVs contained on the M20 in Kent. Local Kent roads experienced significant gridlock and exceptionally high traffic volumes as a result (Kent County Council, 2018b).

Testing of food and checking of certain products of animal and plant origin currently takes place away from the Port of Dover. The report states that the way in which the service transports physical samples to the laboratory from the port to a separate site could ‘present a challenge’ in the event of potential traffic disruption. Existing testing equipment cannot be moved closer to the Port of Dover, due to the cost of the instrumentation. However, alternative options are currently under consideration. In addition, chemicals and consumables manufactured, or part-manufactured, in the EU are used in conducting food safety analysis. A no-deal scenario could disrupt their supply chain for border control work, and therefore the food supply chain (Kent County Council, 2018b).

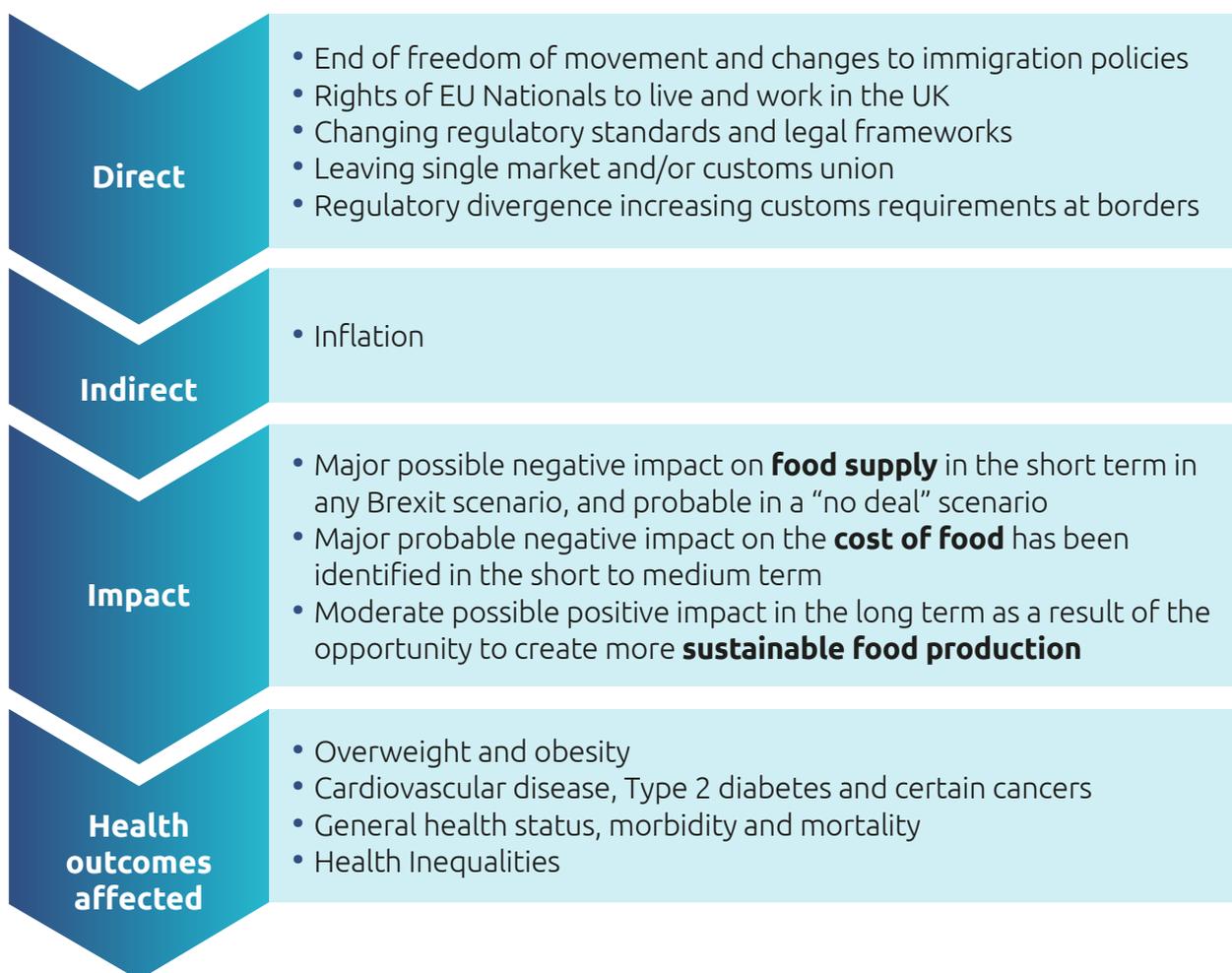
In addition, there are concerns from stakeholders (identified during the HIA workshop) and in the literature about inflation (Breinlich, Leromain, Novy, & Sampson, 2017) and the affordability of food in future (Lang, Lewis, Marsden, & Millstone, 2018) (Breinlich, Dhingra, Sampson, & Van Reenan, 2016). An analysis by the LSE suggests that food prices could rise by 3-5% (Breinlich, Dhingra, Sampson, & Van Reenan, 2016). This is concerning within the context of rising food bank use in Wales (see above) (Wales Institute of Social &

Economic Research, 2017), the existing significant impact on household income in Wales due to Welfare Reform (Beatty & Fothergill, 2017) (Beatty & Fothergill, 2016) and current levels of material poverty in Wales affecting around 16% of the population (Public Health Wales Observatory, 2018a).

Both the literature and stakeholders participating in the HIA workshop identified an opportunity to create more sustainable food production in Wales in the long term as a result of Brexit. This could also lead to the opportunity to change consumption patterns and trends and consume more of the food produced in Wales and the UK (Brexit Health Alliance, 2018a) (Lang, Lewis, Marsden, & Millstone, 2018) (House of Lords, 2017) (The Health Foundation, 2018) (National Assembly for Wales Climate Change, Environment and Rural Affairs Committee, 2017).

Summary of Key Impacts: Food Supply and Affordability

The direct and indirect mechanisms by which Brexit could impact on food supply and access have been identified as follows:



Current Policy Statements: Food Supply and Affordability

The Welsh Government has published its proposals for a new land management policy to replace the Common Agricultural Policy (CAP) in Wales and is working with the Food and Drink Wales Industry Board to develop a successor to the Food and Drink Industry Action Plan, specifically looking at post-Brexit arrangements (INT4) (Food and Drink Wales, 2018) (National Assembly for Wales Climate Change, Environment and Rural Affairs Committee, 2017).

The UK Government (HM Government, 2018) is proposing the creation of a new free trade area for goods including agri-food goods. The proposals include a common rulebook for agri-food goods (Department for Exiting the European Union, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that free movement will end and the UK government has stated that the future immigration system will be based on skills, not on where the person comes from. A single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.



4.2.2 Appraisal: Lifestyles - Alcohol Use and Regulation



Population Context

19% of the adult population age 16 and over in Wales drink alcohol above the recommended guidelines (Public Health Wales Observatory, 2018a).

Use and Regulation of Alcohol

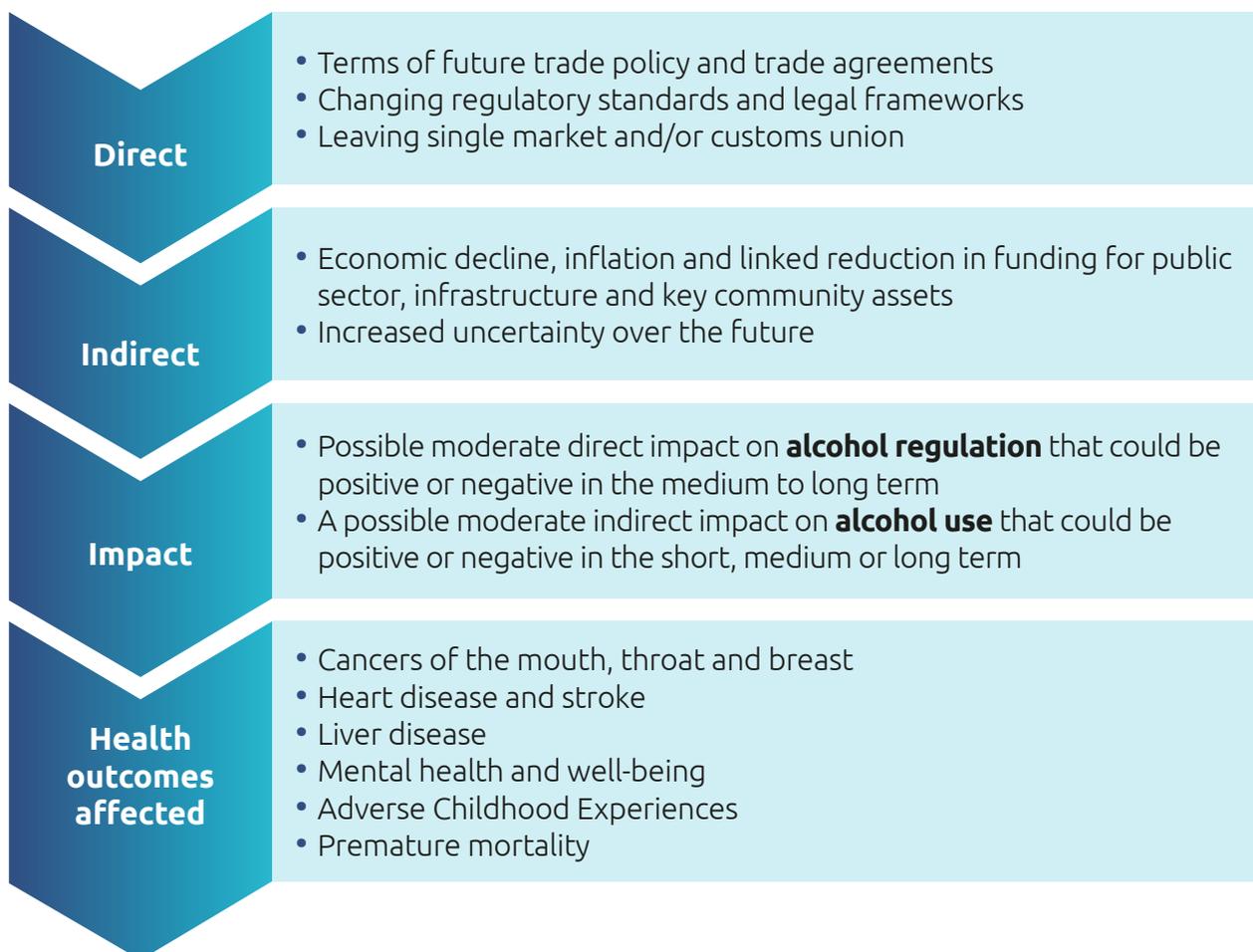
Stakeholders in the HIA workshop identified two key areas of impact on alcohol. Firstly, there could be potential reduction in regulation as part of any new trade agreements and a reduction in co-operation in respect to illegal drugs and alcohol import / export. However, there could also be a potential benefit and opportunity post withdrawal through implementing stronger regulations on alcohol than currently applied in the EU. There is also evidence in the literature that trade agreements can have a major impact on alcohol regulation and public health measures designed to reduce alcohol consumption (Grieshaber-Otto, Sinclair, & Schacter, 2000) (Zeigler, 2006) (Baumberg & Anderson, 2008). Therefore, it is probable that future trade agreements could impact on public health measures on alcohol.

Secondly, the HIA workshop participants highlighted a potential indirect negative impact in relation to increased alcohol use, due to stress caused by any economic

difficulties resulting from Brexit. There is mixed evidence in the literature on whether economic difficulties increase or decrease alcohol use. The WHO reports that people who experience unemployment, impoverishment and family disruptions as a result of economic crises have significantly greater alcohol use disorders than their unaffected counterparts (World Health Organization, 2011). Public Health Wales has identified that the effects of MUE on health and well-being include increased alcohol consumption (Davies, Homolova, Grey, & Bellis, 2017). However, there is evidence of a decline in alcohol consumption with the onset of the economic crisis in the Republic of Ireland (Nolan, Barry, Burke, & Thomas, 2014). In addition, the Centre for Economic Performance estimates that alcohol could rise in price between 4% to 7% as a result of Brexit, which may reduce levels of use (Breinlich, Dhingra, Sampson, & Van Reenan, 2016)

Summary of Key Impacts: Alcohol

The potential direct and indirect mechanisms by which Brexit could impact on alcohol control / regulation and use have been identified by the HIA as follows:



Current Policy Statements: Alcohol

Alcohol licensing is a devolved matter. In England and Wales a ban on selling alcohol below a 'permitted price' (i.e. the level of alcohol duty plus VAT) has been in place since 28 May 2014. In July 2018, the UK Government stated that a Minimum Unit Price (MUP) "remains under review" and that Public Health England will be commissioned to carry out a review into the impact of MUP in Scotland following the introduction of the Alcohol

(Minimum Pricing) Scotland Act 2012. In Wales, the Public Health (Minimum Price for Alcohol) (Wales) Act 2018 received Royal Assent on 9 August 2018 and will enable the introduction of MUP on public health grounds. It is expected to come into force in summer 2019 (Woodhouse, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that a single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.



4.2.3 Appraisal: Lifestyles: Tobacco Use and Regulation



Population Context

19% of the adult population age 16 and over in Wales smoke (Public Health Wales Observatory, 2018a).

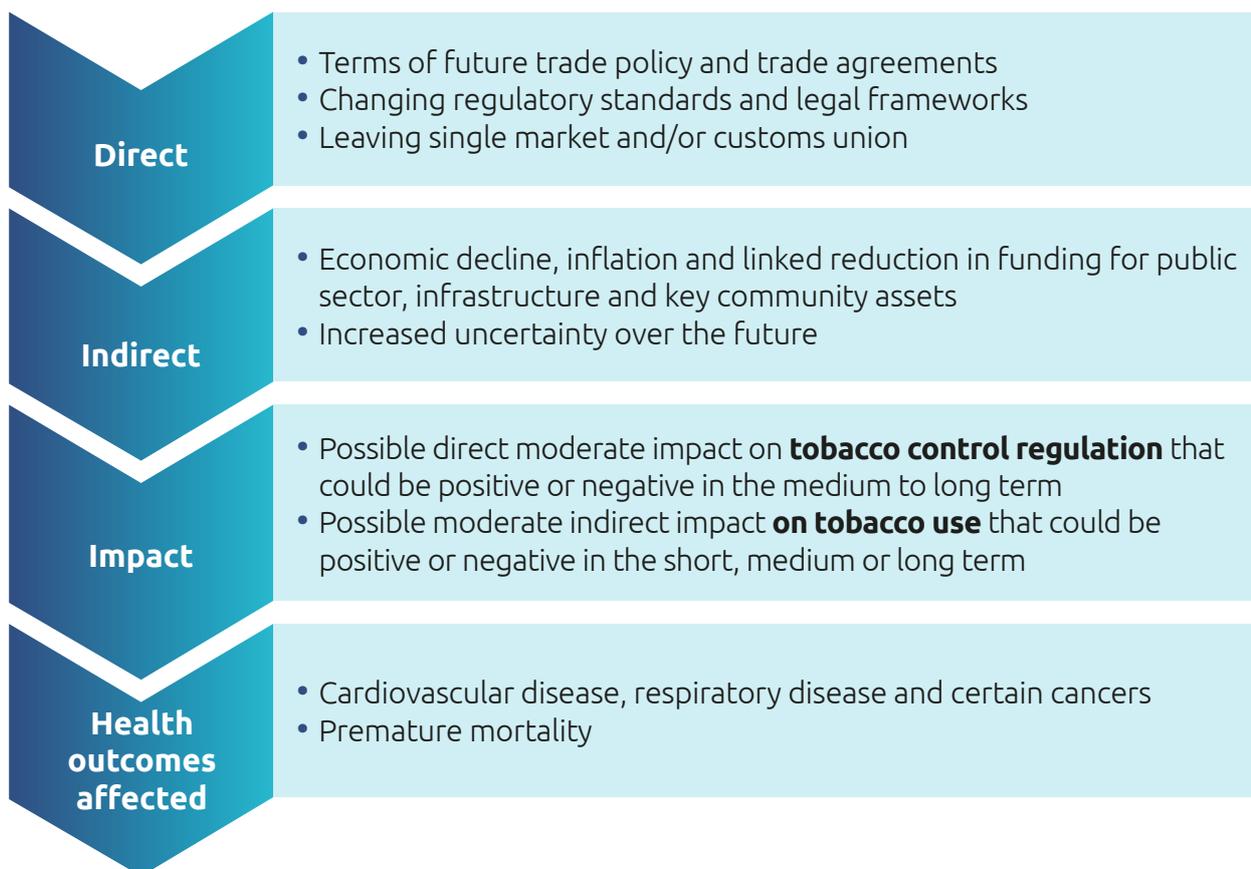
Use and regulation of tobacco

Stakeholders in the HIA workshop identified two key areas of impact on tobacco. Firstly, there could be potential reduction in regulation as part of any new trade agreements and a reduction in co-operation in respect to illegal imports / exports. However, there could also be a potential benefit and opportunity post withdrawal through implementing stronger regulations on tobacco than currently applied in the EU. There is also evidence in the literature that trade agreements can have a major impact on tobacco control and public health measures designed to reduce tobacco consumption (Zeigler, 2006) (Sy & Stumberg, 2014) (Crosbie, Eckford, & Bialous, 2018). It was noted by stakeholders in the HIA workshop that the EU has the copyright on the warning images on cigarette packaging. Stakeholders highlighted that this is an area where Brexit could provide an opportunity for stricter regulation on labelling.

Secondly, workshop participants highlighted a potential indirect negative impact in relation to tobacco use, which they thought could increase due to stress caused by any economic difficulties resulting from Brexit. PHW has identified that one of the effects of MUEs can be increased tobacco smoking (Davies, Homolova, Grey, & Bellis, 2017). However, a report by Elliott et al. (Elliott & et al., undated) on the impact of the 2008 economic downturn on health in Wales suggests a reduction in tobacco smoking.

Summary of Key Impacts: Tobacco

The potential direct and indirect mechanisms by which Brexit could impact on tobacco control / regulation and tobacco use have been identified by the HIA as follows:



Current Policy Statements: Tobacco

Current regulations for tobacco and related products are designed to promote and protect the public's health. Regulations are EU-derived and cover the control of the sale of products; advertising; product standards (such as ingredients of products and their emissions), and packaging. The current EU Tobacco Products Directive also sets reporting requirements for tobacco products and e-cigarettes. Manufacturers must submit specified information on ingredients and emissions for products before they are placed on the market.

In Wales, provisions relating to tobacco and nicotine products are contained in the Public Health (Wales) Act 2017 which re-states existing restrictions on smoking in enclosed and substantially enclosed public and work places, and extends them to cover school grounds, hospital grounds and public playgrounds. It also creates a national register of retailers of tobacco and nicotine products, which aims to help enforcement agencies to uphold restrictions on their sale and prevent access by children and young people.

The UK Government has stated it will maintain the same high standards after the UK leaves the EU, and it has published a “no deal” technical advice note on labelling tobacco products and e-cigarettes (Department for Exiting the European Union, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that a single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.



4.2.4 Appraisal: Human Rights



Population Context

The EU Charter of Fundamental Rights applies to the whole population of Wales. Both stakeholders and findings from a literature review have highlighted women, children and black and ethnic minorities as potentially more adversely affected by the loss of application of the Charter (Heald, Vida, & Bhugra, 2018) (Trade Union Congress, 2016) (Equality and Human Rights Commission, 2018) (Children in Wales, 2018).

The EU Charter of Fundamental Rights

There is the potential for a negative impact on human rights after the UK leaves the EU due to the loss of jurisdiction of the EU Charter of Fundamental Rights. The UK will not have to comply with the Charter when making laws and administrative decisions in areas previously within EU competence, such as consumer protection or workers’ rights (National Assembly for Wales Research Service, 2018d).

The Charter contains rights beyond those in the UK’s Human Rights Act (1998) and in particular, it covers many social and economic rights, which are not well recognised in UK law. They include:

- A range of social and workers' rights, including the right to fair working conditions, protection against unjustified dismissal, and access to health care, social and housing assistance;
- A guarantee of human dignity (including bioethics – with implications for clinical trials);
- A right to physical and mental integrity (including rights around personal data – with implications for clinical trials).

(National Assembly for Wales Research Service, 2018d)

Therefore, the UK's withdrawal from the EU may mean that future equality and human rights protections from the EU are not binding in UK law and that existing ones may be removed. Gender equality is recognised as a fundamental right in the Charter and since the UK joined the EU in 1973, women have gained significantly from this strong underpinning to their rights in the workplace (Trade Union Congress, 2016). Employment rights and funding for women's services have been identified as areas of particular concern (Equality and Human Rights Commission, 2018). Therefore, women could be more adversely affected by the loss of application of the Charter.

Possible loss of workplace rights were discussed by stakeholders in the HIA workshop. Other interviewees raised concern about working conditions (INT1,INT10,INT10a,INT13) and the loss of data protection rights which are required for cross-border clinical trials (INT16).

Children in Wales (2018) has also highlighted a concern about the erosion of guarantees for children's rights due to the loss of application of the EU Charter of Fundamental Rights (Children in Wales, 2018).

The National Assembly for Wales' External Affairs and Additional Legislation and Equality, Local Government and Communities Committees have carried out a joint report on Equality and Human Rights in Wales after Brexit (National Assembly for Wales External Affairs and Additional Legislation Committee, 2018a). One of its main concerns about the impact of Brexit on human rights is the loss of the EU Charter of Fundamental Rights which contains a range of civil, political, economic and social rights. Both committees agreed with the Equality and Human Rights Commission's (EHRC) legal advice and were not convinced by the UK Government's assertion in its right-by-right analysis of the Charter that all Charter rights are already protected by UK domestic law⁶.

⁶ (Johnson, 2018) gives an overview of the current situation:
<https://seneddresearch.blog/2018/11/01/equality-and-human-rights-in-wales-after-brexit-an-update/>

Summary of Key Impacts: Human Rights

The potential direct mechanisms by which Brexit could impact on human rights protections are summarised below:



Current Policy Statements: Human Rights

In their joint report on Equality and Human Rights in Wales after Brexit, the National Assembly for Wales' External Affairs and Additional Legislation and the Equality, Local Government and Communities Committees recommend that consideration should be given to the further incorporation of international human rights treaties in Wales (National Assembly for Wales External Affairs and Additional Legislation Committee, 2018a). The First Minister at the time responded by stating that the Well-being of Future Generations (Wales) Act 2015 will remain its principle legislative instrument in this regard (National Assembly for Wales Research Service, 2018d).

In its response to an earlier National Assembly for Wales External Affairs and Additional Legislation Committee Report, *"Wales' Future Relationship with Europe"*, the Welsh Government (Welsh Government, 2018a) accepted a recommendation for it to call on the UK Government to protect the human rights and equalities standards as well as social, environmental or employment protections that Welsh citizens have benefited from, as citizens of the EU.

After signing an Intergovernmental Agreement (IGA) the Welsh and UK Governments began discussions about entering into an agreement to endorse the existing framework of equal treatment legislation⁷ (UK Government Cabinet Office, 2018). The UK Government says it would maintain current employment and workplace rights (HM Government, 2018) (Department for Exiting the European Union, 2018)

⁷ The Equality Acts 2006 and 2010 and secondary legislation made under those Acts



4.2.5 Appraisal: Living Conditions - Environmental Regulation



Population Context

Exposure to outdoor air pollution increases the risk of poor health and mortality and can disproportionately affect vulnerable population groups. In Wales each year, the equivalent of around 1,600 deaths are attributed to Particulate Matter (PM) 2.5 exposure and 1,100 deaths to Nitrogen Dioxide (NO₂) exposure (Public Health Wales, 2018a). A series of EU directives designed to improve air quality have had a major impact on health and there has been a downward trend in air pollutants across Wales since 1990 (Welsh Government, 2016).

Over 60% of the population of Wales live and work in the coastal zone, with all major cities and many important towns located on the coast. The coastal and marine environment contributes £6.8 billion to the economy of Wales and supports more than 92,000 jobs (Natural Resources Wales, 2017). In 2017, 103 of the 104 designated Welsh bathing waters met the standards set by the EU Bathing Water Directive (Natural Resources Wales, 2017).

Environmental regulation including air and water quality

Public health (including environmental protection) is one of six areas of concern where, according to the House of Common's Health and Social Care Committee, leaving the EU is likely to have an impact on health in the UK (Dr Sarah Wollaston MP, 2016). The Welsh Local Government Association (WLGA) has identified that as much as 80% of EU environmental legislation affects local authorities in some way (Wales Local Government Association, 2018). A series of EU directives designed to improve air quality have had a major impact on health. Following restrictions on the sulphur content of fuel, there has been an 80% decline in sulphur dioxide emissions (Fahy, et al., 2017).

There is concern from health stakeholder groups that trade negotiators from potential trade partners may seek removal of what they regard as regulatory barriers, including environmental and associated standards (NHS Confederation European Office, 2018a)

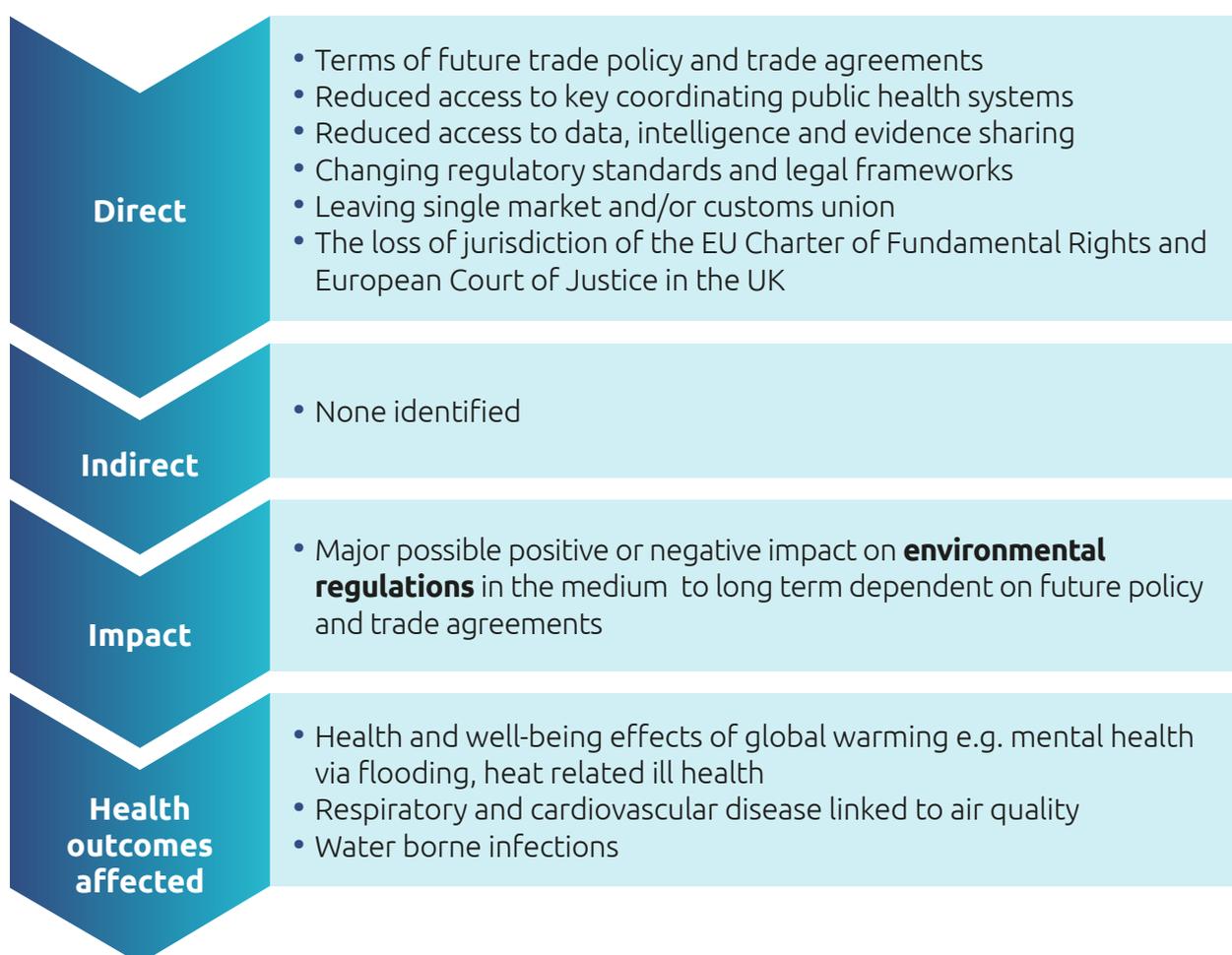
(Nesbit & Watkin, 2018). The Faculty of Public Health reports that its stakeholders are keen that environmental and other public health standards are not reduced in the quest to reduce barriers to trade (Faculty of Public Health, 2018a).

The stakeholders at the HIA workshop identified a number of both positive and negative impacts for environmental determinants and these were mainly in relation to regulation. Participants in the HIA workshop noted that Brexit could open up opportunities for improved standards – mainly in the medium to long term, particularly if this area of competence is devolved to Wales in the future.

Whilst there is potential to increase standards for environmental regulations as a result of Brexit, there is also a risk that in the absence of the EU framework they could also be weakened (Fahy, et al., 2017), which was also highlighted in interviews (INT17, INT12).

Summary of Key Impacts: Environment

The direct mechanisms by which Brexit could impact on environmental regulation have been identified in the HIA as follows:



Current Policy Statements: Environment

In April 2018, the UK and Welsh Governments entered into an Intergovernmental Agreement on the European Union (Withdrawal) Act and the Establishment of Common Frameworks (UK Government Cabinet Office, 2018) which identified a number of environmental areas where a common framework would be needed with legislative

underpinning. In a subsequent consultation document outlining its proposed 25 Year Environment Plan (Department for the Environment, Food and Rural Affairs, 2018) the UK Government has stated its intention to work closely with the devolved administrations on a framework that works for the whole of the UK.

In September 2018, the Welsh Government responded to recommendations from the National Assembly for Wales Climate Change, Environmental and Rural Affairs Committee's Inquiry Report on Environmental Governance Body and Environmental Principles (National Assembly for Wales Climate Change, Environment and Rural Affairs Committee, 2018). One of the recommendations was that it should clarify whether it supports the establishment of a UK-level governance body. The Welsh Government stated that *"until further information is provided on the detail of the UK Government's proposals and our own analysis is finalised, including discussions with our Welsh stakeholders, it is too early to give a definitive response on whether a UK-level body is the most appropriate solution"* (Welsh Government, 2018b)(p.2).

The European Union (Withdrawal) Act 2018 requires the Secretary of State to publish a draft Bill containing environmental principles and a statement of policy, within six months of the EU Withdrawal Act being passed.

The UK Government's White Paper (HM Government, 2018) refers to a number of environmental issues including a proposal that the UK Government would commit to 'high regulatory environmental standards' through a 'non-regression' requirement in a future relationship treaty with the EU and commitments to uphold international environmental cooperation. It has also issued a number of Technical Advice Notices (Department for Exiting the European Union, 2018) linked to energy and climate change in the event of a "no deal" Brexit.



4.2.6 Appraisal: Economic Conditions: Employment and Skills



This section considers the impact of Brexit on employment and skills in Wales across the following areas:

- Future Job Security in Sectors Linked to Exports / Exposure to Changes in Tariff and Non-tariff Barriers
- Skills and Employability
- Loss of Key Skilled Workers in Sectors Linked to Health and Well-being

Population Context

In west Wales and the Valleys region, where EU investment is concentrated, employment levels have grown faster than Wales as a whole. Since devolution, the proportion of people in employment across Wales and particularly west Wales and the Valleys, has increased at a faster rate than across the UK as a whole. Economic inactivity across both Wales and west Wales and the Valleys has fallen at a faster rate than across the UK as a whole over the same period (Welsh Government, 2018c).

Research by the Centre for Economics and Business Research (CEBR) (2014) found that over 4 million direct and indirect jobs in the UK depend on exports to the EU. Approximately 200,000 of these jobs are in Wales, around 14% of the workforce (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017a).

In 2014, more than 600 firms across Wales exported goods to the EU worth over £5 billion, equivalent to 43% of the total exports of goods. In addition, 500 firms from other EU countries have operations in Wales, providing more than 57,000 jobs (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017a).

The Welsh Economy Research Unit (2017) suggest that different industries could potentially be affected to different degrees by the UK leaving the EU. The main factors identified are (Welsh Economy Research Unit, 2018):

- Effects of tariffs on exports and imports
- Effects on the labour market
- Effects on the economy
- Loss of access to knowledge and innovation networks

In Wales, 3.8% of the adult population are unemployed and 22.2% are economically inactive. 8.7% of the Welsh population have no qualifications and 35.1% of the adult population have achieved a qualification of NVQ4 and above (Office for National Statistics, 2018).

The number of young people not in education, employment or training (NEET) varies by area, age and disability. Mid Wales has the lowest percentage (10.4%) and south west Wales (14.8%) the highest. Young people aged between 19 and 24 years of age, are more likely to not be in education, employment and training when compared to younger age groups (16 to 18 years) (Welsh Government, 2018d).

14% of workers in the UK are employed in industries that are classified as very highly exposed to changes in trade agreements. Of these workers 19% are men classed as low-educated (Levell & Keiller, 2018). For Wales, it is estimated that 21% of men working in industries that are very highly exposed to changes in trade are classed as low educated. However, there may be employment opportunities in industries such as agriculture, which may benefit from trade barriers, as consumers substitute away from imports towards products made by UK industries (Levell & Keiller, 2018).

Future Job Security in Sectors Linked to Exports / Exposure to Changes in Tariff and Non-tariff Barriers

Evidence in the literature points to a range of factors stemming from Brexit that could impact on employment in Wales. Chapter 3 of the HIA reviews key evidence on the potential economic impact of Brexit across a range of scenarios. Rising inflation, lower growth and business investment, and the risk of higher unemployment are all key concerns.

The conclusion of the National Assembly for Wales' External Affairs and Additional Legislation Committee in 2017 was that: *"Manufacturing plays a greater part in the Welsh economy than elsewhere in the UK and the principal market for Welsh manufacturers is the EU. The imposition of tariffs poses major risks for this sector, especially for manufacturers that exist within global value chains"* (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017a).

Analysis of large and Regionally Important Companies by Cardiff University in 2017 found that *"For a number of firms the prospect of Brexit is resulting in significant disinvestment from Wales (and the UK) – and in some cases potentially complete exit – was a real one. The companies in this bracket tended to be multinationals with a large presence in Wales; a number of these in the Aerospace systems and services, Automotive, transportation etc., and Electrical engineering etc. sectors"* (Welsh Economy Research Unit, 2018).

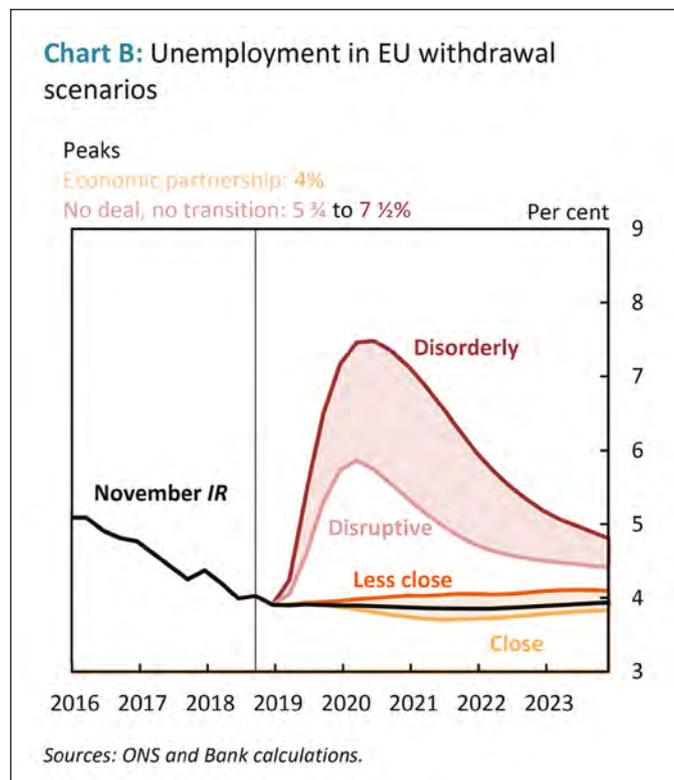
The Cardiff University report also found that *"respondents in sectors that are non-EU oriented, may see Brexit as a relatively minor problem. Sectors here include construction and civil engineering, paper and wood, business services and TV production. However, here there is the prospect of impact should the UK economy overall experience slower growth as a result of Brexit"* (Welsh Economy Research Unit, 2018).

The Confederation of British Industry (CBI) analysis of a “no deal” scenario highlights agriculture and forestry facing significantly higher tariff barriers on exports. Food and drink exports are estimated to experience a 30% average increase in non-tariff barriers, aerospace is estimated to have an 11% rise in non-tariff barriers and metals a 7.4% increase (Confederation of British Industry, 2017). Airbus is a major employer in north Wales and has highlighted the risks for future competitiveness and security of its operations in the UK due to Brexit (Airbus, 2018).

In respect to business and trade, stakeholders in the HIA workshop highlighted that many trade policies are UK based and not devolved. If these are unsuccessful in the face of Brexit then there could be a negative impact, which could lead to an economic downturn. Stakeholders also identified that if global or national companies relocate from Wales then there is a real risk to local populations’ employment, mental health and well-being and local / regional economic status. Another stakeholder (INT17) identified that north Wales is dependent on small businesses and the public sector for jobs, which could be at risk in an economic downturn. In addition, a number of jobs in the region have been reliant on EU funding for set up or capital costs.

The Bank of England has modelled projections for unemployment against three Brexit scenarios, illustrated in Chart B (right). This shows that both a disorderly and disruptive Brexit⁸ could have an impact on UK unemployment rates (Bank Of England, 2018).

Stakeholders in the HIA workshop identified that Brexit may open up increased access to training and employment opportunities (for young adults in particular) and lead to less competition for university and other educational places. However, there is also concern about the potential future loss of opportunities to study in EU nations, and retaining access for young people to the ERASMUS + programme has been highlighted as important for Wales (Welsh Government and Plaid Cymru, 2017).



Source: Bank of England / EU withdrawal scenarios and monetary and financial stability

European Structural and Investment Funds have invested significantly in skills and employability programmes in Wales and the funds support 5,000 people a year into work

8 In the Bank of England disruptive scenario, tariffs and other barriers to trade between the UK and EU are introduced suddenly. No new trade deals are implemented within the five year period, but the UK replicates deals acquired by virtue of EU membership. While the UK recognises EU product standards, the EU does not reciprocate. The EU does not take action to address remaining risks of disruption to financial markets.

In the Bank of England disorderly scenario, on which the Financial Policy Committee of the Bank of England has focussed given its remit for financial stability, the UK loses existing trade arrangements that it currently has with non-EU countries through membership of the EU. The UK’s border infrastructure is assumed to be unable to cope smoothly with customs requirements. There is a pronounced increase in the return investors demand for holding sterling assets. There are spillovers across asset classes.

and help around 21,500 people annually to gain qualifications (Welsh Government and Plaid Cymru, 2017).

Recent labour market figures released in November 2018 show a 132,000 drop in the number of citizens from other European Union countries working in Britain over the last year, a record number of vacancies⁹ and people in work in Britain as a whole (ONS data, 2018). The Chartered Institute of Personnel and Development report from a survey of employers (Spring 2018) states that the strong demand for labour is not being matched by labour supply, and overall labour supply is expected to fall in the coming years, partly due to an increasing proportion of older workers, who tend to work fewer hours, and partly due also to less non-UK EU nationals who tend to work longer hours (CIPD, 2018). From the same survey, of employers who currently have vacancies in their organisation, three in five (61%) report that at least some of these vacancies are proving hard to fill. On average two-thirds (66%) of hard to fill vacancies are reported as skill-shortage vacancies, or vacancies that are proving difficult to fill because employers cannot find applicants with the appropriate skills, qualifications or experience. Meanwhile, just over a third (34%) of hard to fill vacancies are the result of labour shortages, which are unskilled or low-skilled vacancies that do not require a high level of skills, qualifications or experience (CIPD, 2018).

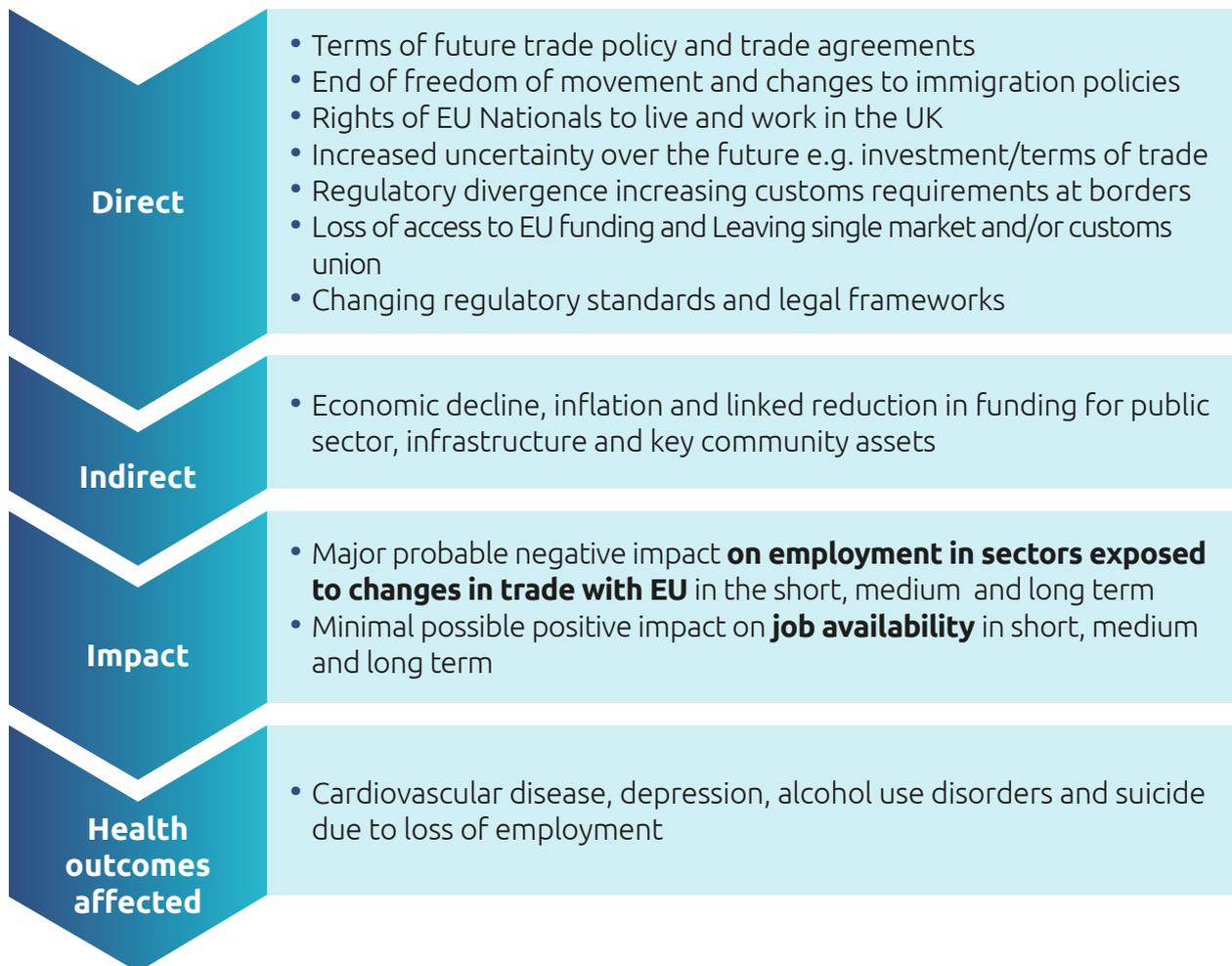
The evidence highlighted previously suggests that EU funding has contributed to increasing skills and employment in Wales, and there are key sectors and jobs highly exposed to changes in trade terms with the EU. Certain areas of Wales, which are dependent on a large employer or sectors that are exposed to changes in trade terms with the EU, could face a higher risk of unemployment. There may also be opportunities for employment via vacancies left by EU nationals. However, this opportunity may be limited due to demographic and skills availability factors.



9 This does not include a measure of the quality of work.

Summary of Key Impacts: Job Security

Impacts from Brexit on job security may occur via the following direct and indirect policy mechanisms:

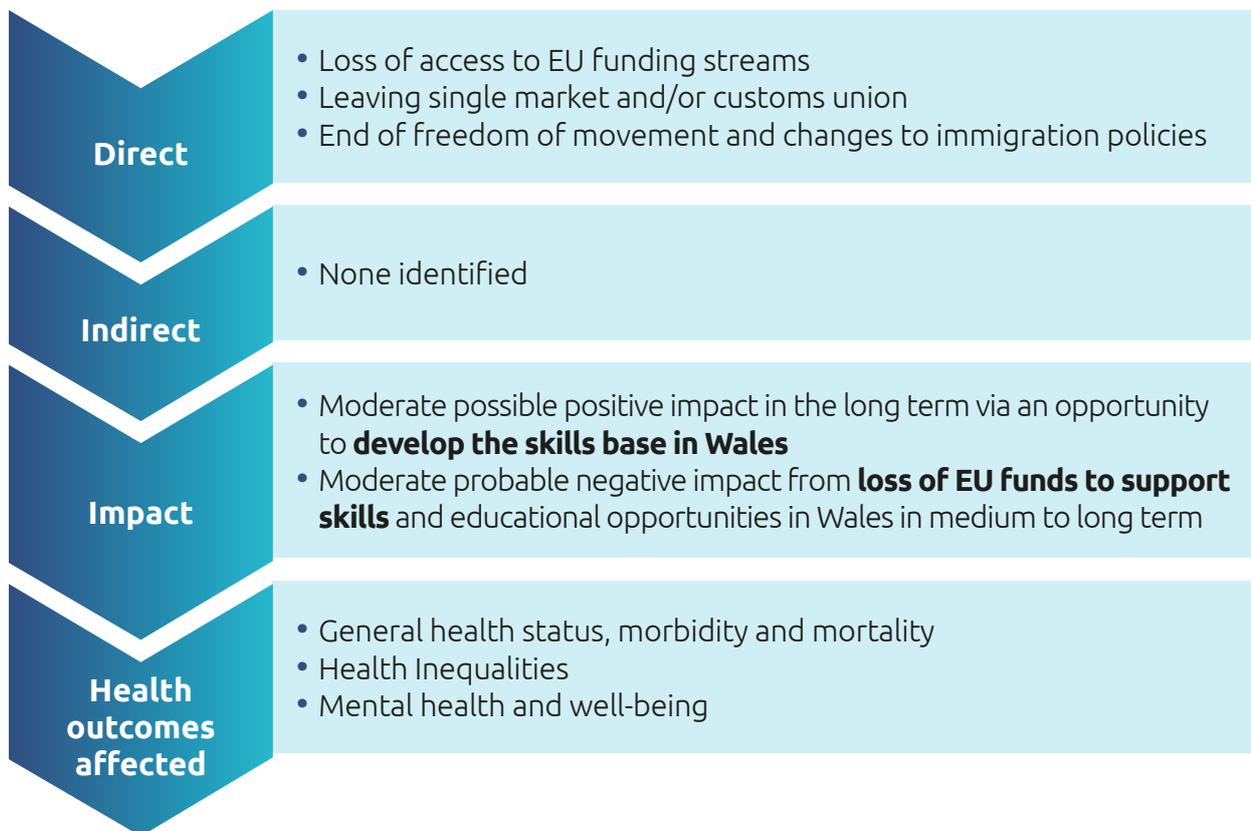


Current Policy Statements

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that free movement will end and the UK government has stated that the future immigration system will be based on skills, not on where the person comes from. A single customs territory between the EU and UK will apply during the transition period with no tariffs on goods, and deep regulatory co-operation (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

Summary of Key Impacts: Skills and Employability

Impacts from Brexit on skills may occur via the following direct policy mechanisms:



Workforce challenges in sectors linked to health and well-being

Sectors particularly dependent on skills from the EEA include the veterinary sector the food and drink manufacturing industry and NHS workforce¹⁰ (Welsh Government, 2017a).

Within meat hygiene services, it is estimated that more than 80% of the veterinary workforce is made up of non-British EU citizens (Welsh Government and Plaid Cymru, 2017). The potential major impact of food related workforce shortages and gaps were highlighted in the HIA workshop. As noted in the section on food safety above (Section 4.2.1), Brexit could lead to workforce gaps and thereby delays in certification and delivery that could subsequently lead to increased perishability and food wastage.

In addition, some 1,360 academic staff in Welsh universities came from EU countries as at December 2014; any restrictions to the free movement of workers or access to Europe-wide research programmes would severely impact Wales' ability to access academic talent and to engage in cross-border collaboration. The life sciences sector and the pharmaceutical industry are also significantly dependent on EU citizens (Welsh Government and Plaid Cymru, 2017).

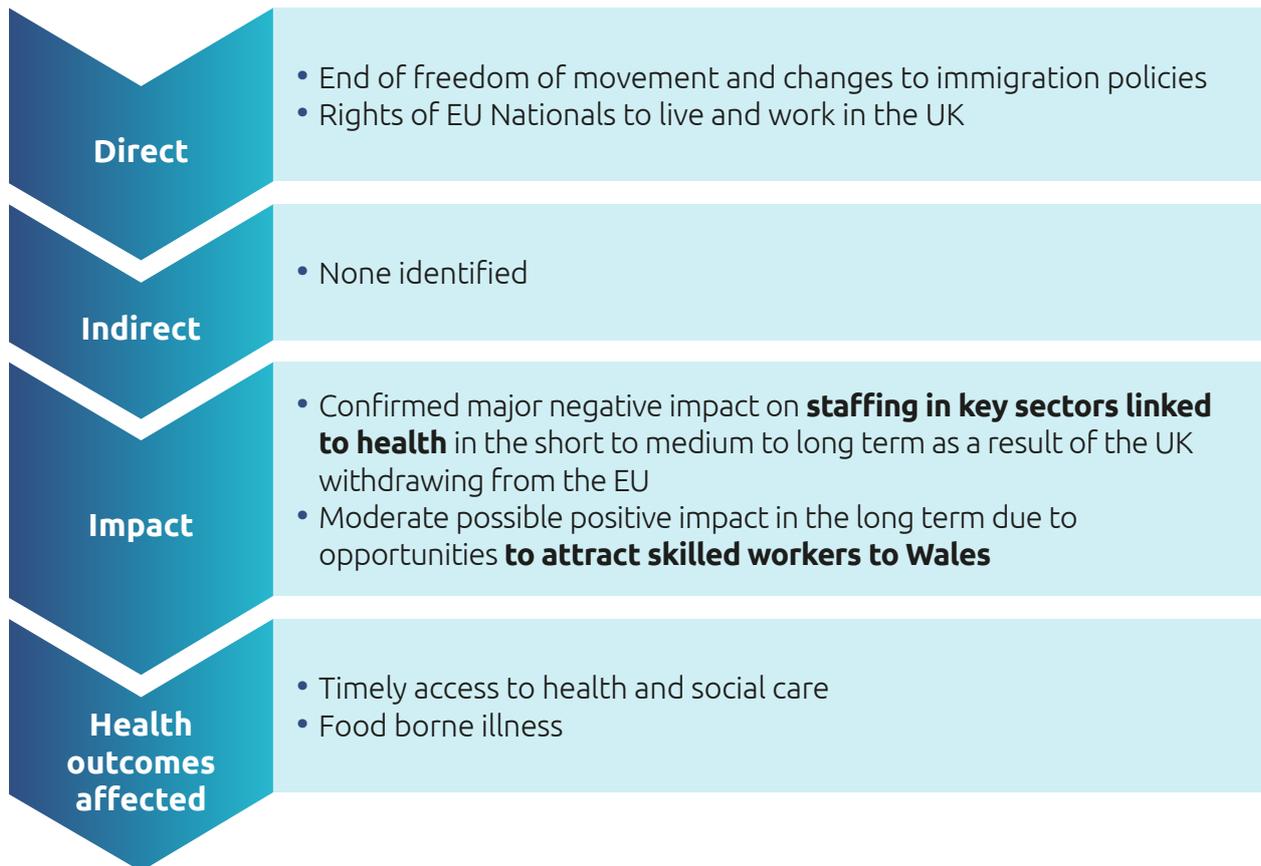
Participants in the HIA workshop identified that political divergence could increase internal competition between the four UK nations, for example, if one nation provides more or less favourable employment, working or economic conditions than the others. A greater emphasis on social protections, well-being and good working conditions could

¹⁰ The NHS and social care workforce are covered in detail in Section 4.2.9

make a country a more attractive place to work. Some have argued that there will be a need for a “common rulebook” across the UK in some policy areas to avoid internal competition across the UK.

Summary of Key Impacts: Workforce challenges in sectors linked to health and well-being

Impacts on the availability of skilled workers as a result of Brexit may occur via the following direct policy mechanisms:



Current Policy statements

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that free movement will end; this agreement has not yet been ratified by the UK Parliament. In December 2019, the UK Government published a white paper proposing a new single immigration system based on skills which will be open to all nationalities.

www.gov.uk/government/publications/the-uks-future-skills-based-immigration-system



4.2.7 Appraisal: Economic Conditions: EU Funding



This section considers the impact of Brexit on EU Funding in Wales across the following areas:

- Community, regional and economic development
- Common Agricultural Policy
- Research and Development

Population Context

In budgetary terms, Wales is a net beneficiary of EU membership, currently receiving about £680 million in EU funding each year (Welsh Government and Plaid Cymru, 2017).

- £295 million in EU Structural Funds from the European Social Fund (ESF) and European Regional Development Fund (ERDF)
- £274 million in direct payments to farmers from the CAP
- £80 million in funding from the Rural Development Programme
- £31 million in other funding

The EU Structural Funds in Wales help support: people into work and training; youth employment; research and innovation; business (SMEs) competitiveness; renewable energy and energy efficiency; connectivity and urban development; reducing inequalities in health and tackling poverty and contributing to the promotion of well-being of the Welsh people (Welsh Government, 2018e).

The funding received is split between west Wales and the Valleys, which receives the majority of the funding due to lower levels of economic output, and east Wales (Welsh Government and Plaid Cymru, 2017). The funding is allocated by the Welsh Government through the Wales European Funding Office (WEFO).

Community, Regional and Economic Development Funding

Resources (including EU agencies, funding programmes, networks and health in overseas aid) is one of six areas of concern where, according to the House of Commons Health and Social Care Committee (Dr Sarah Wollaston MP, 2016), leaving the EU is likely to have an impact on health in the UK. The UK Government has largely guaranteed funding for projects agreed prior to 2020 (European Union and United Kingdom Government, 2017). However, there is uncertainty on how the replacement funds will be structured and administered (National Assembly for Wales Finance Committee, 2018).

Participants in the HIA workshop clearly identified the value that EU investment had played in economic and social development in Wales giving specific examples of new development, for example, the Aberystwyth Innovation and Enterprise Centre. In addition, attendees highlighted that some large infrastructure developers and investors are based in the EU and future investment opportunities may be more favourable in the EU or other regional areas of the UK rather than Wales if not carefully managed. This could compound existing inequalities in some local areas of Wales that may face challenges in obtaining funding for infrastructure development in future. An increase in inequalities was also highlighted by a number of interviewed stakeholders who felt that disadvantaged communities would be more likely to experience negative impacts (INT2, INT7, INT17). The Welsh Government has highlighted that not only is EU funding important to Wales in terms of driving economic growth and jobs, it also enables the Welsh Government to leverage additional resources from both public and private sources (Welsh Government and Plaid Cymru, 2017).

In the literature, key health expert groups also report that EU Structural Funds have supported initiatives to directly benefit the determinants of health, reduce inequalities in health, tackle poverty and contribute to the promotion of well-being and there is concern that losing access to EU funding and structural support for disadvantaged areas would risk widening health inequalities (Welsh NHS Confederation, 2018) (British Medical Association, 2018a).

The WLGA (Welsh Local Government Association, 2018) considers that any replacement to EU Structural Funds should adhere to the key principles that underpin EU Cohesion Policy, in order to address regional inequalities. Those who advocate for leaving the EU argue that the UK Government would have more money to give to areas like Wales (BBC, 2016). However, there are significant concerns from the National Assembly for Wales Finance Committee (National Assembly for Wales Finance Committee, 2018) and other stakeholders (INT7) about the lack of clarity and engagement around the plans for the new regional funding model (“Shared Prosperity Fund”) and that the role of the devolved administrations is still unclear (National Assembly for Wales Finance Committee, 2018) (Welsh Government, 2018f), INT7). The Health Foundation (2018) has also highlighted that:

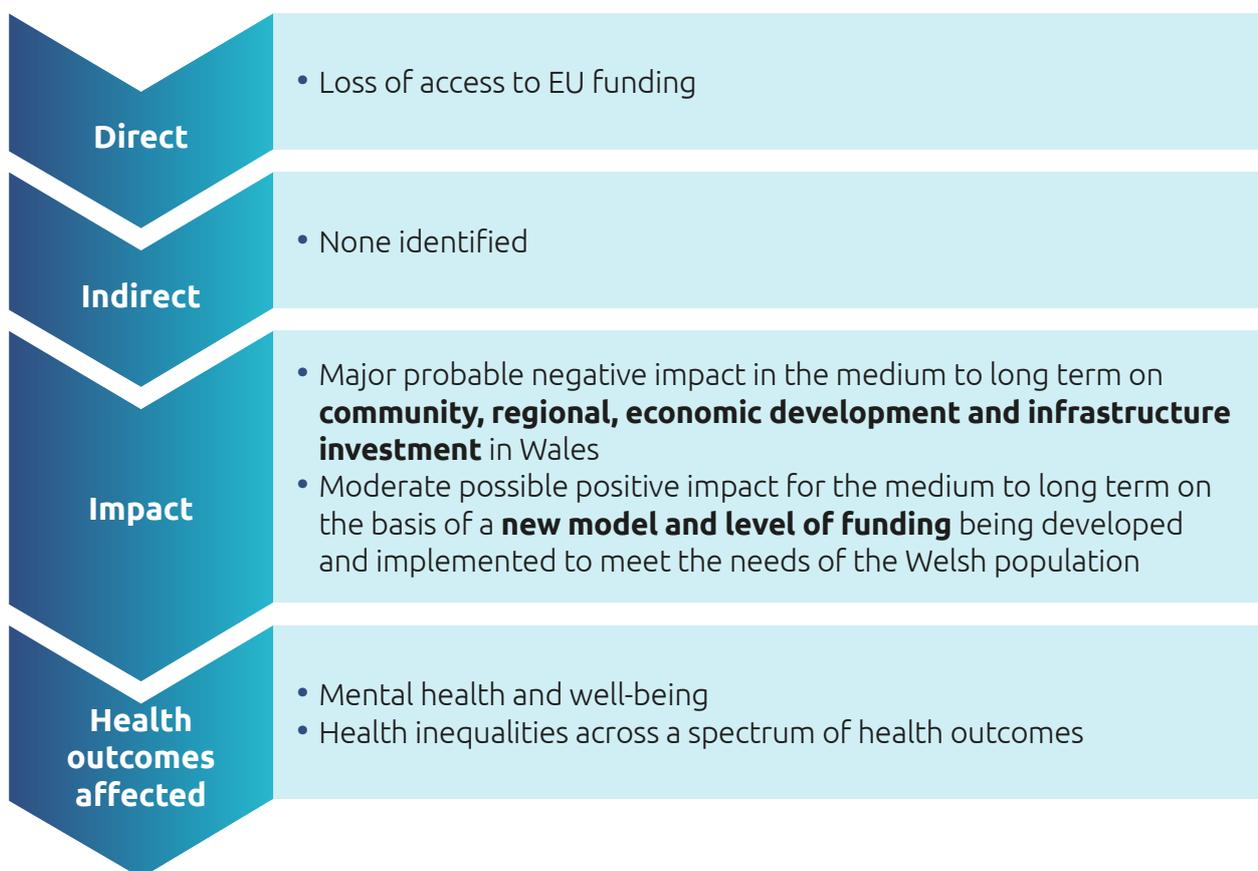
“The replacement of EU funding with domestic funding could lead to less objective decisions about where the money is spent to support areas of investment, need for regeneration, infrastructure and jobs, unless decisions are protected from political influence (at both national and local level)”

(The Health Foundation, 2018) (p43).

The WLGA (Welsh Local Government Association, 2018) and the National Assembly for Wales’ Finance Committee (National Assembly for Wales Finance Committee, 2018) see Brexit as an opportunity to ‘do things better’, including the development of a Single Fund, combining capital and revenue, and more streamlined and simplified processes. Stakeholders in the HIA workshop also identified opportunities to restructure funding to make it work better for Wales and to establish a new type of “Business Development Agency” for Wales.

Summary of Key Impacts: Community, Regional and Economic Development Funding

The direct impact of Brexit on community, regional and economic development and infrastructure investment after 2020 has been identified by the HIA as follows:



Current Policy Statements: Community, Regional and Economic Development Funding

The Financial Settlement that forms part of the draft Withdrawal Agreement agreed between the UK and the EU (European Union and United Kingdom Government, 2017) states that the UK will take part in all EU funded programmes until December 2020, subject to a final negotiated agreement.

The UK Government has announced a UK wide Shared Prosperity Fund to replace EU structural funding. Although details of how the fund will operate are currently unclear, it is expected there will be consultation on the proposal (pending at the time of writing) (National Assembly for Wales Research Service, 2018a).

The UK Government's White Paper (HM Government, 2018) makes no reference to structural funding although it has published a number of technical advice notes (Department for Exiting the European Union, 2018) guaranteeing EU funding awarded to organisations until the end of 2020 in the event of a "no deal" Brexit.

In its White Paper "Securing Wales' Future" (Welsh Government and Plaid Cymru, 2017), the Welsh Government states that not only is EU funding hugely important to Wales in terms of driving economic growth and jobs, it also enables the Welsh Government to leverage additional resources from both public and private sources. In its policy paper on Regional Investment in Wales after Brexit (Welsh Government, 2017b), it sets out its objection to the Shared Prosperity Fund as a UK-wide programme.

The Welsh Government has also accepted (in whole or in principle) all the recommendations of two National Assembly for Wales' Committees. The External Affairs and Additional Legislation Committee Inquiry into the future of regional policy - What next for Wales? (Welsh Government, 2018g) called for Welsh Government to: continue to press the UK Government on proposals for a formal inter-governmental structure for agreeing funding allocations; ensure greater simplification and flexibility in the rules governing regional policy after the UK leaves the EU and to retain strategic oversight and set the direction for future regional policy in Wales. The Welsh Government also later accepted the recommendations of the Finance Committee report on the replacement of EU funding streams after Brexit, which made a cross party case for continued future funding for Wales (Welsh Government, 2018f).



Common Agricultural Policy



Population Context

Agriculture contributes £370m to the Welsh economy (0.7% of GVA), with significant regional variation. Estimated GVA for forestry and related sectors is £530m (0.9% of GVA) (Welsh Government, 2018h).

While 23,500 people in Wales cite agriculture, forestry and fisheries as their main

sector of employment, an additional 55,000 are involved in these sectors, including contractors, suppliers, and family members. Around 4.1% of employment in Wales is from agriculture (Welsh Government, 2018h). Up to 28% of people in Welsh rural communities work in the agricultural industry (Farmers' Union of Wales and NFU Cymru, 2018).

Many farmers rely on the Common Agricultural Policy (CAP) Pillar I and II funding to keep their businesses viable, and any substantial reductions in the level of support would have a major impact on both the agriculture sector and the wider rural economy. It has been estimated that EU subsidies make up 80% of farm income in Wales (although this is variable between dairy and sheep farmers) (House of Lords, 2017, p.58¹¹).

Common Agricultural Policy (CAP)

Stakeholders in the HIA workshop recognised the uncertainty and transition to future agricultural payments stemming from Brexit potentially having health and well-being impacts on farmers and rural communities. Participants said that Brexit could lead to a decreased ability to obtain labour or export goods in this sector. Farmers could be subject to a cumulative impact – they could be rurally isolated, dependent on EU funding, and therefore more likely to experience stress and depression. However, people also identified that there may be benefits from EU withdrawal, including freedom from the CAP and its restrictions. Longer term there could be new opportunities for Welsh land management policy and environmental protections.

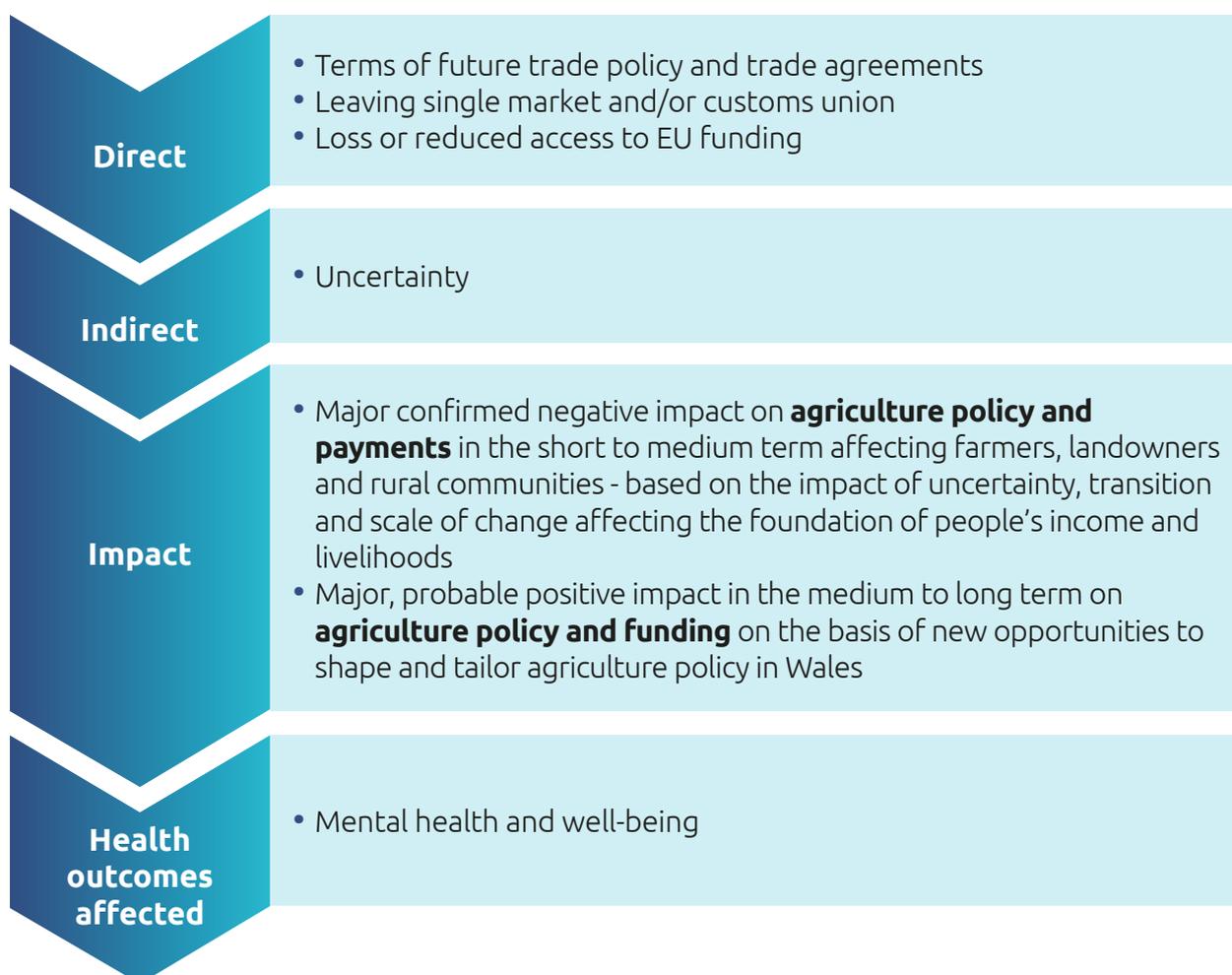
The UK will take part in all EU funded programmes until December 2020, subject to a final negotiated agreement (European Union and United Kingdom Government, 2017). The Centre for Economic Performance has stated that unless new agricultural subsidies are introduced, farmers would be among the 'big losers' following Brexit (Centre for Economic Performance, 2018). Farmers' unions and the CBI all call for agricultural support post-Brexit to be maintained at current levels and a transition period of 10 years to allow for adjustment to new agricultural policies (Farmers' Union of Wales, 2016) (NFU Cymru and CBI Wales, 2018).

A report by the House of Lords (2017) states that "*the CAP has often been criticised by the industry for being bureaucratic and burdensome, and some believe CAP financial support has been misdirected and ineffective. Brexit thus presents a real opportunity for the UK to review and adopt a policy for food and farming which regulates and supports the agricultural sector effectively, and which is tailored to the UK's unique farming landscape*". However, the same enquiry also found that "*farmers risk high tariffs and non-tariff barriers on exports, which would render their business uncompetitive, while simultaneously having to adjust to a new UK policy for funding. This could have detrimental effects on an industry—and rural communities*" (p5). They conclude that farmers across the UK will also need time and clarity from the UK Government to make the transition to a new regulatory framework and a new funding system after Brexit (House of Lords, 2017) (p4).

11 Evidence to the House of Lords from Dr Alan Greer, Associate Professor in Politics and Public Policy at UWE Bristol, on UK farmers' reliance upon CAP payments: "*It has been estimated that EU subsidies make up between 50 and 60 per cent of farm income in the UK as a whole. However it is estimated that 87 per cent of total farming income in Northern Ireland, 80 per cent in Wales, and three quarters of total income from farming in Scotland is contributed by CAP payments*".

Summary of Key Impacts: Agricultural Funding

Direct and indirect policy mechanisms that will impact on agriculture funding were identified as follows:



Current Policy Statements: Agriculture Funding

In March 2018, the Welsh Government accepted the recommendations of a number of Committee reports (Welsh Government, 2018g) (Welsh Government, 2018a). It accepted a recommendation from the National Assembly for Wales External Affairs and Additional Legislation Committee report on "Wales' Future relationship with Europe Part one: a view from Wales" that it should call on the UK Government to ensure that the interests of the farming, fishing and food industries are safeguarded during the withdrawal process. It also accepted the recommendations of a separate report by the same Committee that it should continue to press the UK Government to bring forward proposals for a formal inter-governmental structure for agreeing funding allocations and clarifying whether its views on the legal status of the powers for regional policy are in accord with those of the Welsh Government. Additionally, the Welsh Government also accepted it should ensure that rural areas in mid and west Wales are properly accounted for in the future design and delivery of regional policy. In November 2018, the Welsh Government accepted the recommendations of the Finance Committee report on the replacement of EU funding streams after Brexit, which made a cross party case for continued future funding for Wales (Welsh Government, 2018f).

The UK Government's Agriculture Bill (UK Government, 2017) will authorise new expenditure to provide support for the land management sector once the CAP comes to an end, and time-limited powers for the Welsh Government to carry on making payments and introduce new schemes until it introduces its own legislation. As the first step towards this, the Welsh Government issued a consultation on future land management, which closed at the end of October 2018 (Welsh Government, 2018h).

The UK Government's White Paper (HM Government, 2018) proposes the introduction of a new Facilitated Customs Arrangement to remove the need for customs checks and controls between the UK and the EU and includes a common rulebook for agriculture, food and fisheries products. It has published a number of Technical Advice Notes (Department for Exiting the European Union, 2018) relating to EU funding and farming.



Population Context

4% of students in Welsh universities (2014 / 15) are from the EU (Welsh NHS Confederation, 2018).

1,360 academic staff in Welsh universities came from EU countries as of December 2014; any restrictions to the free movement of workers or access to Europe-wide research programmes would severely impact Wales' ability to access academic talent and to engage in cross-border collaboration. The life sciences sector and the pharmaceutical industry, which have a major focus on research, are also significantly dependent on EU citizens (Welsh Government and Plaid Cymru, 2017).

Between 2008 and 2013, the UK received €8.8 billion of EU science funding (Welsh NHS Confederation, 2018). The UK is a net beneficiary for EU research funding, contributing 11% to the research budget but receiving 16% for the projects it leads (Middleton & Weiss, 2016). Awards from the EU's Framework Programmes (currently Horizon 2020) are an important source of research funding in Wales. Welsh organisations have secured just over €100m of Horizon 2020 funding since the start of the programme. This has involved 255 participations and over 2,800 international collaborations (Welsh Government, 2018i).

Research and Development

This section deals with research and development which is supported directly by EU funding (including Horizon 2020 and Creative Europe) as well as medical and commercial research and development in general. The UK will take part in all EU funded programmes until December 2020, subject to a final negotiated agreement (European Union and United Kingdom Government, 2017).

Research is one of six areas that the UK Parliament's Health and Social Care Committee consider to be 'vital' for health and social care (Dr Sarah Wollaston MP, 2016); the Committee is concerned that research and development will be adversely affected by regulatory divergence, seriously so in the event of a "no deal" Brexit.

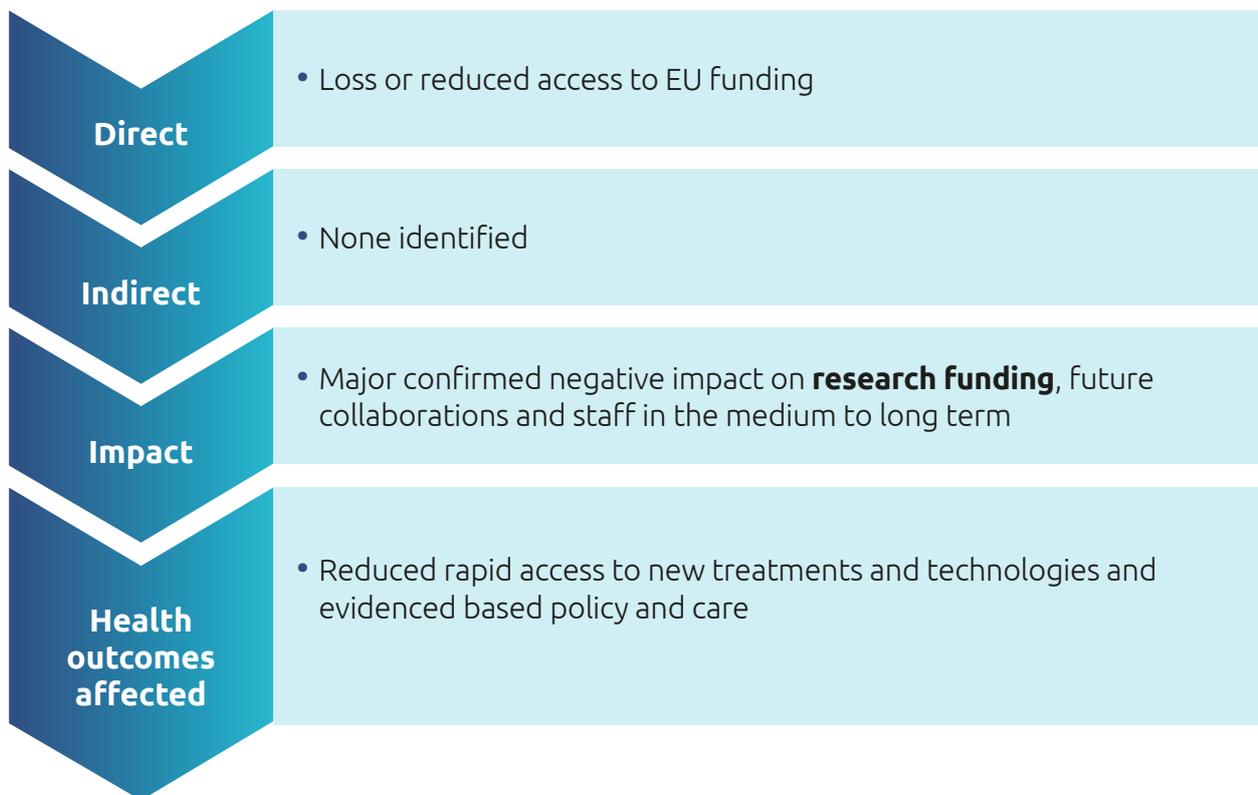
EU funding currently supports health research, innovation networks and clinical trials as well as other academic research and innovation. Many of the available grants are designed specifically to promote collaboration. Universities Wales has stated that the Welsh university sector has been strengthened and enhanced through participation in European programmes and European funding streams (National Assembly for Wales External Affairs and Additional Legislation Committee, 2018b).

Stakeholders at the HIA workshop discussed the potential negative impact that Brexit (and the uncertainty of it) could have on access to research collaborations, networks, and opportunities. There was concern from HIA workshop participants that many successful Welsh collaborations and relationships could be lost without European research funding and partners.

Discussion and presentations at an event in Swansea University on funding post Brexit (Swansea University Morgan Academy, 2018) included concerns raised that whilst the UK will likely be able to buy access to EU research programmes in future, there could be significant barriers and limitations compared with the current process. For example, it is likely that in the future UK universities would not be able to lead "Horizon 2020" (or its replacement) programmes, freedom of movement changes may limit collaborations, the UK would not be able to receive more funding than it pays in (as is the case currently), and there is a lack of clarity over who will pay for access.

Summary of Key Impacts: Research and Development

A direct impact on research and development funding has been identified as follows:



Current Policy Statements: Research and Development Funding

Although the Welsh Government has established a central unit to develop future funding arrangements in co-production with partners, plans for continuing to participate in, or replacing, other EU funding sources such as Horizon Europe, research and innovation funding remain the subject of negotiations between the UK and EU. Previously, in its response to a recommendation from the National Assembly for Wales External Affairs and Additional Legislation Committee Report: *“Wales’ Future Relationship with Europe”* (Welsh Government, 2018a), the Welsh Government stated that if the UK Government does not agree to participate in the future Research and Development Framework Programme, it is unlikely Wales would be able to do so in its own right.

The Financial Settlement that forms part of the draft Withdrawal Agreement agreed between the UK and the EU (UK Government and European Union, 2018) states that the UK will take part in all EU funded programmes until December 2020, subject to a final negotiated agreement. In the meantime, the UK Government has set out its intention to explore future involvement with research funding programmes. The UK Government has published a number of technical advice notes in relation to EU-funded research programmes in the event of a “no deal” (Department for Exiting the European Union, 2018) and guaranteed EU funding awarded to organisations until the end of 2020.

The most recent political declaration agreed with the EU on 25 November 2018 states that there is a commitment to *“explore the participation of the United Kingdom to the European Research Infrastructure Consortiums”*, the aim of which would ensure that the UK is able to continue to be involved in EU research programmes (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.



4.2.8 Appraisal: Living Conditions: Working Conditions



Population Context¹²

Conditions in the workplace affect everyone of working age in the Welsh population. However, they also impact on social determinants of health such as family life, social relationships and early year's development via policies such as working hours, maternity and paternity leave, holiday pay and allowances. Therefore, any potential changes to working conditions are highly significant to population health.

Gender equality is recognised as a fundamental right in EU law and since the UK joined the EU in 1973, working women have gained significantly from this strong underpinning to their rights (Trade Union Congress, 2016) including:

- Expanded the right to equal pay, strengthened protection from sex discrimination and improved remedies and access to justice for women who have been unfairly treated
- Strengthened protection for pregnant women and new mothers in the workplace and created new rights that have helped women balance work with care and encouraged men to play a greater role in family life too
- Benefited the many women who work part-time or on a temporary basis, improving their pay and conditions and giving them access to rights at work that they were previously disqualified from

Therefore, women are particularly exposed to any changes in working conditions.

¹² All data sources in this section (unless otherwise referenced) can be found in the Technical Report: Part 2

Health and safety at work, workers' rights and equality, and working hours

This analysis covers all workers in all sectors, although some of the specific examples provided relate to the health service. EU law provides employee safeguards on working hours and minimum standards for annual leave, as well as enshrining equal pay and maternity rights. The Working Time Regulations (UK Parliament, 1998) ensured that the European Working Time Directive (European Council, 1993) was implemented into UK law. For the health sector, these regulations mean that doctors, nurses and other staff are limited to working no more than 48 hours a week (averaged across 26 weeks) and that they are entitled to a holiday allowance, rest breaks and limits on night work. It has been identified that longer working hours are associated with negative health outcomes such as enhanced risk of coronary heart disease and stroke, therefore this directive is viewed as protective for health (Steadman, 2018).

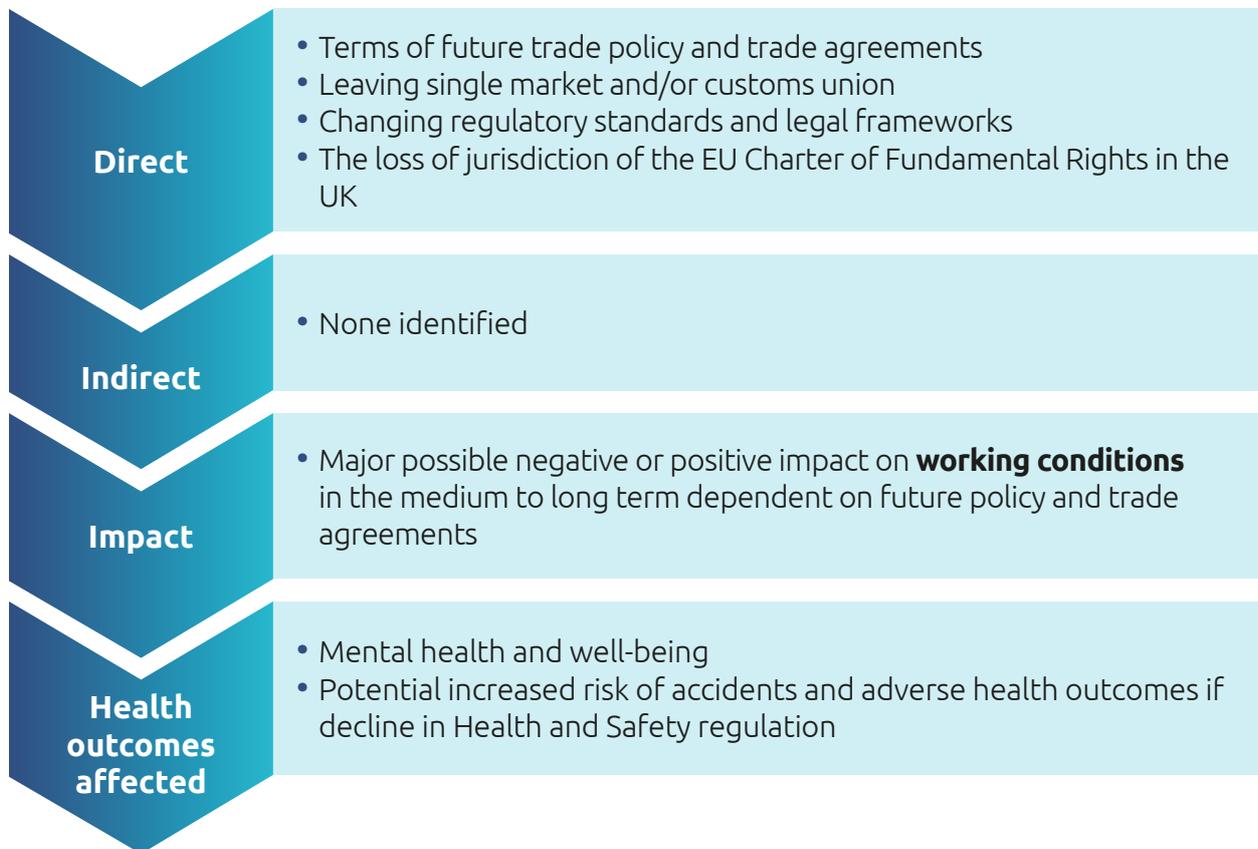
In the literature, the Welsh NHS Confederation call for the retention of the existing UK Working Time Regulations (1998), and protection of existing workers' rights, as well as retaining employment Directives in UK law for the current and future workforce. The Welsh NHS Confederation also outlines areas where EU legislation currently applies including a Directive on measures to improve safety and health at work, occupational health and safety, sharp injuries in the hospital and health care sector and the manual handling of loads (Welsh NHS Confederation, 2018).

Fahy et al. (2017) assess the impact of three potential scenarios for Brexit and conclude that under a "Soft Brexit", workers' rights in the NHS (and by extension all workers' rights) are likely to remain the same, under a "hard Brexit" rights are likely to be diminished and under a "failed Brexit" (same as "no deal" with trade with EU based on WTO rules) there would be no protection for existing rights and the European Court of Justice would cease to adjudicate on disputes (Fahy, et al., 2017). The authors also raise concerns over the ability of future trade deals to subject the NHS to investor-state dispute settlement mechanisms, which could allow corporations to contest domestic policies on working conditions by arguing that such policies are non-tariff barriers to trade or investment. The literature review identified that a number of authors view working conditions as potentially affected by future trade agreements, presenting risks and opportunities for workplace related health (Steadman, 2018) (Nuffield Trust, 2017) (Rimmer, 2016).

After Brexit, the UK will not have to comply with the EU Charter of Fundamental Rights (Section 4.2.5) and some social and economic rights are not fully recognised in UK law, including a range of workers' rights, for example, the right to fair working conditions and protection against unjustified dismissal (Equality & Human Rights Commission, 2018) (National Assembly for Wales External Affairs and Additional Legislation Committee, 2018a) (National Assembly for Wales Research Service, 2018d) (Welsh Government, 2018a). Stakeholders taking part in the HIA workshop also highlighted that much legislation and regulation in relation to employment is derived from the EU and they identified a risk to health and safety at work if a de-regulation agenda was pursued in the future. Potential positive impacts were also identified as Wales could choose to enhance working conditions in the future.

Summary of Key Impacts: Working conditions

Direct impacts on working conditions have been identified in the HIA via the following policy mechanisms:



Current Policy Statements: Working Conditions

The Welsh Government, in its response to the National Assembly for Wales' External Affairs and Additional Legislation Committee Report "*Wales' Future Relationship with Europe*" (Welsh Government, 2018a), accepted a recommendation for it to call on the UK Government to protect the human rights and equalities standards as well as social, environmental or employment protections that Welsh citizens have benefited from by being citizens of the EU. In its White Paper (HM Government, 2018) and in a Technical Advice Notice on workplace rights (Department for Exiting the European Union, 2018) the UK Government has stated it would maintain current employment and workplace rights.



4.2.9 Access to Services: Access to Safe and Timely Health and Social Care Services



This section covers a range of issues relevant to access to safe and timely health and social care:

- Staffing, Recruitment, Qualifications and Fitness to Practise
- Access to Medicines, Medical Devices and Clinical Trials
- Health Protection / Health Security
- Research and Development
- Rare Diseases
- Reciprocal Health

Population Context¹³

In the 2011 census, Wales had a higher percentage of residents with a long term illness (23%, 696,000 people) than any English region, this was also true in 2001 (Office for National Statistics, 2012). Over 50% of older people in Wales have a limiting long term illness (Public Health Wales Observatory, 2018a). Therefore, the Welsh population is significantly exposed to changes in the capacity of health and social care services.

¹³ All data sources in this section (unless otherwise referenced) can be found in the Technical Report: Part 2

Staffing, Recruitment, Qualifications and Fitness to Practise

Recruitment is one of six areas that the House of Common's Health and Social Care Committee consider to be 'vital' for health and social care (Dr Sarah Wollaston MP, 2016). The Welsh Government states that the NHS in Wales is reliant on EU workers at every level including those delivering social care (Welsh Government, 2017a). The estimated annual recruitment needed from the EU (in England) is 7,000 nurses and 2,000 doctors and public health experts report that losing such significant staffing would have severe impacts on the ability to deliver already over-stretched health care services (Middleton & Weiss, 2016).

Stakeholders identified that some areas of Wales face existing medical recruitment challenges (INT17), in particular for GPs and specialist posts such as Paediatrics (INT1). In Wales 4% of GPs and 15% of dentists gained their primary medical qualification in the EEA (See Community Health Profile in the Technical Report: Part 2). Evidence collected by the National Institute of Economic and Social Research includes insight from key health and social care sector stakeholders who report that EEA nationals are more likely to work in specialties and locations with weak domestic supply and EEA doctors are well-represented in shortage specialties (National Institute of Economic and Social Research, 2018).

The National Institute of Economic and Social Research also estimate that in the short run, the UK may have an additional shortage of around 2,700 nurses and by projecting this shortfall over the remaining period of Brexit transition to 2021 they suggest that there may be a shortfall of around 5,000-10,000 nurses (in addition to current vacancies) (National Institute of Economic and Social Research, 2018).

There is evidence to suggest that there is already a reduction in the number of health care staff from the EU working in the UK and that others are planning to leave. The number of people from the EEA on the Nursing and Midwifery Councils register in March 2018 compared with March 2017, fell by 8% (Nursing and Midwifery Council, 2018). There are also concerns and evidence that doctors from the EEA who work in the UK are either considering leaving or are leaving since the referendum result. A survey of 1,193 EEA doctors working in the UK found that 42% were considering leaving since the outcome of the referendum, and a further 23% were unsure whether to stay (Torjesen, 2017). A later survey by the British Medical Association has found that 35% of EU doctors are considering leaving the UK and 78% are not reassured by UK Government statements about the rights of EU Citizens in the event of a "no deal" (British Medical Association, 2018b).

There is a lack of robust data on the social care, independent and third sector workforce in Wales. However, the number of EU nationals working in social care is far greater than those working in the NHS (Welsh NHS Confederation, 2018). In 2016, EEA nationals made up 5.4% of the social care workforce in the UK. In Wales their numbers have grown by 56% since 2011 (National Institute of Economic and Social Research, 2018). It is estimated that between 3-4 % of the social care workforce in Wales come from the EU (INT15) and there are existing recruitment and capacity challenges in social care in Wales along with a growing demand (INT15).

The UK's withdrawal from the EU will have the potential to impact the current system of recognition of medical qualifications that allows doctors who qualified in other EU countries to readily work in the UK. The possible loss of the Mutual Recognition of Professional Qualifications (MRPQ) Directive (system of reciprocal recognition of

professional qualifications between the remaining EEA States and the UK) (INT, INT10a) (Fahy, et al., 2017) and retaining access to the EU Internal Market Information System to facilitate communication exchange on doctors' fitness to practise are both highlighted as important (INT4) (Welsh NHS Confederation, 2018). The Royal College of Nursing in Wales has stated that;

"As well as raising the standards of nursing education, the MRPQ Directive has enabled the UK to recruit nurses and doctors from Europe to help fill our own workforce shortages. If the UK decides to move away from these jointly developed standards, the UK may lose important safeguards, lose access to alert mechanisms, and miss out on crucial exchanges between professional regulators"

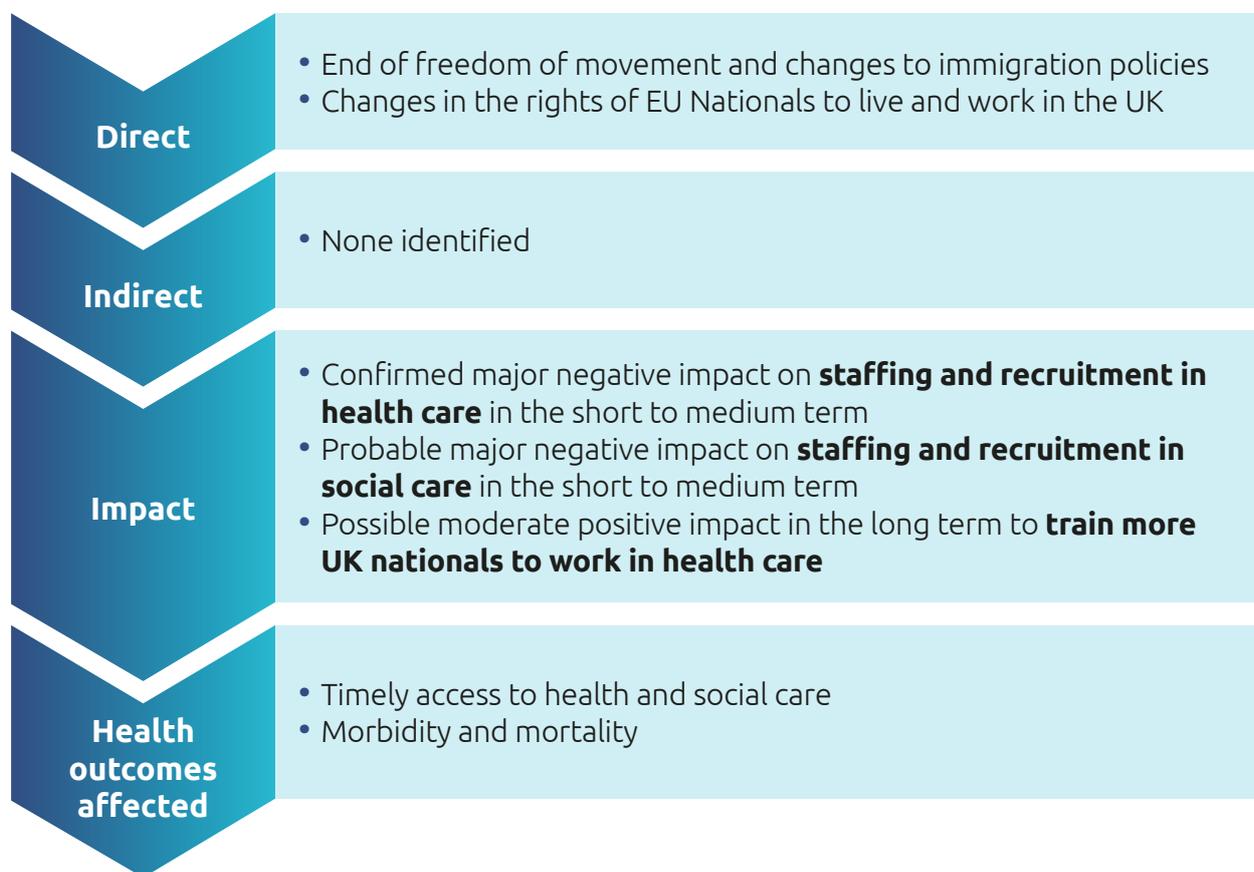
(Royal College of Nursing, 2018) (p.5-6).

The House of Commons Health and Social Care Committee's 2017 report into Brexit and health and social care quoted evidence from the Chief Executive of Health Education England, Ian Cumming, who stated that self-sufficiency from training UK health care staff could take *"somewhere in the region of 10 or 12 years."* The Committee concluded that the *"requirement for the UK to maintain an immigration system which facilitates swift entry to the UK for the health and social care workforce is likely to continue for many years"* (House of Commons Library, 2018). This view was reinforced by stakeholders in the HIA workshop. A further issue raised by the research on health and social care staffing by the National Institute of Economic and Social Research is that recent reforms to education and training routes have driven down applications to study nursing in the UK by more than 20% since 2016, while applications to read medicine have also fallen by 10% since 2016 (National Institute of Economic and Social Research, 2018).



Summary of Key Impacts: Staffing, Recruitment, Qualifications and Fitness to Practise

The HIA identified direct impacts on staffing, recruitment, qualifications and fitness to practise as follows:



Current Policy Statements: Staffing, Recruitment, Qualifications and Fitness to Practise

The UK Government's White Paper (HM Government, 2018) is seeking reciprocal mobility arrangements with the EU and is proposing a system for the mutual recognition of professional qualifications. In June 2018, the UK Government announced that as part of a long term government plan for the NHS, doctors and nurses are to be excluded from the cap on skilled worker visas. This will mean there will be no restriction on the numbers of doctors and nurses who can be employed through the Tier 2 visa route – giving the NHS the ability to recruit more international doctors and nurses (UK Government, 2018). This may mitigate some of the NHS staffing impacts of Brexit.

However, this is unlikely to benefit social care where the non-EEA immigration rules are not seen as meeting the needs of the adult social care workforce and many roles may not meet the minimum skills or salary thresholds for a Tier 2 visa (National Institute of Economic and Social Research, 2018).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that there will be appropriate arrangements in the future relationship for reciprocal professional qualifications and free movement will end. The UK government has stated that the future immigration system will be based on skills, not on where the person comes from (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament. In December 2018, the UK

Government published a white paper proposing a new single immigration system based on skills which will be open to all nationalities.

www.gov.uk/government/publications/the-uks-future-skills-based-immigration-system

Access to Medicines, Medical Devices and Clinical Trials

Access to medicines, medical devices and clinical trials is one of six areas that the House of Commons Health and Social Care Committee considered to be 'vital' for health and social care in relation to planning for Brexit (Dr Sarah Wollaston MP, 2016) (House of Commons Health and Social Care Committee, 2018). There are a range of areas impacted including access and supply of medicines and devices, licensing, approvals, clinical trials, research and development of medicines, pharmacovigilance and nuclear medicine.

The Welsh NHS Confederation, the Office of Health Economics and the Life Science Industry Coalition advocate that patients in the UK continue to benefit from EU clinical trials (Office of Health Economics, 2017) (Life Science Industry Coalition, 2017) (Welsh NHS Confederation, 2018). Key health sector stakeholders have identified a lack of detail from the UK Government regarding post-Brexit arrangements on issues ranging from membership of the European Medicines Agency (EMA) and Euratom (see Glossary), transposition of EU law into UK law, to information, safety, access and supply (Office of Health Economics, 2017) (Welsh NHS Confederation, 2018) (Life Science Industry Coalition, 2017).

Stakeholders in interviews and the HIA workshop advised that supplies such as syringes, cotton wool, bandages and low tech consumables are all supplied on a just-in-time basis which may be affected by Brexit (INT16). Currently, the EMA provides and coordinates licensing, expertise and support for medicines and medical devices throughout the EU (House of Commons Library, 2018). The UK Government has stated it wishes to remain a member of the EMA and to continue broadly with existing arrangements (Department for Exiting the European Union, 2018). However, this has not yet been agreed, leading to significant uncertainty over the mechanisms and standards for the regulation of medicines post Brexit.

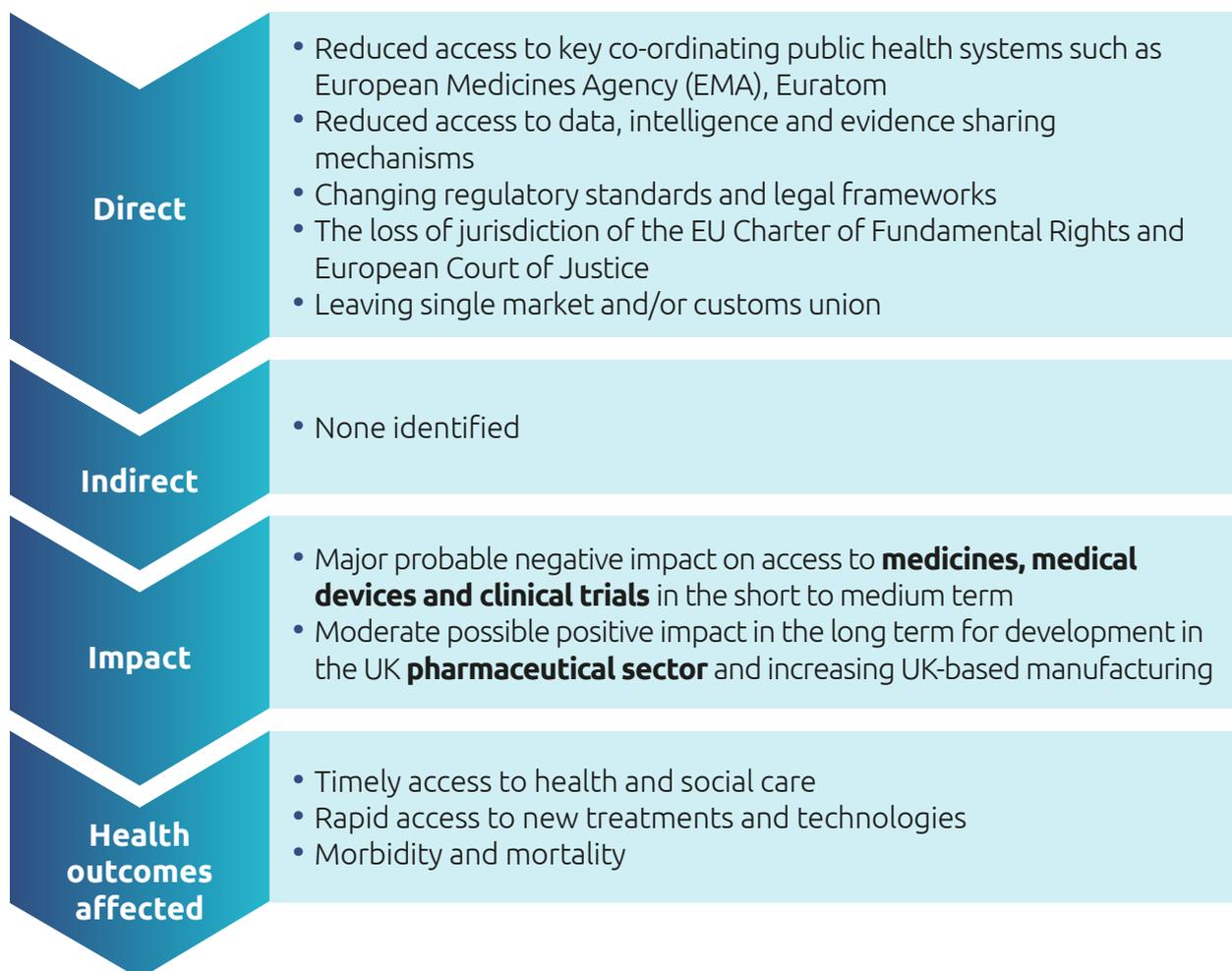
The Nuffield Trust are among those who argue that a "no deal" scenario *"would risk a chaotic disruption to supplies of medical products, and a rise in prices that would push hospitals deeper into deficit"* (Nuffield Trust, 2017). If the UK is no longer subject to the European Court of Justice (ECJ) this impacts on the regulation and oversight of patient data sharing which is needed for clinical trials and may reduce the number of new treatments trialled here (INT16). Wang and Macaulay's (2017) paper suggests that Brexit could potentially deny thousands of UK patients access to pioneering and innovative candidate treatments as UK trial sites will no longer need to align to EU "CT" (clinical trials) regulations (Wang & Macaulay, 2017).

With regards to devices, the CE Marking Association considers it is likely that the current system of CE (see Glossary) Marking will remain. It refers to the UK Government's stated wish to commit to maintain a common rulebook for all goods within the UK and EU post-Brexit (CE Marking Association, 2018).

Stakeholders at the workshop highlighted people who are dependent on imported medicines like insulin and those receiving treatment as part of a clinical trial as populations of concern.

Summary of Key Impacts: Access to Medicines, Medical Devices and Clinical Trials

The HIA identified direct impacts on access to medicines, medical devices and clinical trials as follows:



Current Policy Statements: Medicines, medical devices and clinical trials

The Welsh Government has stated its commitment to remain a member of the EMA and other European health organisations (Welsh Government, 2018a). The UK Government has stated it wishes to remain a member of the EMA and to continue broadly with existing arrangements (HM Government, 2018). In March 2017 the UK Government gave notice of its intention to leave Euratom (Peck, 2017). The UK Government has also published a series of “no deal” technical advice notes (Department for Exiting the European Union, 2018) in relation to medicines, medical devices and clinical trials. The Medicines and Health care Products Regulatory Agency (MHRA) has recently consulted on the regulation of medicines, medical devices and clinical trials in a “no deal” scenario (Department of Health and Social Care, 2018).

In terms of supply chains of medicines and medical equipment, the most recent Withdrawal Agreement and political declaration agreed on 25 November 2018 states that there will be a single customs territory between the EU and UK, no tariffs on goods, and deep regulatory co-operation during the transition period. This should avoid Brexit-

related shortages and supply chain difficulties after 29 March 2019 (NHS Confederation European Office, 2018b). Data sharing will continue during the transition, with an intention to have a future agreement in place by the end of the transition period (NHS Confederation European Office, 2018b). The political statement says that both the UK and EU will “*explore the possibility of cooperation of United Kingdom authorities with Union agencies such as the European Medicines Agency*” and there will be a wide-ranging Nuclear Cooperation Agreement between the European Atomic Energy Community (EURATOM) and the United Kingdom on peaceful uses of nuclear energy including health (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

Health Protection / Health Security

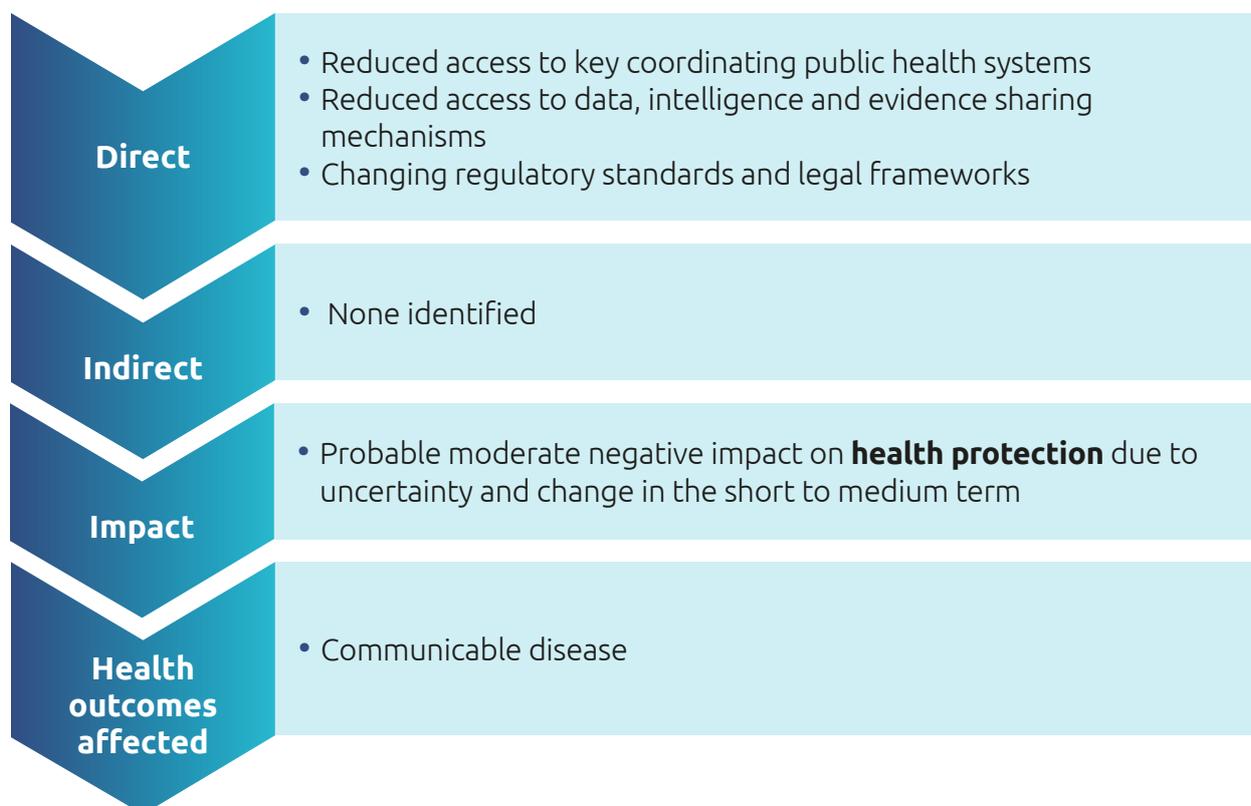
Stakeholder evidence gathered in the participatory workshop highlighted concern about maintaining access to population health data, surveillance and monitoring in order to prevent and manage cross-national public health issues such as infectious disease outbreaks. Many health protection systems, such as those for infectious diseases, are planned and co-ordinated at a European level, for example European Centre for Disease Prevention and Control (ECDC). This concern is reflected in the literature where organisations including the Welsh NHS Confederation, and the Faculty of Public Health (Welsh NHS Confederation, 2018) (Faculty of Public Health, 2018b) have identified health security and protection as a key issue.

The Brexit Health Alliance have stated that:

“Post-Brexit, without a formal relationship with ECDC, social networks and professional relationships may fragment and the ability to tackle infectious diseases is likely to decline. After Brexit, if an agreement is not reached on continued UK access to ECDC, creating a bespoke relationship with ECDC would be the next preferred option. This would be a long-term project and would require significant investment in system strengthening”
(Brexit Health Alliance, 2018a) (p.3).

Summary of Key Impacts: Health Protection / Health Security

Direct impacts on health protection have been identified in the HIA as follows:



Current Policy Statements: Health Protection and Security

The Welsh Government states that it is in favour of the UK remaining a member of the European Centre for Disease Prevention and Control (ECDC) (Welsh Government, 2018a). Delegates at the Welsh NHS Confederation Policy Forum also emphasised that continued 'strong coordination' between the UK and EU will be key to protecting public health including communicable diseases, influenza outbreaks, infectious diseases and antimicrobial resistance (National Assembly for Wales Research Service, 2018b).

The UK Government's White Paper (HM Government, 2018) proposes continuing collaboration with the EU's Health Security Committee and bodies such as the ECDC, including access to all associated alert systems, databases and networks; ongoing access to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); collaboration with the European laboratory surveillance networks; and continued collaboration between the EU and the devolved administrations including the ability for Public Health Wales to provide European Public Health Microbiology (EUPHEM) training.

The most recent political declaration agreed with the EU on 25 November 2018 discusses in broad terms continued co-operation on health security "*The parties should cooperate in matters of health security in line with existing Union arrangements with third countries*" (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

Research and Development (Health Care)

This section deals with research and development particularly related to health care which is supported directly by EU funding (including Horizon 2020 and Creative Europe) as well as medical and commercial research and development in general. Section 4.2.7 provides an appraisal of the evidence of impact on Research and Development funding more broadly.

Continued access to EU funding streams or replacement funding for research and participation in networks is one of six areas that the House of Commons Health and Social Care Committee considered to be 'vital' for health and social care in relation to planning for Brexit (Dr Sarah Wollaston MP, 2016) (House of Commons Health and Social Care Committee, 2018). The UK will take part in all EU funded programmes until December 2020, subject to a final negotiated agreement (UK Government and European Union, 2018). EU funding currently supports health research, innovation networks and clinical trials. Awards from the EU's Framework Programmes (currently Horizon 2020) are an important funding source for the UK. Between 2008 and 2013, the UK received €8.8 billion of EU science funding (Welsh NHS Confederation, 2018). The UK is a net beneficiary for EU research funding, contributing 11% to the research budget but receiving 16% for projects it leads (Middleton & Weiss, 2016). Welsh organisations have secured just over €100m of Horizon 2020 funding since the start of the programme. This has involved 255 participations and over 2,800 international collaborations (Welsh Government, 2018i). Confidence of access to adequate funding to conduct research is also seen as important for attracting the very best researchers (Watson, 2018).

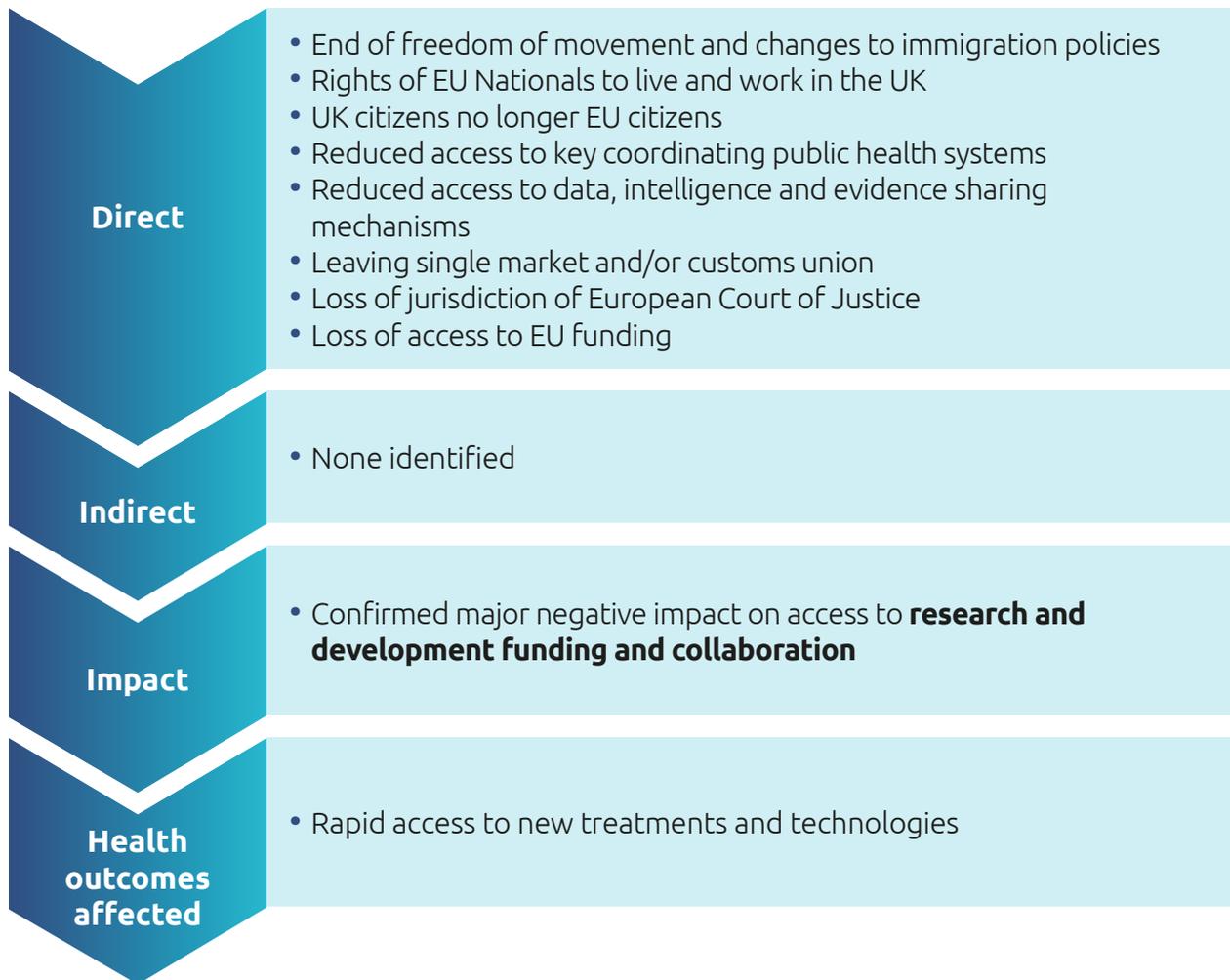
Stakeholders at the HIA workshop discussed the potential negative impact that Brexit (and the uncertainty of it) could have on access to research collaborations, networks, and opportunities. Many successful Welsh collaborations and relationships could be lost without European research funding and partners. In the grey literature, there is wide health sectoral support for continuing membership of EU funding networks (Welsh NHS Confederation, 2018) (Life Science Industry Coalition, 2017) (Brexit Health Alliance, 2018b) (National Assembly for Wales External Affairs and Additional Legislation Committee, 2018b). Stakeholders in the HIA Workshop also identified possible opportunities that already exist to collaborate with non-EU partners in research.

Negative impacts identified in the literature include significantly limiting the ability of researchers and institutions to work together (Brexit Health Alliance, 2018b). The Welsh Government has stated that if the UK Government does not agree to participate in the future Research and Development Framework Programme, it is unlikely Wales would be able to do so in its own right (Welsh Government, 2018a).

The Association of the British Pharmaceutical Industry has said that the UK is the third largest biopharmaceutical research cluster outside the USA and it is not in the EU's interest to be disconnected from the UK base (McCall, 2018).

Summary of Key Impacts: Research and Development (Health Care)

Direct impacts on research and development for health care have been identified in the HIA as follows:



Current Policy Statements: Research and Development (Health Care)

The UK Government states it will discuss how to facilitate temporary mobility of scientists and researchers, it also proposes that the future relationship with the EU includes a science and innovation accord, and that it will seek UK participation in EU research funding programmes (HM Government, 2018).

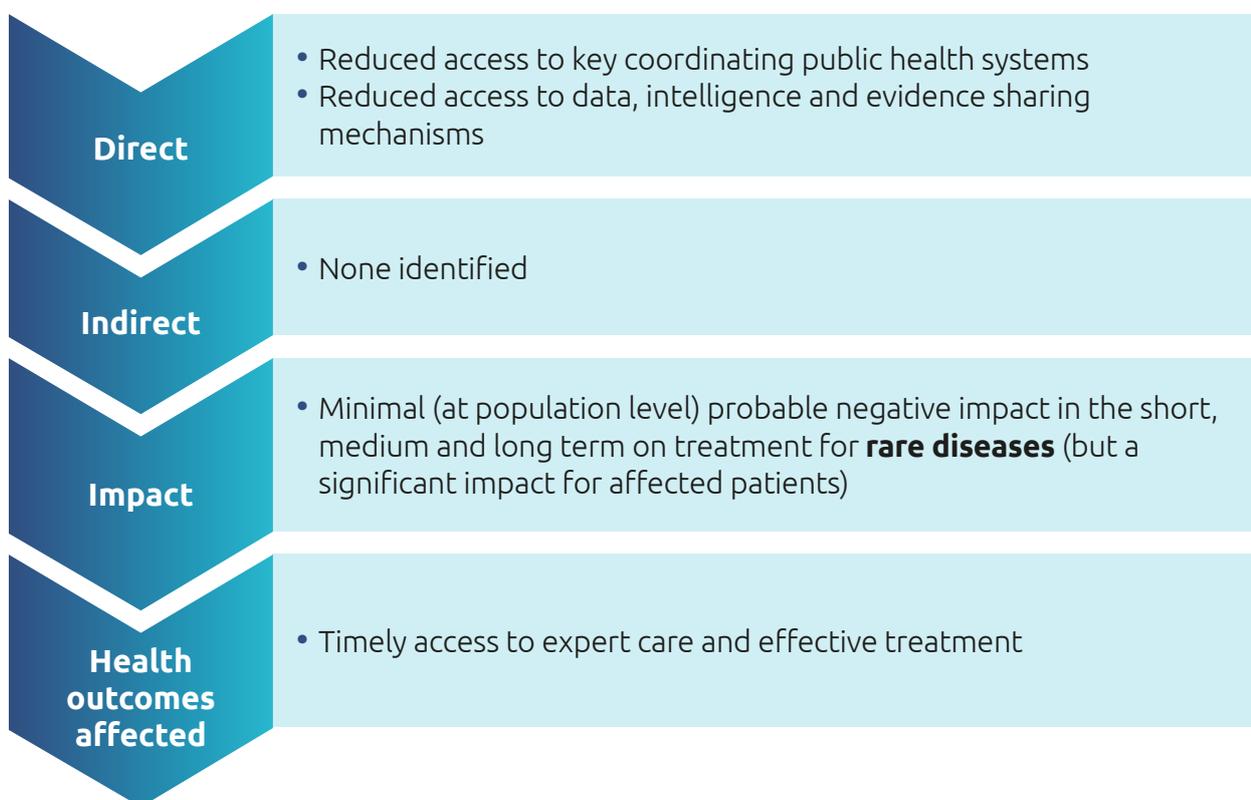
The most recent political declaration agreed on 25 November 2018 states that there is a commitment to “*explore the participation of the United Kingdom to the European Research Infrastructure Consortiums*”, the aim of which would ensure that the UK is able to continue to be involved in EU research programmes (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.

Rare Diseases

There is concern both amongst stakeholders participating in the HIA workshop and in the literature (Welsh NHS Confederation, 2018) (Brexit Health Alliance, 2018b) at the prospect of the UK's exclusion from European rare disease networks (European Reference Networks), which also receive support from EU research funding programmes. A "no deal" Brexit would mean that UK patients, experts and hospitals would all be excluded from the European rare disease networks (Brexit Health Alliance, 2018b) (Leake, 2018) (Welsh NHS Confederation, 2018). It is also reported that British medical experts have already been removed from leadership roles covered by the European Reference Networks (Leake, 2018).

Summary of Key Impacts: Rare Diseases

Direct impacts on treatment for rare diseases have been identified in the HIA as follows:



Current Policy Statements: Rare Diseases

The UK Government is seeking to participate in policies and networks that benefit businesses, researchers, citizens and patients across the UK and the EU, including European Reference Networks (HM Government, 2018). The most recent political declaration agreed with the EU on 25 November 2018 makes no mention of European Reference Networks (NHS Confederation European Office, 2018b).

Reciprocal Health Care

Reciprocal health care coverage and cross-border health care is one of six areas of concern where, according to the House of Common's Health and Social Care Committee (Dr Sarah Wollaston MP, 2016), leaving the EU is likely to have an impact on health in the UK.

Reciprocal rights for patients across the EU allow access to health care in other member states. Eligibility is based on residence and economic status, not nationality which means that an individual is likely to be insured by the country in which they reside permanently, even if they are a citizen of another country. The country that insures an individual will meet the cost of the care they receive. In the event of changes to the current system UK nationals may need to take out private health insurance.

Present arrangements are administered by four main programmes - the European Health care Insurance Card (EHIC), and the S1, S2 and S3 schemes- which individuals must subscribe to or apply to themselves in order to exercise their right to reciprocal health care.

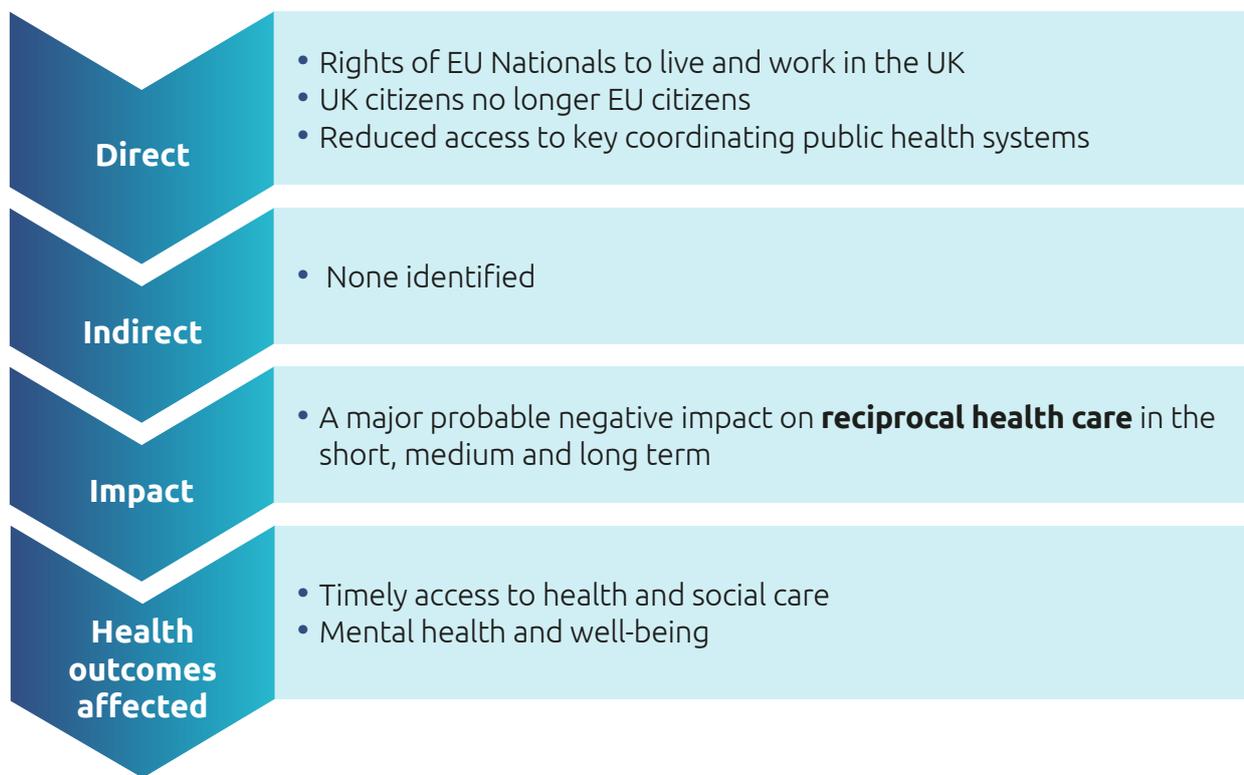
If there is a "no deal", then bilateral agreements with countries such as France and Spain (where large numbers of UK pensioners reside either permanently or for part of a year) could potentially be agreed (INT8). It is thought that if the EHIC scheme disappears it will be a significant burden on health boards in Wales to identify and charge citizens of other EU countries receiving health care in the UK (INT8).

Stakeholders and academics advocate for existing arrangements to continue, fearing a major impact on UK citizens living in or visiting the EU, significant strain on the NHS if patients are required to return to the UK for care and also increased complexity of cost recovery processes (Welsh NHS Confederation, 2018) (Fahy, et al., 2017) (Royal College of Nursing, 2018).

Participants in the HIA workshop also identified that continuing reciprocal medical agreements in relation to EHIC cards with EU countries would be a positive benefit. However, they also identified that if there are any adverse changes to these agreements with European nation states, it could have potential negative impacts through two channels. Firstly via increased costs when travelling and increased costs for travel insurance (particularly for those who have pre-existing medical conditions or are aged over 70). Secondly, through reducing the ability of UK citizens to elect to travel to an EU state to receive specific treatment, as they can currently.

Summary of Key Impacts: Reciprocal Health Care

Direct impacts on reciprocal health care have been identified in the HIA as follows:



Current Policy Statements: Reciprocal Health Care

The UK Government has agreed in principle with the EU that UK pensioners already living in the EU will be able to use the S1 and EHIC schemes during a transition period. However, this will only come into effect if the withdrawal agreement is ratified by both the EU and the UK before the actual date of withdrawal (European Union and United Kingdom Government, 2017).

The UK Government Department for Work and Pensions (DWP) is responsible for administering the scheme in the UK. The Welsh Government has called for current arrangements to be preserved (Welsh Government and Plaid Cymru, 2017) (Welsh Government, 2018a). The UK Government stated its wish to continue with existing arrangements after the UK leaves the EU (HM Government, 2018). The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 guarantees the rights of UK citizens (including reciprocal and cross-border health care) in the EU and vice-versa during transition, but without guarantees as to what will happen after the transition period ends (NHS Confederation European Office, 2018b). This agreement has not yet been ratified by the UK Parliament.



4.3 Appraisal of key potential indirect impacts on mental health and well-being



During the HIA screening stage several potential indirect impacts of Brexit were identified¹⁴ including: mental well-being, family life; and racism and hate crime.

Throughout the evidence collection stage of HIA, the SAG and stakeholders raised mental well-being, community cohesion and resilience, family relationships, uncertainty, and increased political engagement and peaceful activism as important (if less well evidenced) potential indirect impacts of Brexit.

Population Context

Combining the rates of Years Lived with Disability (YLD) (see Glossary) for anxiety disorders and depressive disorders, these mental health conditions accounted for the second largest diagnoses of ill health¹⁵ in Wales in 2016 according to the most recent Global Burden of Disease analysis for the UK countries (Steel & et al., 2018). Public Health Wales Observatory also report on data from the Global Burden of Disease 2016 study and report that mental health and musculoskeletal disorders cause most Disability Adjusted Life Years in working age adults in Wales (Public Health Wales, 2018b). Treatment for mental health problems is the single largest programme budget in the NHS in Wales, accounting for 11.2% of total NHS expenditure in 2016 / 17 (Welsh Government, 2018j).

For measures of mental well-being, the National Survey for Wales reports that in 2016 / 17 people who reside in the most deprived areas of Wales experience significantly poorer mental well-being than the least deprived areas (Public Health Wales Observatory, 2018a).

14 The original list also contained alcohol use and local authority budgets/infrastructure. These have been addressed as potential direct impacts in Section 4.2.2. and 4.2.7 respectively

15 YLD rates per 100 000 population for both sexes for anxiety and depression is 1124, the largest cause was low back and neck pain at a rate of 1692 per 100,000 people.

4.3.1 Appraisal: Mental well-being and Community Resilience and Cohesion

Mental health and well-being is addressed in the WHIASU Health and Well-being Determinants Checklist used in Wales to guide HIAs (see Technical Report: Part 1). It uses the key protective factors for mental well-being that form the basis of Mental Well-being Impact Assessment (Cooke, Friedli, Coggins, Edmonds et al., 2011).

Key stakeholders in Wales have identified concerns about the mental health and well-being impacts of Brexit (INT2, INT3,) (Welsh NHS Confederation, 2018) (Children in Wales, 2018) [HIA workshop]. There is a strong evidence base that the following factors promote and protect mental well-being and overall health outcomes at an individual and community level (Public Health England and Institute of Health Equity, 2017) (Cooke, Friedli, Coggins, Edmonds et al., 2011):

- Sense of control over one's life, including having choices and skills
- Communities that are capable and resilient
- Opportunities to participate, e.g. in making decisions, through work
- Being and feeling included: relationships with friends, family, work colleagues
- Social determinants of mental health and well-being

A Sense of Control

Having a sense of control over one's life, including having choices and skills, is widely recognised as a protective factor for mental well-being and general health outcomes. Low control, whether assessed subjectively or objectively, is associated with poorer health outcomes (Public Health England and Institute of Health Equity, 2017).

A number of stakeholders in the HIA workshop felt that those who voted for withdrawal from the EU may have an enhanced sense of control following the referendum result. However, the converse could also be true of those who did not vote to leave, and this could be a negative impact on those individuals and communities' health and well-being. Some stakeholders felt that there could be resentment if the perceived benefits of Brexit are not realised, which in turn could affect mental well-being (INT3) [HIA Workshop]. The uncertainty over the future generated by Brexit has also been highlighted as having a potential negative impact on mental well-being at a population level.

The Welsh NHS Confederation (2018) has stated that:

"The period of uncertainty related to Brexit is likely to impact the mental health and well-being of the population and may disproportionately affect specific groups, such as farming communities, lower socio-economic groups and people with disabilities" (Welsh NHS Confederation, 2018) (p.10).

Major changes and uncertainty concerning vital income sources for farmers and rural communities has been highlighted in Section 4.2.7. Concern has also been expressed for the mental health and emotional well-being of children and young people, due to the continuing fear and uncertainty about a post-EU future (Children in Wales, 2018). Children in Wales also reports that key stakeholder groups involved in children's services are concerned for existing services for children and young people, which may be threatened by leaving the EU, due to loss of funding and loss of EU citizens working in the sector (Children in Wales, 2018).

Community Resilience

Resilience can be defined as "*a positive, dynamic process by which individuals and communities are able to use intrinsic and extrinsic resources to prepare for, respond to, and cope with adversity, change and hardship*" (Davies, Grey, Homolova, & Bellis, Forthcoming, 2019).

Community resilience is "*the ability of communities and groups to adapt and thrive in response to external stressors*" (South, Jones, Stansfield, & Bagnall, 2018). Participants in the HIA workshop identified increased resilience at a population level as a potential positive impact – by which some participants thought communities may start to engage and come together to respond to any effects of Brexit. However, participants in the workshop raised concerns that some communities may be affected in ways that they did not anticipate, such as via mass unemployment events. They may not know how to respond to such events, nor have the skills, capabilities, resources or structures in place that allow them to mobilise and remain resilient in the face of challenges.

Participants in the HIA workshop also identified a potential negative impact on communities in terms of the creation of divisions in communities between those who voted to remain in the EU and those who voted to leave. The differential voting patterns amongst different age groups was highlighted in the discussions. Participants felt that this could lead to resentment between generations, disagreements, and blame, should Brexit not deliver citizens' expected results. In terms of mitigation, one participant in the HIA Workshop flagged the potential role of the arts and culture in bringing communities together. Cultural capital is a recognised element of community resilience (Davies, Grey, Homolova, & Bellis, Forthcoming, 2019) and cultural measures are often included in resilience frameworks for disaster management. The WHO 2020 European policy framework for health and well-being identifies that broader "*cultural resources*" are one element of coping strategies for individuals and communities (World Health Organization, 2013).

Opportunities to participate

Positively, stakeholders in the HIA workshop identified a perceived increase in the mobilisation of social and political capital for example, the networks of relationships among people who live and work in a particular society. In particular, participants in the HIA Workshop identified an increased interest in and engagement with, politics and policy decisions by many (particularly young people) and an increased incidence of peaceful activism. There is anecdotal reporting of this in the media^{16, 17} but more robust evidence was not identified in the literature review.

16 <https://www.theguardian.com/world/2017/dec/16/first-time-activists-year-of-protest-womens-march-brexit>

17 <https://www.independent.co.uk/news/uk/politics/brexit-final-say-demonstration-london-peoples-vote-numbers-theresa-may-a8594011.html>

Being and feeling included: social relationships with friends, family, work colleagues, community

Social relationships are a key determinant of health and also play an important role in buffering the impacts of stress (Public Health England and Institute of Health Equity, 2017). Family life and relationships were identified in the HIA workshop as an impacted area that is important for mental well-being. Participants in the HIA workshop identified a potential negative impact on family relationships in terms of the creation of divisions in families between those who voted to remain in the EU and those who voted to leave. Anecdotal evidence in the workshop included instances of young people deciding to emigrate as a result of Brexit and therefore creating a distance from family. A major negative impact on family life for EU Citizens living in Wales, and particularly for children in these families, has been identified elsewhere in the HIA report due to the uncertainty regarding future rights to live and work in the UK (See Section 4.4).

Feeling included in communities is important for mental well-being. Heald et al. (2018) provide an expert view that the mental health of Black and Minority Ethnic groups may be negatively impacted by reported rises in hate crime following the EU referendum and also the loss of application in the UK of the EU Charter of Fundamental Rights, which has strengthened the institutionalisation of equality in the UK (Heald, Vida, & Bhugra, 2018). Two systematic reviews have found a significant relationship between reported racial discrimination and mental health outcomes (Priest, Paradies, Trenerry, Truong et al.,) (Paradies, Ben, Denson, Elias, & Priest, 2015). Stakeholders in the HIA workshop also identified a potential negative impact in relation to increased hate crime, reduced tolerance in Wales and an associated cultural change post withdrawal. Further evidence on this area is covered in Section 4.4.4.

Social determinants of mental health and well-being

Economic challenges experienced in Wales could be a key pathway by which Brexit affects population mental health and well-being. Chapter 3 of this report reviews a range of literature on the potential economic impacts of Brexit, and highlights that mental health and well-being is negatively affected at times of recession, with suicide rates being a particular concern (Nolan, Barry, Burke, & Thomas, 2014) (World Health Organization, 2011) (Davies, Homolova, Grey, & Bellis, 2017). The evidence is further supported by a WHO report that states:

“It is well known that mental health problems are related to deprivation, poverty, inequality and other social and economic determinants of health. Economic crises are therefore times of high risk to the mental well-being of the population and of the people affected and their families”. (World Health Organization, 2011) (p.1)

Elliott et al. and WHO both find that policy choices determine whether an economic recession will significantly affect mental health (Elliott et al., undated) (World Health Organization, 2011). Evidence suggests that legislation for protecting social welfare can increase the resilience of communities to economic shocks and mitigate the mental health effects of unemployment and the stress related consequences of economic downturns. Economic downturns result in smaller changes in the mental health of the population in countries where strong social safety nets are available (World Health Organization, 2011). See Section 3 of this report for a more comprehensive review of the evidence.

Summary

Potential impacts of Brexit on the mental well-being of individuals and communities were identified by stakeholders. The potential mechanisms through which mental well-being could be affected are supported by the literature, however the HIA has not identified any analysis of health surveillance data or qualitative research carried out to date on the impact of Brexit on population mental health and well-being. This is an area where research and surveillance could provide a better understanding of the issue. Evidence regarding economic crises and the link to poor mental health and well-being suggest that policy interventions can be effective in reducing or mitigating the impacts.

4.4 Appraisal: Population Groups

The WHIASU Population and Vulnerable Groups checklist, the screening process and SAG for the HIA helped to identify the following groups as particularly impacted by Brexit:

Age-related groups:

- Children¹⁸
- Young adults¹⁹

Income-related groups:

- People who are living on low income
- People who are unemployed / at risk of unemployment

Geographical groups:

- People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding
- People living in areas where large employers may move
- Farmers / rural communities
- Port areas in Wales²⁰
- Coastal areas²¹

Groups who suffer discrimination or other social disadvantage

- Black and minority ethnic groups

Sex and Gender groups:

- Women / Men²² – Gender perspective

Other groups:

- Families impacted by uncertain / new immigration regulations (e.g. EU citizens living in Wales)
- People in need of health and social care services
- Small business owners²³

A detailed Community Health Profile (see Technical Report: Part 2) provides insight into the nature and scale of the impact of Brexit on the populations outlined above. This section synthesises all the evidence gathered during the HIA process relevant to each of the population groups to develop an understanding of the potential impacts of Brexit for them.

18 This population of concern was identified in further engagement with stakeholders in the workshop, interviews and review of the literature

19 As above

20 As above

21 As above

22 As above

23 As above

4.4.1 Age-related groups



Children

Agencies working in children's services in Wales have suggested that it is important that current levels of participation and co-operation in key European agencies are maintained, in order to safeguard children and young people, while they are in the UK and when travelling in the EU (The Children's Society, 2018). For example, the UK is currently a member of the following EU agencies and agreements:

- Europol
- Eurojust
- European Arrest Warrant
- European Criminal Records Information System
- The second generation Schengen Information System (SIS II)
- The European Protection Order

Children in Wales, in partnership with the Observatory on Human Rights of Children, produced a joint briefing paper, which focuses on the emerging key thematic priorities for children and young people in Wales arising from EU withdrawal. This paper was discussed at the National Assembly for Wales Cross-Party Group on Children seminar. This paper reports that the key priority areas of concern are:

- The erosion of guarantees of fundamental rights for children and young people
- The undermining of social cohesion, including the increase in negative attitudes, tensions and reporting of hate crime
- The loss of EU funding to support disadvantaged communities
- The need to engage and hear the voices of children and young people
- Consideration of UK wide matters impacting on Wales, which include existing cross border safeguarding structures and the future status of EU national children and young people

(Children in Wales and Observatory on Human Rights of Children, 2017)

In addition, concern has been expressed by the children's services sector for the mental health and emotional well-being of children and young people, due to the continuing fear and uncertainty about a post-EU future. There is concern about existing services for children and young people, which may be threatened by leaving the EU, due to loss of funding and loss of EU citizens working in this sector (Children in Wales, 2018a). An indirect effect on children and young people from any reduction of legislative protections for specific employment rights in respect of maternity / paternity rights, parental leave, staff pay, work life balance, and recruitment has also been identified by the children's services sector (Children in Wales, 2018). In addition, the potential negative impact on the UK economy and levels of unemployment following the UK leaving the EU will have an indirect effect on children and young people. It is well recognised that increased levels of poverty and unemployment can impact on the health and well-being of children and young people (Scott, Sutherland, & Taylor, 2018) (Marmot & Bell, 2009) (World Health Organization, 2009) (Davies, Homolova, Grey, & Bellis, 2017).

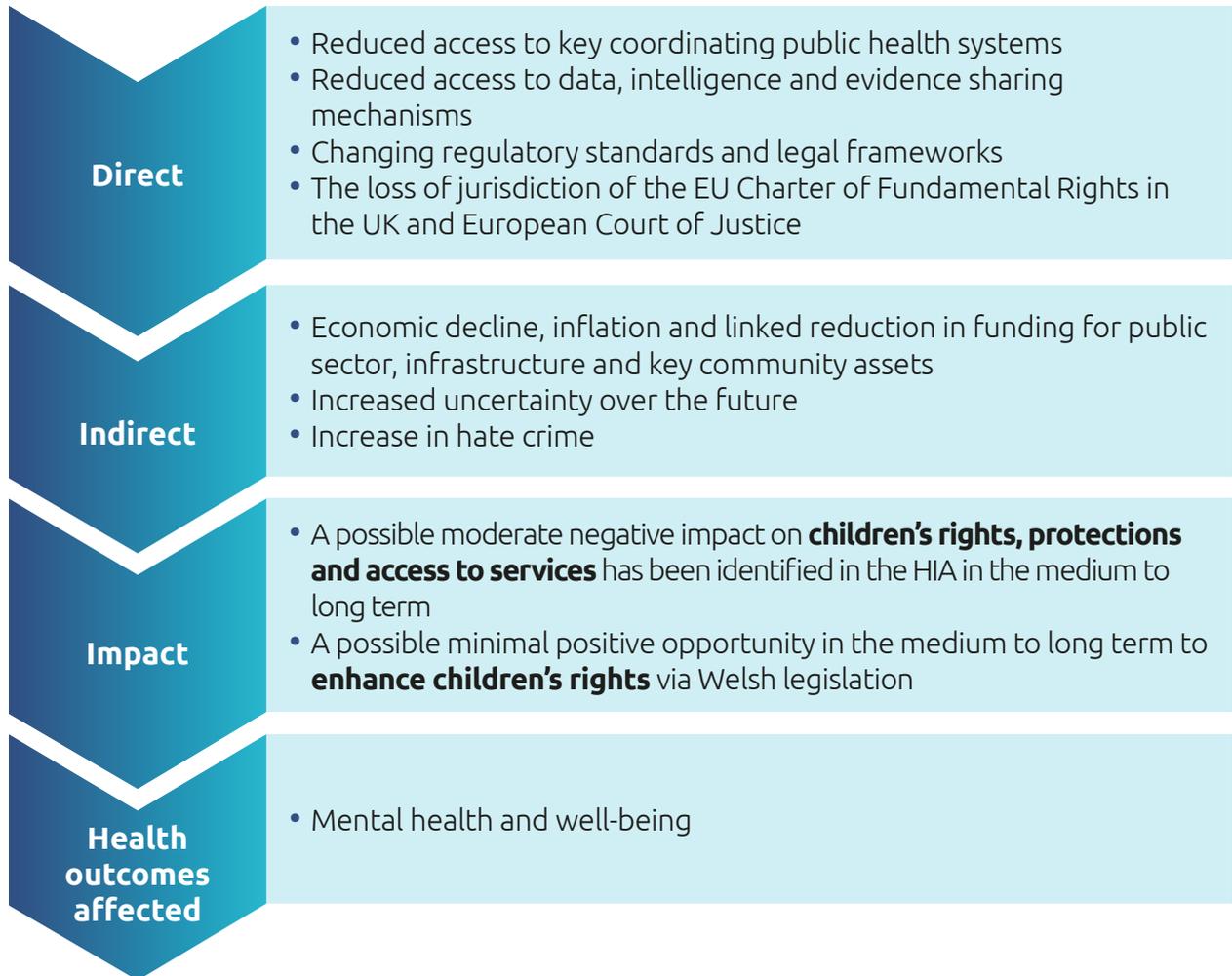
A number of opportunities have been identified to address some of these issues, including:

- Development of the new school curriculum to support children in regard to identified issues
- Reform of current processes, to improve the ability of third sector organisations to access funding and to review the present priorities and simplifying the monitoring, reporting and accountability mechanisms
- Development of Wales's specific rights laws in response to any repeal of existing UK legislation by the UK Government, e.g. The Rights of Children and Young Person (Measure) 2011

(Children in Wales, 2018)

Summary of Key Impacts: Children

The direct and indirect policy mechanisms and the subsequent impacts of Brexit on children are summarised as follows:



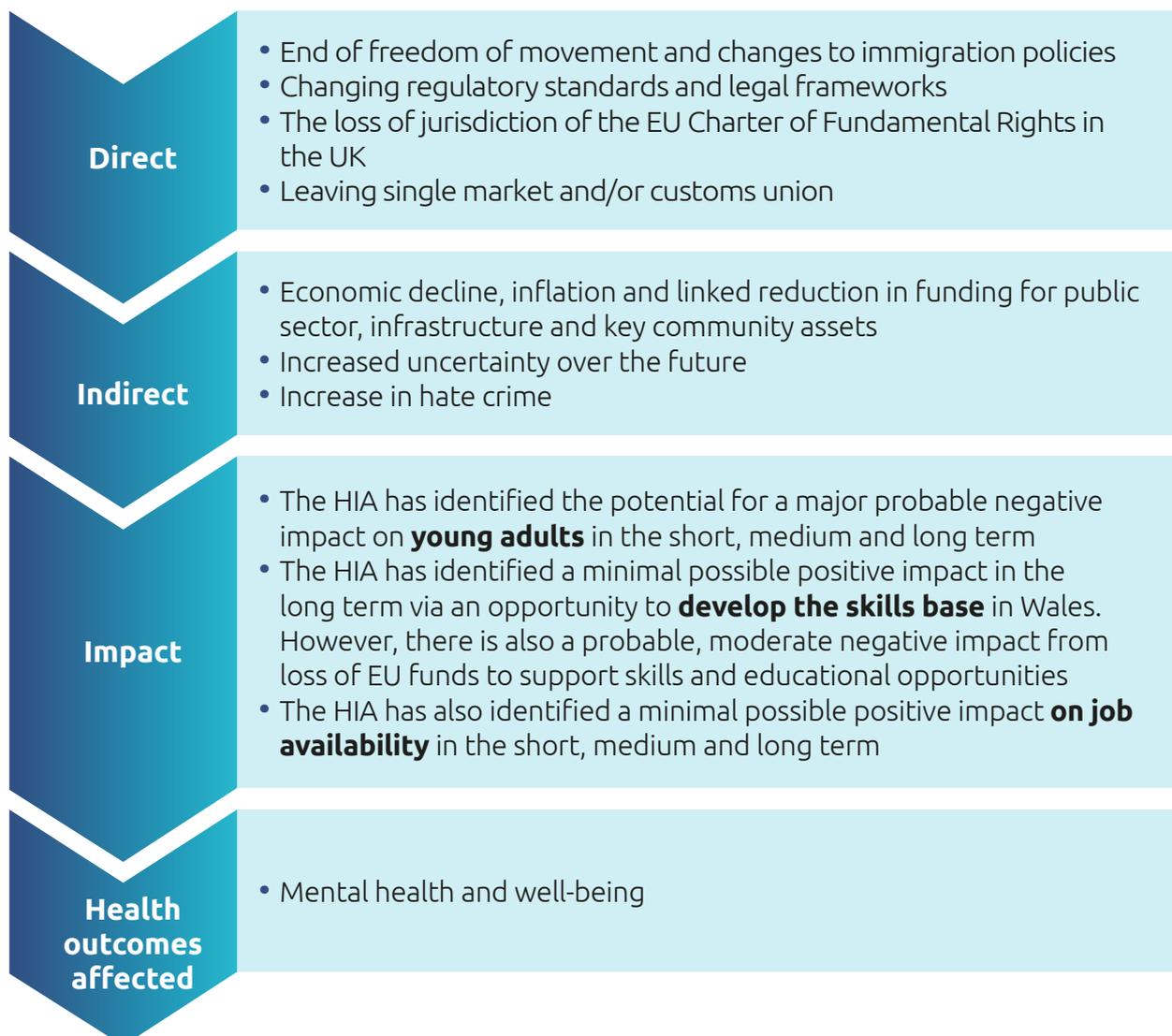
Young adults

Stakeholders highlighted in the HIA workshop that for young adults, Brexit could increase access to training and employment opportunities and lead to less competition for university and other educational places. Data already cited suggests a potential rise in employment vacancies in the UK (See Section 4.2.6.). With between 10 and 15% of 19 - 24 year olds in Wales not in education, employment or training (Welsh Government, 2018d) this is a relevant opportunity. However, for some young adults, Brexit could reduce access to employment, study and travel in the EU area due to loss of freedom of movement, rights and any economic downturn. The literature review supported the identification of young adults as a population of concern (See Technical Report: Part 1).

A possible loss of investment in public services could also impact on young adults, as well as on EU young adults and populations, who wish to live, work and study in Wales. This could have a cumulative effect on Welsh universities and academia. Workshop participants highlighted that young adults could feel more marginalised and powerless due to Brexit and experience a loss of sense of control as surveys suggest that they were less likely to vote for withdrawal from the EU (Full Facts, 2018) and those under 18 did not have the opportunity to vote in the referendum as they were too young.

Summary of Key Impacts: Young Adults

The direct and indirect policy mechanisms and subsequent impacts of Brexit on young adults are as follows:



4.4.2 Income-related groups



People who are living on low income

Almost 16% of the Welsh population are unable to afford everyday goods and services (Public Health Wales Observatory, 2018a). There has also been a significant impact on household income in Wales due to Welfare Reform (Beatty & Fothergill, 2016) (Beatty & Fothergill, 2017).

Lower income households spend more on essentials such as food and drink than higher income households (Clarke, Serwicka & Winters, 2017).

There is a risk that people living in poorer areas will be adversely affected due to their exposure to changes in trade agreements, inflation, and any loss of regional funding from the EU. In addition the uncertainty of a future UK-EU trading relationship may increase the risk of price rises, a fall in real wages, lower employment and lower tax revenues, all of which can have a significant effect on the poorest within our communities (Joseph Rowntree Foundation, 2018).

Over the last 20 years, working-age poverty in the UK has become increasingly dominated by poverty among working families due to low pay and insecure work (Joseph Rowntree Foundation, 2018). The evidence suggests that economic recession can potentially increase the social exclusion of vulnerable groups, low-income people and people living near the poverty line. Such vulnerable groups include children, young people, single-parent families, unemployed people, ethnic minorities, migrants and older people (World Health Organization, 2009). In addition, during economic recessions, social inequality in health can widen (Kondo et al., 2008) (Morrell et al., 1994), with the least well-educated at greatest risk of ill health after job loss (Edwards, 2008).

The Centre for Economic Performance at the London School of Economics modelled the potential changes to household expenditure by different income groups and household types based on estimates of changes in the prices of goods and services after leaving the EU in either an EEA type "Soft Brexit" and a WTO type "hard Brexit" (Breinlich, Dhingra, Sampson & Van Reenan, 2016). They identify highest price rises on transport, food, alcohol and clothing as these products rely more significantly on imports. They report

potential price rises in transport of between 4% (EEA type) and 7.5% (WTO rules), alcohol price rises of 4% (EEA type) to 7% (WTO rules), food price rises of 3% (EEA type) to 5% (WTO type) and clothing 2% (EEA type) to 4% (WTO type). Overall, they find a similar drop in household income in both scenarios across the income distribution.

Some other authors also suggest that any direct or indirect effects from Brexit on prices, wages and employment are expected to be felt across all income groups, rather than impacting disproportionately on those at the bottom (Joseph Rowntree Foundation, 2018). However, if benefits and tax credits were to fall behind inflation, low-income households could be left exposed and disproportionately affected (Joseph Rowntree Foundation, 2018). The Institute for Public Policy Research (IPPR) found that any price impacts of Brexit are unlikely to worsen income inequality, as all income groups - including the poorest - will face negative impacts. However, there is little evidence that post-Brexit trade deals will benefit the worst-off overall; any reductions in import tariffs would be unlikely to compensate for the increase in prices due to Brexit-induced trade barriers between the UK and the EU (Morris, 2018).

Stakeholders in the HIA workshop identified a potential negative impact on lower income groups because of lower resilience to economic changes such as inflation. Participants in the workshop stated that for those in work, there is a potential negative impact from the risk of businesses relocating or the risk of unemployment from an economic downturn.

In summary, whilst some analysis suggests that there will not be differential impacts across the income spectrum, there is also evidence that those on lower incomes will have less resilience to specific economic impacts such as increases in inflation and reduction in targeted regional investment. This is particularly in the context of welfare reform and rising in work poverty in the UK.

Summary of Key Impacts: People Living on a Low Income

The direct and indirect policy pathways and subsequent impacts of Brexit on people on a low income have been identified as follows:



People who are unemployed / at risk of unemployment

Data contained in Section 4.6 of the Community Health Profile (See Technical Report: Part 2) gives an insight into this population group.

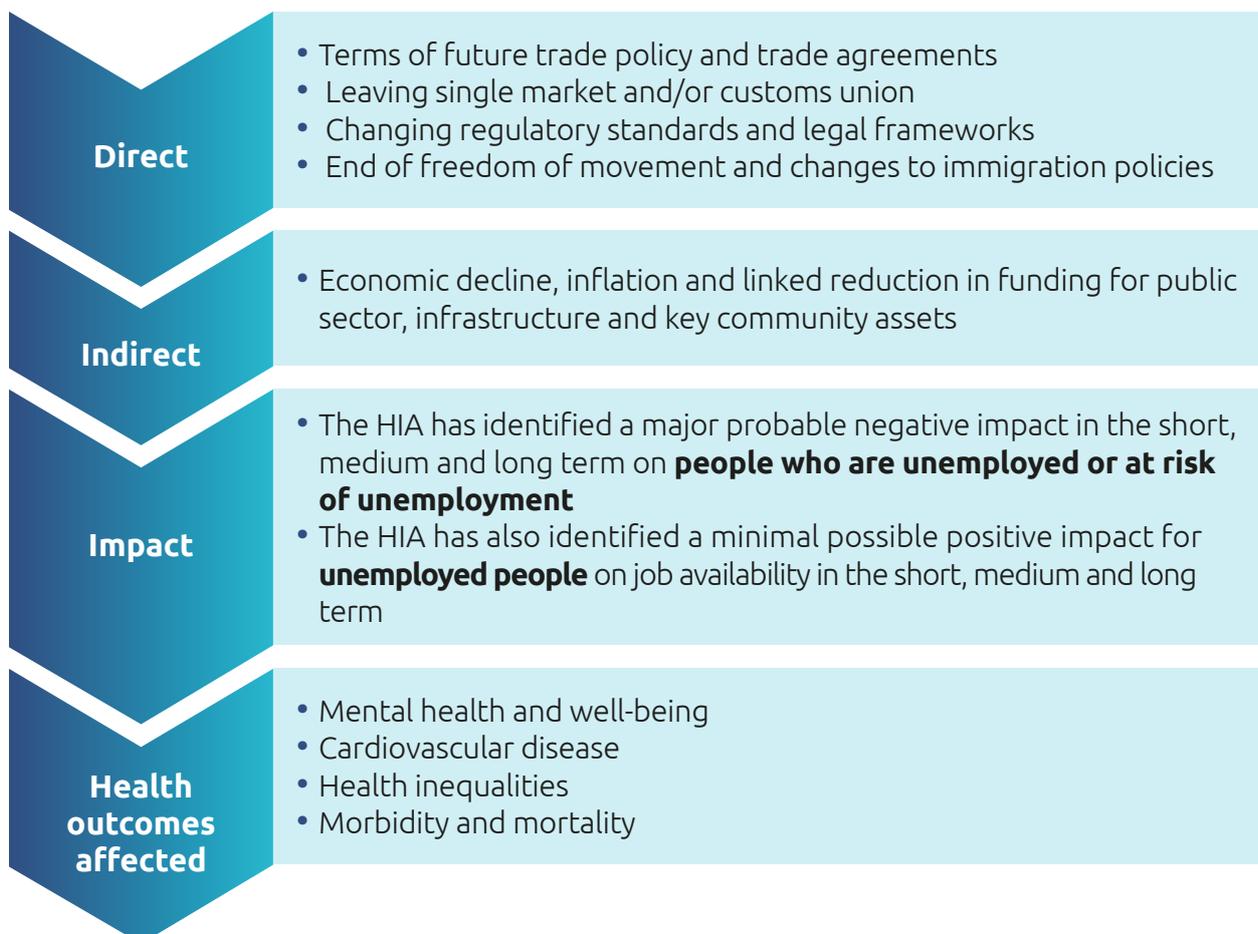
Key relevant facts include:

- For the period May 2018 to July 2018, 22.2% of the Welsh population (aged 16 to 64) were economically inactive
- In some areas of Wales almost 15% of young people are NEET

Previous sections in this report and the Community Health Profile - Section 4.2.6 of this report and Section 4.6 of the Health Profile (Technical Report: Part 2) - have summarised key evidence on the potential impacts on unemployment in Wales.

Summary of Key Impacts: people who are unemployed / at risk of unemployment

The direct and indirect policy mechanisms and impacts of Brexit on people who are unemployed / at risk of unemployment have been identified as follows:



4.4.3 Geographical groups

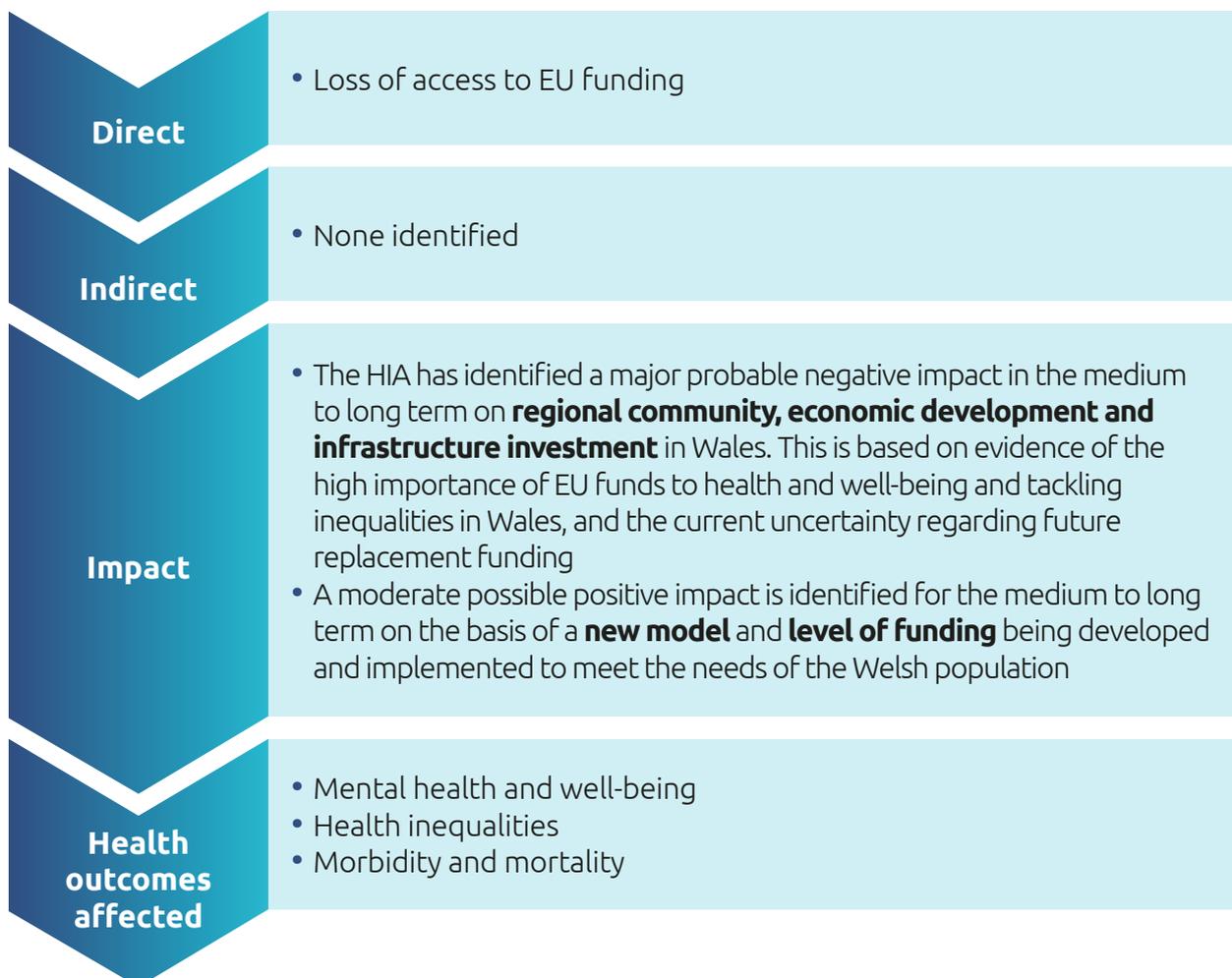


People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding

Section 4.2.7 reviews the evidence gathered in the HIA on the impact of the loss of EU funding for community, economic and infrastructure investment for addressing inequalities.

Summary of key impacts: People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding

The direct impact of Brexit on people living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding is as follows:



Current Policy Statements: people living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding

Further information on policy statements is available in Section 4.2.7.

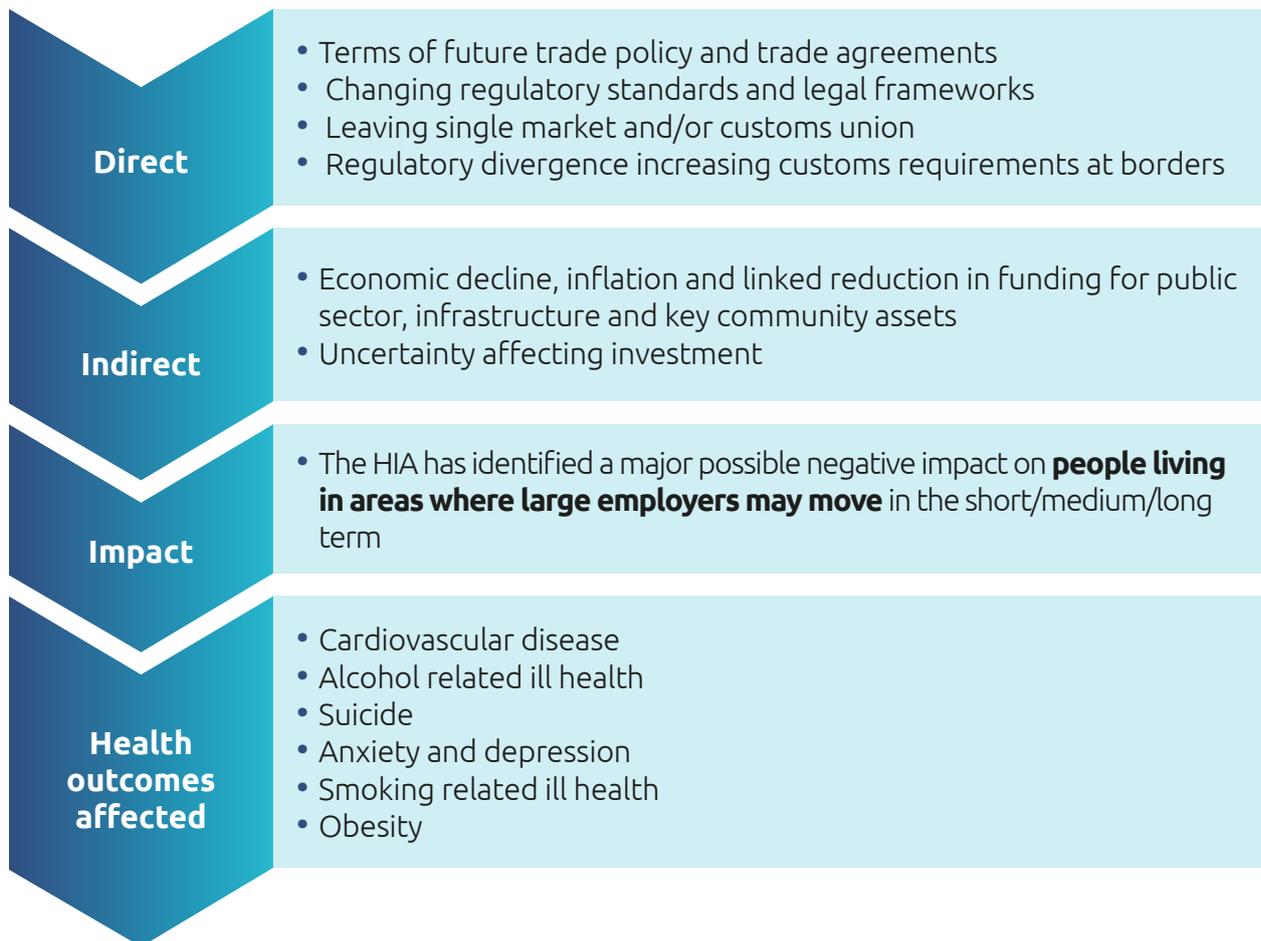
People living in areas where large employers may move

Section 4.8 of the Community Health Profile (Technical Report: Part 2) provides data on this population group. The Office of National Statistics reports that the three areas in Wales with the highest proportion of the workforce, employed by a large employer (250+ employees) are Cardiff (52.7%), Newport (52.6%) and Flintshire (49.7%) (Office for National Statistics, 2017).

Section 4.2.6 of this report has previously summarised and documented the evidence gathered in the HIA of potential impacts on job security in Wales.

Summary of Key Impacts: People Living in Areas Where Large Employers May Move

The direct and indirect policy pathways and subsequent impacts of Brexit on people living in areas where large employers may move are as follows:



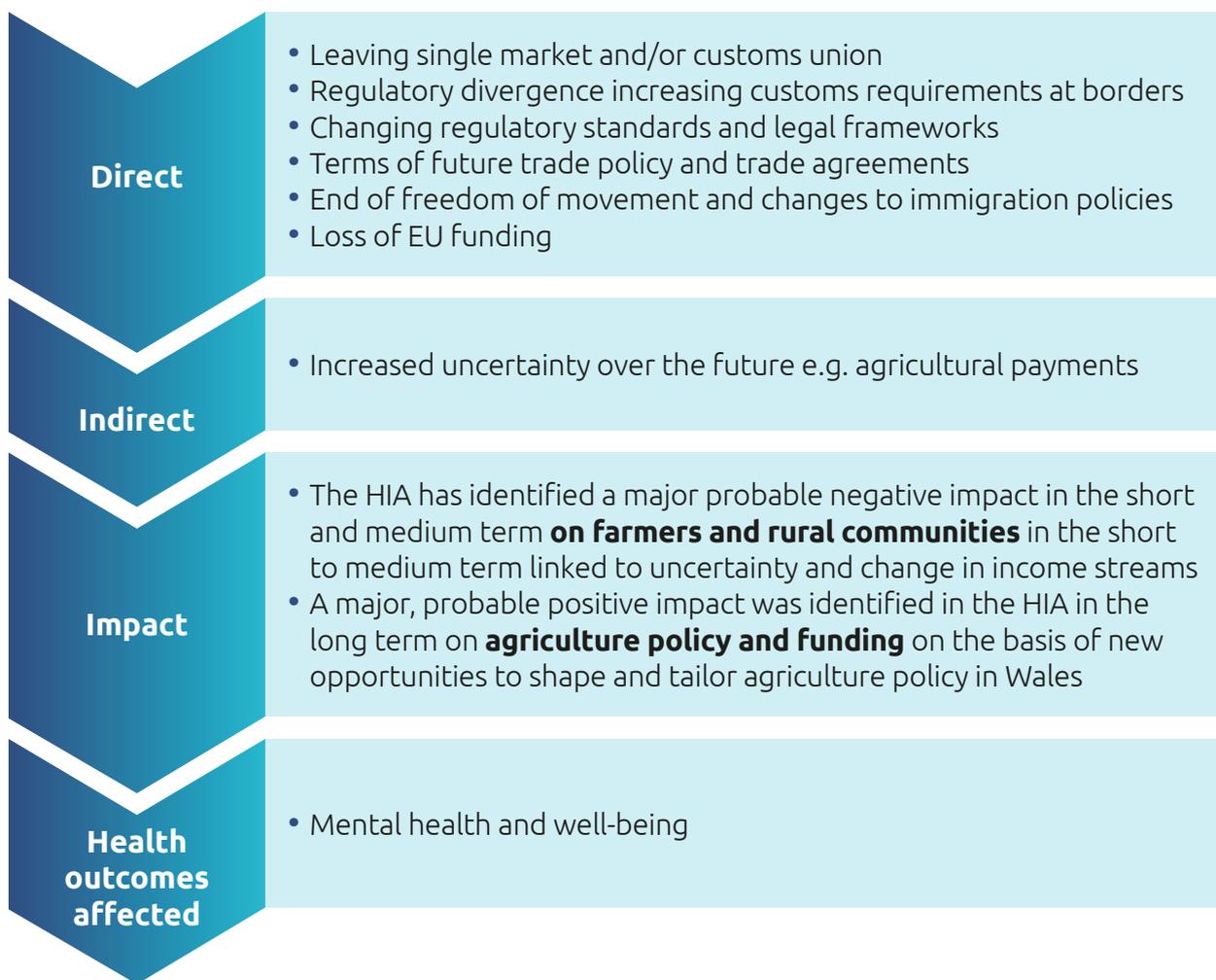
Farmers / Rural Communities

Section 4.2.7 of this report reviews the evidence gathered in the HIA on potential impact of changes to agriculture policy and payments, which in turn will impact significantly on farmers and rural communities in Wales including on their mental health and well-being.

Table 28 in the Community Health Profile for the HIA (Technical Report: Part 2) provides data on the total number of jobs in the agriculture sector for both Wales and the UK. This highlights the relative importance of agriculture to the Welsh economy (4.07% employment) compared with the UK average (1.42%) (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017a). Therefore, any changes to agriculture policy and payments will have a greater impact on Wales. Section 5.5 of the Community Health Profile for the HIA (see Technical Report: Part 2) reviews data on rural communities. Of note is that people in rural areas are significantly more likely to feel a sense of community (57.7% vs. 46.2%) and are significantly more likely to be able to afford everyday goods and activities (86.8% vs. 83.1%). Rates of suicide are higher in rural communities, although this difference is not statistically significant (Public Health Wales Observatory, 2018a). An opportunity is identified in the HIA in Section 4.2.1 to develop more sustainable food production in the long term as a result of Brexit.

Summary of Key Impacts: Farmers / Rural Communities

The direct and indirect policy pathways and potential impacts of Brexit on farmers / rural communities are as follows:



Current Policy Statements: farmers / Rural communities

Further information on policy statements is available in Section 4.2.7.

Port Areas in Wales

Port areas were identified at the HIA workshop and in an interview (INT17) as a geographical area that could be particularly impacted by Brexit. Wales has 32 ports, ranging from harbours like Tenby to major ports like Milford Haven. Of these, there are seven that the UK Government's Department for Transport classifies as "major ports"; these are Milford Haven, Fishguard, Holyhead, Newport, Cardiff, Port Talbot and Swansea (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b).

It is estimated that Welsh ports directly support 18,400 jobs, and three of the Welsh Government's eight Enterprise Zones (Anglesey, Haven Waterway, and Port Talbot Waterfront) contain ports, reflecting their economic significance (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b). Ports play an important role both as key transport and logistics hubs that support national trade and tourism and as a driver of local economies. Alongside freight and passenger services, the port of Milford Haven has highlighted its role in supporting the fishing industry, wave and tidal energy, shipbuilding, engineering and fabrication (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b).

Each year, Welsh ports handle over 56.4 million tonnes of UK freight, equivalent to 11% of total UK trade by volume. The busiest port in Wales in terms of freight transport is Milford Haven, which handled 37.7 million tonnes of freight traffic in 2015. This is the fourth busiest of all UK ports by tonnage, behind Grimsby and Immingham, and London. At present, over 70% of Irish cargo passes through Wales (National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b).

Research has confirmed that an impact on ports is possible. There are three main areas of concern for ports following the UK leaving the EU, including:

- Displacement of traffic from Welsh ports to ports in England and Scotland with traffic flowing via Northern Ireland with a linked reduction of competitiveness
- The technological and logistical challenges of new customs arrangements
- A lack of appropriate infrastructure and physical capacity to accommodate new border controls and customs checks

(National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b)

There are currently no Border Inspection Posts at Welsh ports or Designated Points of Entry in Wales (Food Standards Agency, 2018a). Given that any high-risk food will have to be checked on entry, without the right infrastructure trade may have to be diverted to other ports, for example, Liverpool (INT).

The National Assembly for Wales External Affairs and Additional Legislation Committee is:

“concerned that a soft border between Northern Ireland and the Republic, and a hard maritime border between Wales and the Republic of Ireland, could severely disadvantage Welsh ports and result in a loss of competitiveness leading to a displacement of traffic from Welsh ports – principally Holyhead – to ports in England and Scotland, via Northern Ireland”

(National Assembly for Wales External Affairs and Additional Legislation Committee, 2017b) (p.15).

One participant in the HIA (INT17) highlighted that there could be a reduction in heavy goods vehicular transport through north Wales if port arrangements or customs change. There could also be impacts from loss of income from people travelling through Wales to Ireland and reduced goods deliveries.

Summary of Key Impacts: Port Areas in Wales

The direct and indirect policy pathways and subsequent impacts of Brexit on port areas in Wales are as follows:



Coastal Areas

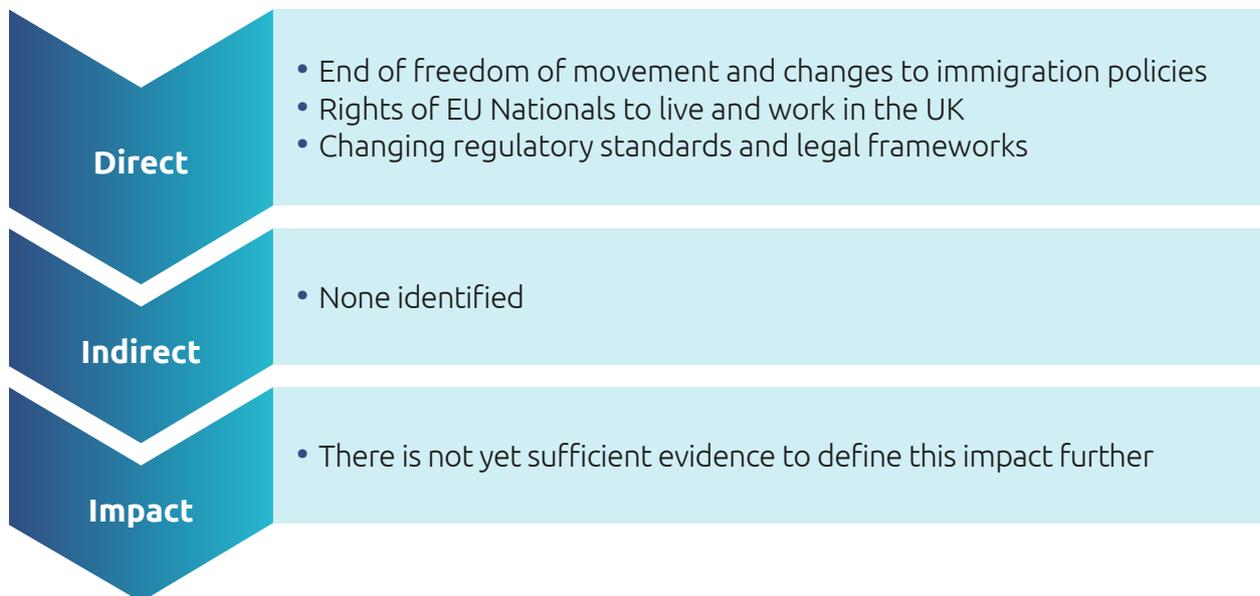
Two key issues have been raised in the HIA in relation to coastal areas. Firstly, the regulation of bathing water quality in Wales which has been driven by EU frameworks, and secondly the economic importance of tourism and non UK EU nationals working in the tourism sector in these areas (INT17).

5% of the tourism workforce in Wales are from the EEA (Table 10, Community Health Profile, Technical Report: Part 2) and the British Hospitality Association believes that, in a scenario of restricted access to the EU workforce, the sector's future labour market requirements may not be met from the UK resident population in the short to medium term (Welsh Government, 2017a)(p15).

Wales' bathing waters are of great importance for the economy, for local communities and for tourism. Over 60% of the population of Wales live and work in the coastal zone, with all major cities and many important towns located on the coast. The coastal and marine environment contributes £6.8 billion to the economy of Wales and supports more than 92,000 jobs (Natural Resources Wales, 2017). European water policy has played an important role in protecting water resources. In 2017, 103 of the 104 designated Welsh bathing waters met the standards set by the EU Bathing Water Directive (Natural Resources Wales, 2017) and Gulland notes that coastal and inland bathing water has improved substantially over the past 20 years (Gulland, 2016).

Summary of Key Impacts: Coastal Areas

The direct impacts identified by the HIA on coastal areas in Wales are as follows:



4.4.4 Groups who suffer discrimination or other social disadvantage



Black and Minority Ethnic (BME) groups

Wales is less ethnically diverse than all areas of England except the North East. Just over 6% of the population define themselves as not White British or Irish, although this represents a doubling of the proportion since the previous Census in 2001. The population defining themselves as not White British or Irish is not distributed evenly across Wales but is concentrated in urban centres. Cardiff has the highest proportion with just under 20% of its population not being White British or Irish. In rural areas and the south Wales Valleys the proportion is as low as 2.5%. The BME population has a younger age profile than the White British or Irish group (Public Health Wales Observatory, 2015).

Pupils from ethnic backgrounds other than White British attend schools in all 22 local authorities in Wales but these pupils are not evenly dispersed around Wales. They are concentrated in three local authorities: Cardiff (40%), followed by Newport (12%) and Swansea (10%). Even within these local authorities, pupils are more likely to be concentrated in particular schools (Lewis & Starkey, 2014).

Stakeholders in the HIA workshop identified a potential negative impact via reports of increased hate crime, reduced tolerance in Wales and an associated cultural change post withdrawal. Heald et al (2018) provide an expert view that the mental health of BME groups may be negatively impacted by reported rises in hate crime following the EU referendum and also by the loss of application in the UK of the EU Charter of Fundamental Rights, which has strengthened the institutionalisation of equality in the UK (Heald, Vida, & Bhugra, 2018). Two systematic reviews have found a significant relationship between reported racial discrimination and mental health outcomes (Paradies, Ben, Denson, Elias, & Priest, 2015) (Priest, Paradies, Trenerry, Truong et al., 2013).

The Home Office (2018) has reported:

- A general increase in the number of racially or religiously aggravated offences recorded by the police over the five-year period from April 2013 (The Home Office, 2018) (this is reported by the Home Office as reflecting improvements in crime recording by the police (Hambly et al., 2018))
- A rise in racially or religiously aggravated offences during the EU Referendum campaign, from April 2016, to a peak in offences after the result, in July 2016 (The Home Office, 2018)

Other academic analyses of hate crime data have also reported a significant spike in hate crime following the EU Referendum (Devine, 2018).

Analysis of victimisation by personal and household characteristics shows that for personal hate crime the risk of being a victim varies by sociodemographic characteristics. However, it should be noted that differences in victimisation rates between ethnic groups may be at least partly attributable to factors other than ethnicity, such as age profile within ethnic groups with some having a larger proportion of young people, who are at higher risk of crime (The Home Office, 2018).

The risk of being a victim of personal hate crime in the 2015 / 16 to 2017 / 18 Crime Survey for England and Wales (CSEW) was highest, for example, among:

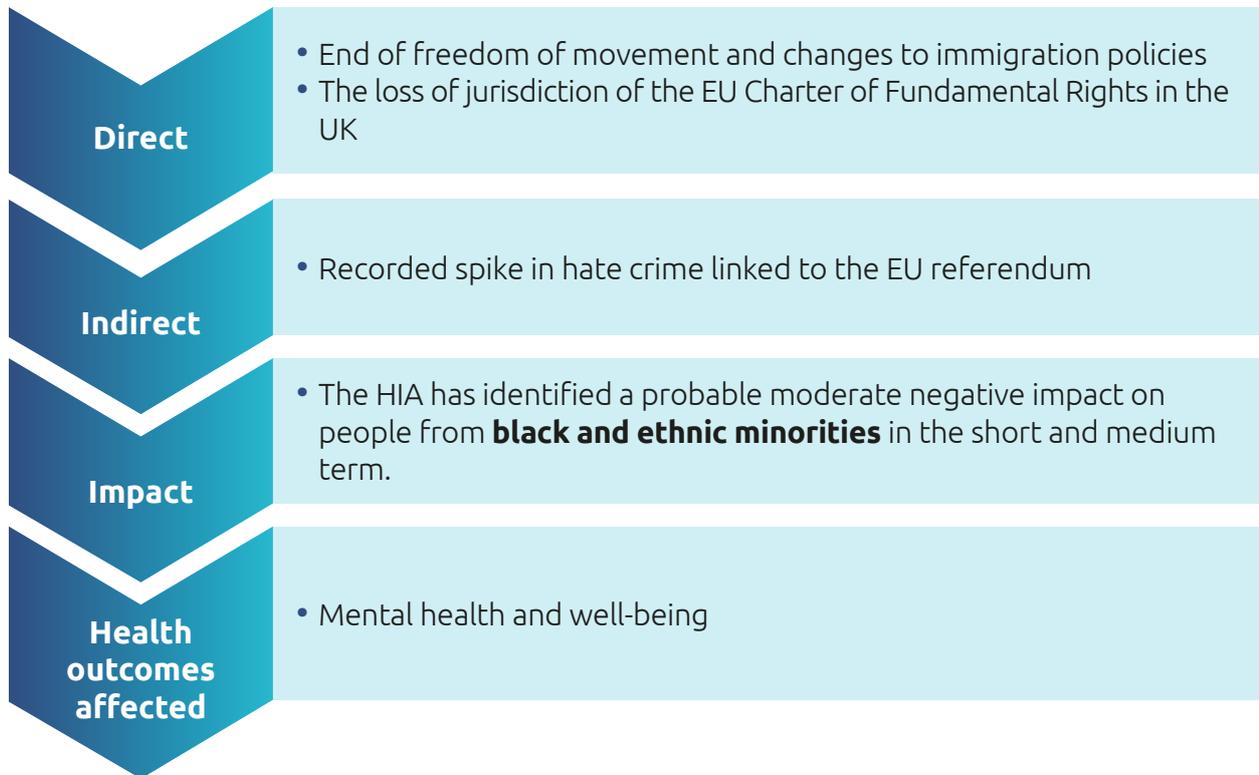
- People aged 16 to 24 (0.3% experienced personal hate crime)
- Men aged 16 to 24 (0.5% compared with less than 0.03% of men aged 75 and over)
- Those with the religious group Muslim (0.6% compared with 0.1% of Christian respondents)
- People with Asian backgrounds (0.4% compared with 0.1% of White adults)
- Those whose marital status was single or divorced (0.3% compared with 0.1% of married adults)

(The Home Office, 2018)

The Institute for Public Policy Research (IPPR) has estimated the different impacts of the UK leaving the EU based on sectoral GVA analysis and weighting of the sectoral impacts using data on ethnic employment patterns from the Labour Force Survey. The IPPR analysis has not found any evidence that the GVA impacts will affect ethnic groups differently in the case of a “soft Brexit”. However, they have identified that Asian / Asian British and Black / Black British groups are somewhat more affected in the case of a “hard Brexit”, because they tend to work in services industries, which are more likely to suffer in a “no deal” scenario (notably finance and other business services) (Morris, 2018).

Summary of Key Impacts: Black and Minority Ethnic (BME) Groups

The direct and indirect policy pathways and resulting impacts of Brexit on black and ethnic minorities in Wales are as follows:



4.4.5 Sex and Gender Groups



Women were identified by participants in the HIA workshop as potentially experiencing negative impacts of Brexit. This could be due to being in lower income employment such as part time jobs and / or a result of possible increased expectations for them to provide more care to family and elderly relations in the event of increased pressures on social and health care services. There may also be mental well-being impacts from having to manage this and any reduced household / family budgets if there is an economic downturn.

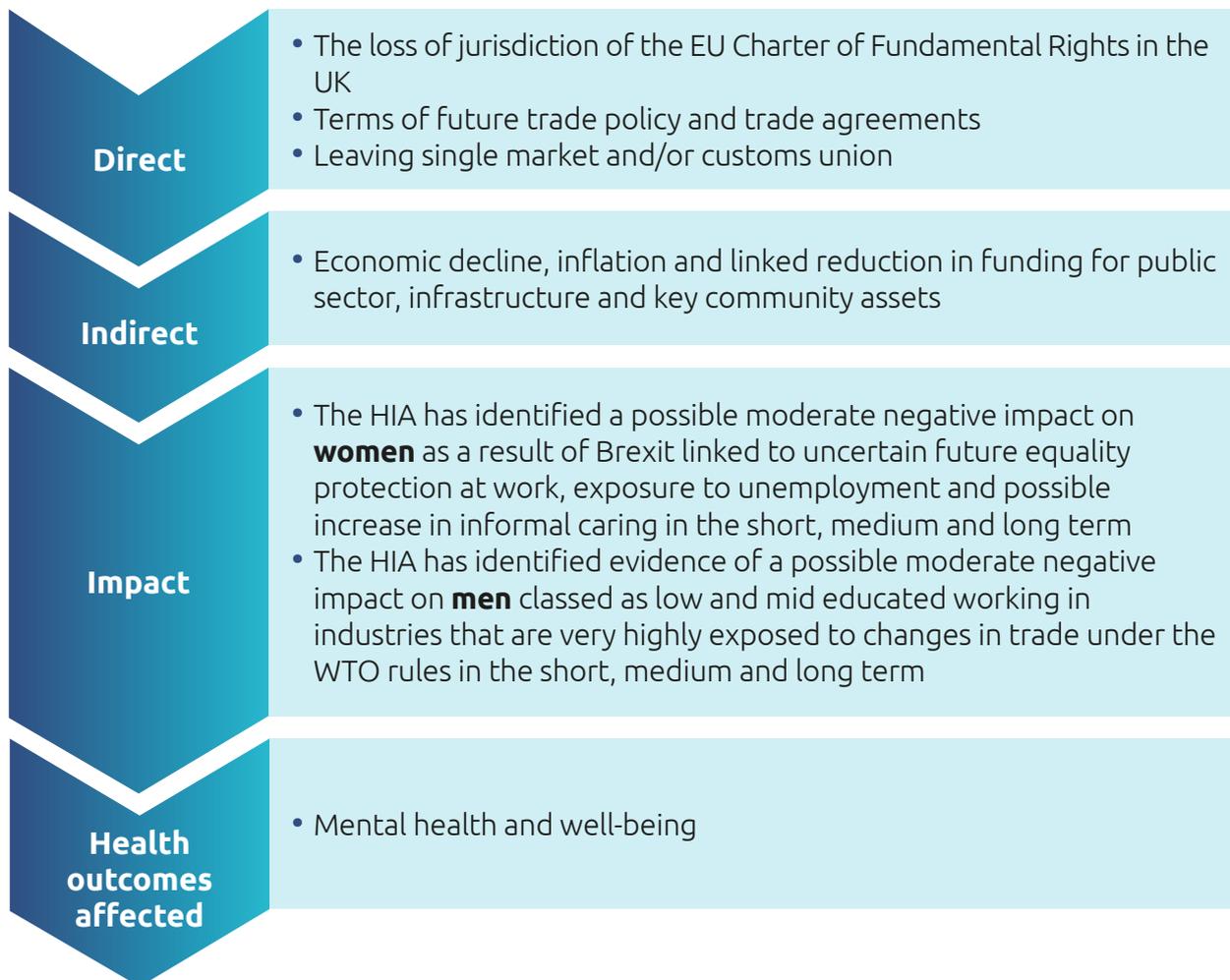
Economic analysis suggests there will be different impacts on employment regionally, by sector and by gender, dependent on different Brexit scenarios (Morris, 2018). Although it is predicted that the negative impacts are larger in certain goods sectors where men tend to work (for example, chemicals and electrical equipment), these are relatively small sectors. In addition, there are some male-dominated sectors where impacts are predicted to be positive, for example agriculture. In contrast, women tend to work in services sectors (for example, education, health and social care, and retail), where the London School of Economics (LSE) analysis indicates that GVA impacts of Brexit will be more negative (Morris, 2018). The analysis suggests that both gender groups may be affected to a similar degree, although women will be slightly more affected in the event of a “hard Brexit” (Morris, 2018).

Gender equality is recognised as a fundamental right in EU law and since the UK joined the EU in 1973, women have gained significantly from this strong underpinning to their rights in the workplace (Trade Union Congress, 2016). Further appraisal in relation to the potential loss of rights is discussed in Section 4.2.4.

In Wales, it is estimated that 21% of men classed as low educated, and 17% of men classed as mid education level, work in industries that are very highly exposed to changes in trade under the WTO rules (Levell & Keiller, 2018).

Summary of Key Impacts: Sex and Gender Groups

The direct and indirect policy pathways and the potential impacts of Brexit on women and men in Wales are as follows:



4.4.6 Other Groups



Families Impacted by Uncertain / New Immigration Regulations (EU Nationals)

Data contained in the Community Health Profile Section 2.1 (see Technical Report: Part 2) gives an insight into this population group:

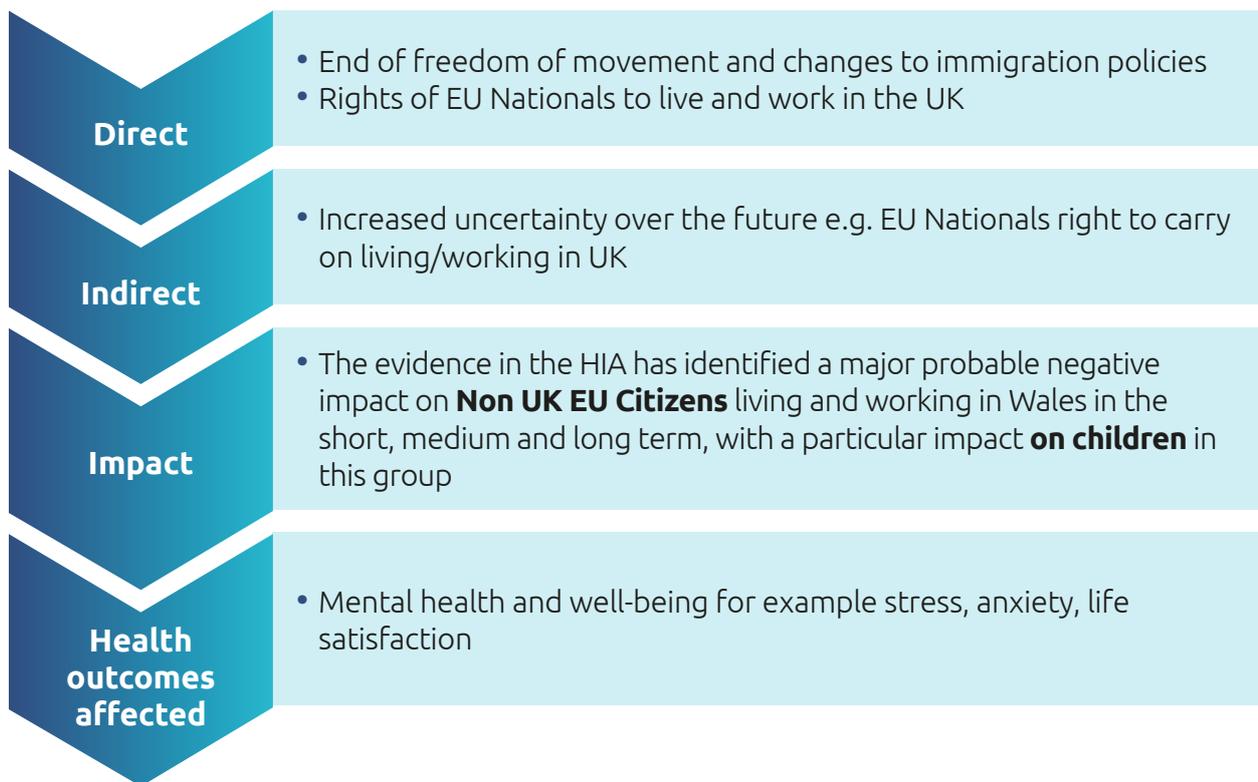
- Migration accounted for over 90% of the population increase in Wales between 2001 and 2011 (from UK, EU and internationally)
- 79,100 people born outside the UK and currently resident in Wales are from other EU Member states (2.6% of the Welsh population)
- Annual migration flows to Wales from the EU is approximately 7,000 people per year
- The three most common foreign nationalities of residents in the UK on census day were Polish, Irish and Indian
- Migrants from EU member states who arrived in Wales in the last 5 years may not be entitled to permanent residency
- The majority of people who reported their ethnicity as “White other” (for example White, non-British, non-Irish) are within the young adults and working age population (20 to 44 years), and in the age group of 0 to 4 years
- 4% (around 20,000) of all Wales-resident children live in a household where at least one person is a non-UK EU citizen. Around 7,000 of this groups are aged 0 to 4
- Recent labour market figures released in November 2018 show a 132,000 drop in the number of citizens from other European Union countries working in Britain over the last year (ONS data, 2018)

Stakeholders in the HIA workshop identified that Brexit could have a detrimental impact for this group and in particular, those who have lived and worked in the UK for less than 5 years and so may not qualify for “settled status”. This impact is widely identified in the

literature. Attendees at the HIA workshop thought this could potentially be mitigated by more certainty from any post Brexit agreement. Participants also identified that there could be a potential fracturing of families, particularly for EU nationals and families with children who have British citizen status from birth. Reduced tolerance towards EU nationals in Wales and an associated cultural change post withdrawal were also highlighted as issues by attendees.

Summary of Key Impacts: Families Impacted by Uncertain / New Immigration Regulations (EU Nationals)

The direct and indirect policy pathways and impacts of Brexit on non UK EU National families affected by uncertain / new immigration regulations are as follows:



Current Policy Statements: Families Impacted by Uncertain / New Immigration Regulations (EU Nationals)

For EU citizens residing in the UK, the UK Government has developed the EU Settlement Scheme. According to the Home Office, the EU Settlement Scheme enables EU citizens resident in the UK and their family members to continue living in the UK permanently. Consistent with the draft Withdrawal Agreement with the European Union, the EU Settlement Scheme means that:

- By 31 December 2020, EU citizens and their families who have resided in the UK for five years or more will be eligible for ‘settled status’ enabling them to stay in the UK indefinitely
- EU citizens and their family who arrive by 30 December 2020 but have not been continuously resident in the UK for five years will be eligible for ‘pre-settled status’, enabling them to reside in the UK for five years and allowing them to apply for settled status

- EU citizens and their families with either settled or pre-settled status will have the same access to health care, pensions and other benefits that they had previously

“The rights of EU citizens under EU law will be unchanged until 31 December 2020. The full roll-out of the EU Settlement Scheme is expected by the end of March 2019 and the deadline to apply for settled or pre-settled status for those residing in the UK by 31 December 2020 will be 30 June 2021. However, the Home Office has not explicitly confirmed whether the deadline for applications will change in the case of a “no deal” Brexit”

(National Assembly for Wales Research Service, 2018c).

The most recent Withdrawal Agreement and political declaration agreed with the EU on 25 November 2018 states that free movement will end and the UK government has stated that the future immigration system will be based on skills, not on where the person comes from (NHS Confederation European Office, 2018b).

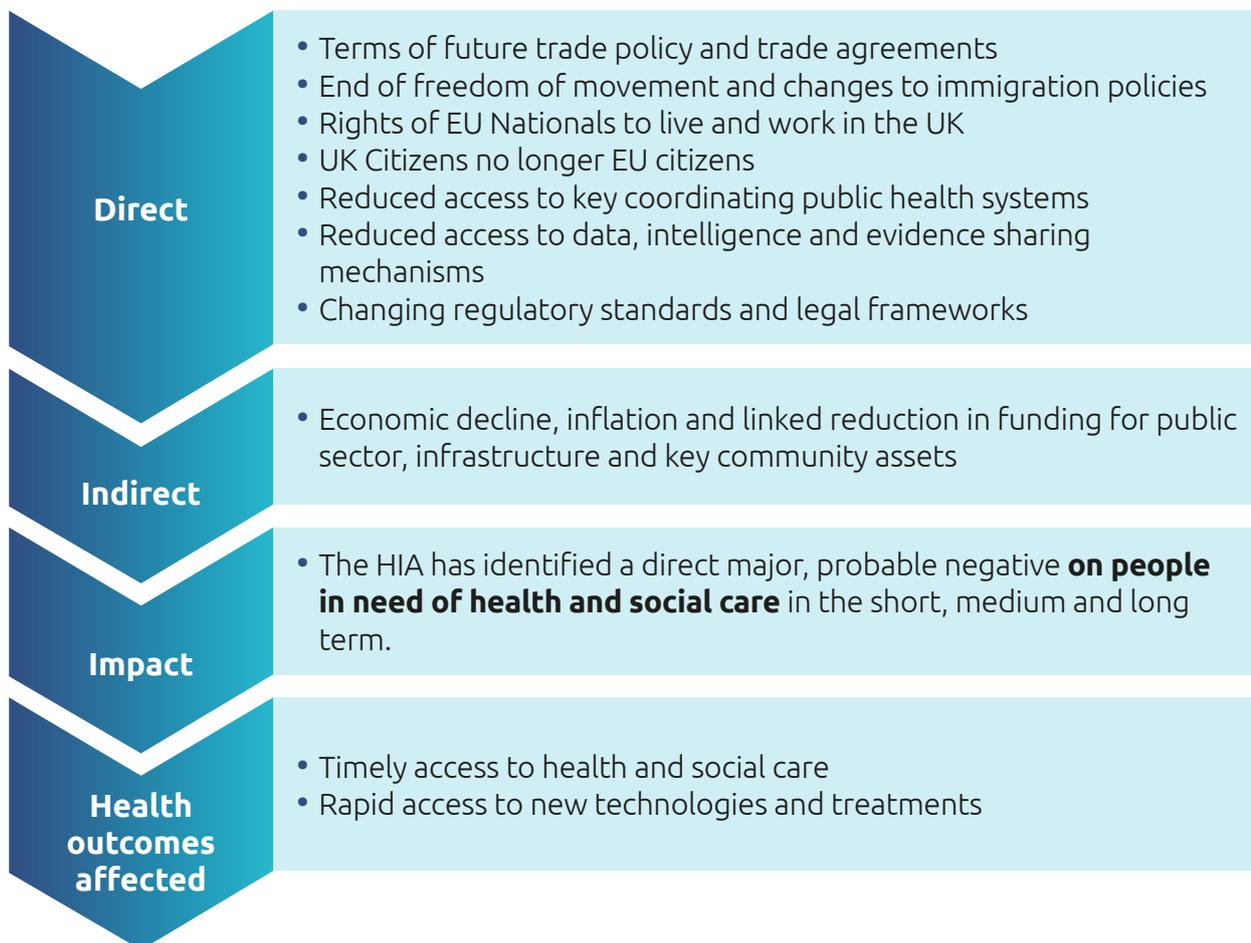
People in Need of Health and Social Care Services

In the 2011 census, Wales had a higher percentage of residents with a long term illness (23%, 696,000 people) than any English region, this was also true in 2001 (Office for National Statistics, 2012). Over 50% of older people in Wales have a limiting long term illness (Public Health Wales Observatory, 2018a). Therefore, the Welsh population is significantly exposed to changes in the capacity of health and social care services. Section 4.2.9 of the HIA covers in detail the evidence of the potential impact of Brexit on access to health and social care services. Stakeholders in the HIA workshop also identified people with health conditions as being at risk of potential negative impacts and these concerns are reflected in the literature review (see Technical Report: Part 1).

Potential staffing issues within the NHS and social care sector following the UK leaving the EU, alongside the health consequences attributed to any economic difficulties and unemployment, has the potential to increase pressures on health and social care services (Menon, 2018) (Davies, Homolova, Grey, & Bellis, 2017) (World Health Organization, 2011). In some areas of Wales there are existing challenges with access to services. For example, a significantly lower percentage of residents in Gwynedd Local Authority (LA) (60.6%) and Powys LA (67.6%) were satisfied with their ability to get to / access facilities and services they need, compared to the Welsh average (77.1%). A significantly higher percentage of residents in Flintshire, Carmarthenshire and Cardiff LAs were satisfied with their ability to get to / access facilities and services they need (85.9%, 85.2% and 86.5% respectively) (see Table 5, Community Health Profile, Technical Report: Part 2).

Summary of Key Impacts: People in Need of Health and Social Care Services

The direct and indirect policy pathways and subsequent impacts of Brexit on people in need of health and social care in Wales are as follows:

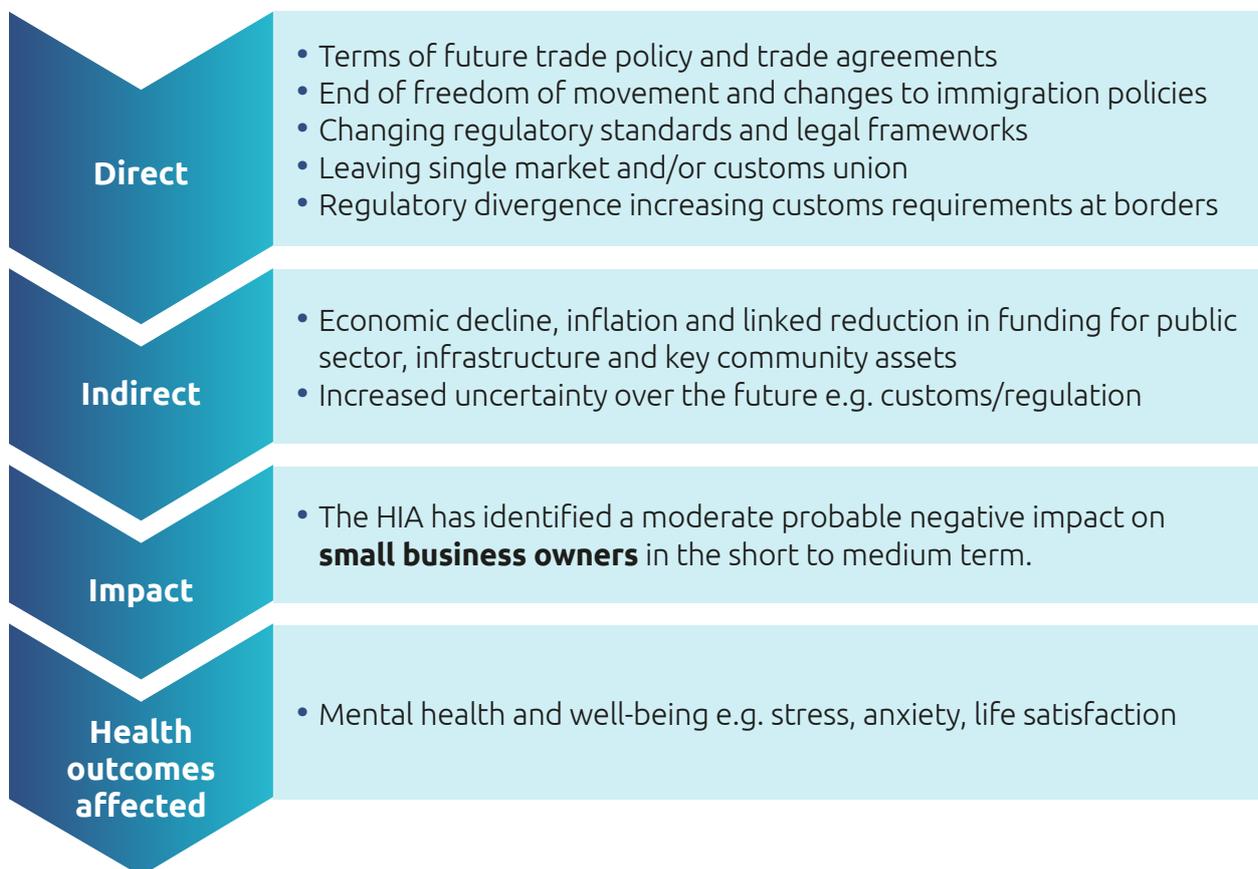


Small Business Owners

Across Wales, the vast majority of enterprises (89.1%) and local units (83.1%) are micro industries that employ 0 to 9 staff (see Section 4.7, Community Health Profile, Technical Report: Part 2). Stakeholders in the HIA workshop identified Small to Medium Enterprise (SME) business owners who import from or export to the EU as a key population group impacted by Brexit. Participants were concerned that withdrawal from the EU could have a negative impact on this group due to the uncertainty of any future trade and regulation deals, potential increased paperwork and checks, costs or workforce issues. This group was also raised as a concern at an event on post Brexit funding for Wales (Swansea University Morgan Academy, 2018).

Summary of Key Impacts: Small Business Owners

The direct and indirect policy pathways and impacts of Brexit on small business owners in Wales are as follows:



Current Policy Statements: Small Business Owners

The “no deal” notices from the UK Government include a range of advice for businesses (Department for Exiting the European Union, 2018).

The Welsh Government has put in place a new Business Wales Brexit Portal to provide companies in Wales with up-to-date information and advice on key issues including international trading and workforce planning. It also includes a diagnostic tool that helps businesses to identify how prepared they are for Brexit, recommends actions they should take to increase their resilience and signposts them to additional sources of support.

5 The Impact of Brexit on Health and Well-Being: The Wider Policy Implications For Wales

This section summarises the key themes identified during the HIA evidence gathering process, relating to the wider policy context and policy implications for Wales.

Stakeholders at the HIA workshop and in interviews (INT17, INT11) have related that the Well-being of Future Generations (Wales) Act 2015 (WFG Act) provides a powerful legislative framework which promotes collaboration, integration, long term thinking, preventative approaches and public involvement. This legislation includes mechanisms for holding public bodies to account through the Office of the Future Generations Commissioner for Wales and the Wales Audit Office. Participants have stated that any new devolved powers, policy frameworks or levers which emerge from Brexit or post withdrawal should take account of these principles, the sustainable development principle and its five ways of working.

An interviewee (INT17) stated the importance of using the WFG Act “*lens*” to consider what will happen in 20 to 25 years’ time as a consequence of Brexit. People and places may be able to cope with austerity for a few years, but any continued economic pressure will lead to major issues over the longer term. This is supported by the analysis of Elliott et al on the impact of the 2008 economic crises in Wales (Elliott et al., undated) (See Section 3).

Stakeholders have identified that the WFG Act can be a positive force to counteract any potential negative impacts of Brexit, and in theory can help provide focus to place well-being at the centre of what all public bodies and other agencies do in Wales. Responding to a joint National Assembly for Wales Committee report recommending further incorporation of international human rights treaties in Welsh legislation, the former First Minister, Carwyn Jones, confirmed that the WFG Act will be its principle legislative instrument for doing so (National Assembly for Wales Research Service, 2018d). Stakeholders in the HIA workshop stated that the WFG Act can be used to shape how they would like the future in Wales to look. There is a need to also understand how the UK’s and Wales’ ‘norms’ have been influenced by being in the EU. Therefore, there is a need to focus on the longer-term landscape in order to reimagine and develop new ‘norms’.

Overall, a number of stakeholders in the HIA workshop recommended that there is a focus on the sustainable development principle (which looks to the long term future) rather than on just managing the short term, immediate consequences of Brexit.

Brexit was believed by participants in the HIA workshop to provide a positive opportunity to discuss future devolved powers (which may give a more economically sustainable platform that stimulates both growth and health) and the potential to build on these. Brexit has provided the opportunity to reflect on current policy and identify potential new long term opportunities for policy and devolution, which may be more appropriate to meet Wales’ needs in the future. Examples of this are the opportunity for a new land

management and resources policy and to build this on existing strategic drivers; and the opportunity to 'sell' Wales more forcefully at an international level, stimulate business opportunities for existing and new sectors / companies and foster non-EU relationships and collaboration. There is also the potential to reshape models of funding for Wales.

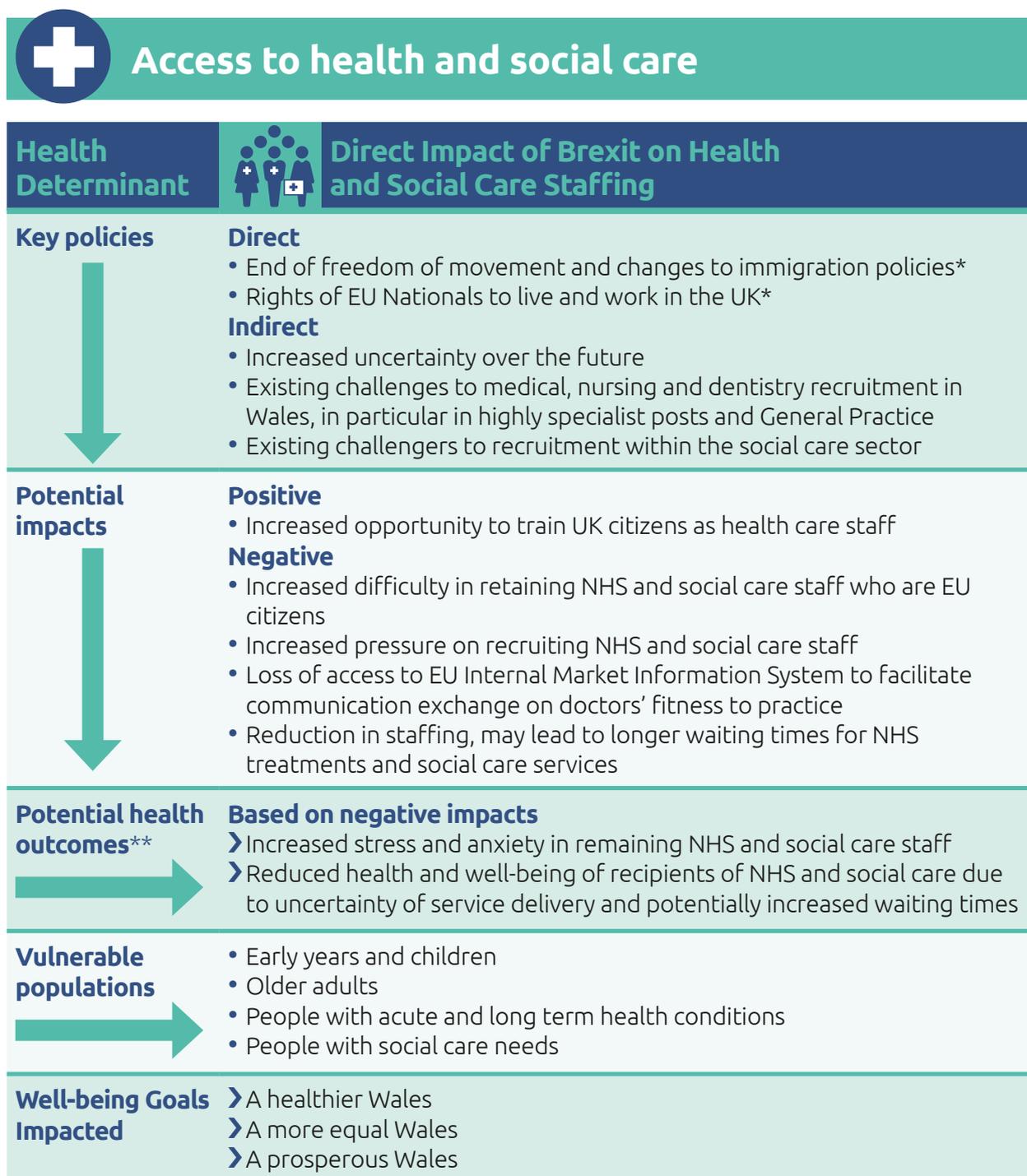
Some workshop participants flagged that the political context of Wales has a key role to play in shaping future regulation. There could be potential for divergence between devolved and non-devolved policies, and this could lead to scenarios such as increased internal competition between the four nations by one nation providing more or less favourable employment, working or economic conditions. However, in respect to business and trade many trade policies are UK based and not devolved to Wales. As discussed in the preceding chapters, attendees at the participatory workshop identified possible negative impacts of Brexit both in the short and the longer term. However, participants also believed that the unique policy context in Wales, driven by devolution, could provide a number of potential positive impacts and opportunities for the people of Wales.

A major unintended consequence of Brexit highlighted by stakeholders in the HIA workshop is the huge opportunity cost of public bodies and agencies focusing on preparing for withdrawal from the EU, with many other policy / implementation priorities being placed on hold or delayed. If there are any economic challenges that emerge post Brexit, there is a risk that GDP and economic development may be prioritised over these policy priorities and take precedence over the implementation of the Wales' well-being goals, the ways of working, and the sustainable development principle.

Climate change has been flagged as a potential area of negative impact for health and well-being. Participants in the HIA workshop suggested that any post Brexit trade deals with nations who do not have the same focus on climate change or carbon reduction, could result in reduced thresholds for emissions or lead to increased distances for importing / exporting food and other products from non EU nations, which could have a long term detrimental impact across the world.

6 Flowcharts

This section contains flowcharts which demonstrate how different policy mechanisms related to Brexit may impact on the determinants of health and well-being, on health outcomes and on vulnerable populations.



^Devolved policy area * Non-devolved policy area

**These have been inferred from the available evidence



Access to health and social care

Health Determinant		Direct Impact of Brexit on Medicines, Medical Devices / Consumables
Key policies 	Direct	<ul style="list-style-type: none"> • Terms of future trade policy and trade agreements^{^*} • Reduced access to key coordinating public health systems such as European Medicines Agency (EMA) and Euratom^{^*} • Reduced access to data, intelligence and evidence sharing mechanisms^{^*} • Changing regulatory standards and legal frameworks^{^*} • Leaving single market and / or customs union[*] • Regulatory divergence increasing customs requirements at borders[^] • The loss of jurisdiction of the EU Charter of Fundamental Rights[*] and European Court of Justice[*] (affects patient data sharing needed for clinical trials)
Potential impacts 	Positive	<ul style="list-style-type: none"> • Increase in development / manufacturing of medicines, medical devices and consumables in the UK Negative <ul style="list-style-type: none"> • Risk of disruption in the supply of medicines, medical devices and consumables imported into the UK from the EU • Reduced opportunities for Research & Development with potential delays in developing / approving new medicines, medical devices and consumables
Potential health outcomes^{**} 	Based on negative impacts	<ul style="list-style-type: none"> › Increased stress and anxiety if disruption to the supply of medicines, medical devices and consumables
Vulnerable populations 		<ul style="list-style-type: none"> • Early years and children • Whole population • Older adults • People with acute and long term health conditions
Well-being Goals Impacted		<ul style="list-style-type: none"> › A healthier Wales › A more equal Wales › A prosperous Wales

[^]Devolved policy area ^{*} Non-devolved policy area

^{**}These have been inferred from the available evidence

Access to health and social care

Health Determinant	 Direct Impact of Brexit on Public Health: Health Protection / Health Security
Key policies 	Direct <ul style="list-style-type: none"> • Reduced access to key coordinating public health system e.g. ECDC, EFSA and EMA^{^*} • Reduced access to data, intelligence and evidence sharing mechanisms^{^*} • Changing regulatory standards and legal frameworks^{^*}
Potential impacts 	Negative <ul style="list-style-type: none"> • Reduced coordination in identifying and managing infectious diseases • Loss of membership of key coordinating bodies e.g. ECDC, EEA role of risk assessment, data analysis, surveillance and coordinating public health systems • Loss of information / data and knowledge sharing on emerging health threats, outbreaks and coordination on managing incidents
Potential health outcomes^{**} 	Based on negative impacts <ul style="list-style-type: none"> ➤ Increased risk of the spread / outbreak of infectious diseases
Vulnerable populations 	<ul style="list-style-type: none"> • Early years and children • Young adults • Older adults • People with acute and long term health conditions
Well-being Goals Impacted	<ul style="list-style-type: none"> ➤ A healthier Wales ➤ A more equal Wales ➤ A globally responsible Wales

[^]Devolved policy area ^{*} Non-devolved policy area

^{**}These have been inferred from the available evidence



Access to health and social care

Health Determinant



Direct Impact of Brexit on Rare Diseases and Reciprocal Health Care

Key policies



Direct

- UK Citizens no longer EU citizens*
- Reduced access to key coordinating public health systems e.g. European Reference Groups, European Medicines Agency^{^*}
- Reduced access to data, intelligence and evidence sharing mechanisms^{^*}
- Changing regulatory standards and legal frameworks^{^*}
- Loss of jurisdiction of European Court of Justice (affects patient data sharing needed for clinical trials)*

Potential impacts



Negative

Rare diseases

- Reduced opportunity for researchers and institutions to work together
- Reduced access for people to participate in clinical trials

Reciprocal Health Care

- Higher costs for travellers to the EU which may impact on access to holidays / work / study opportunities
- Increased cost of accessing health care for UK citizens living in the EU
- Increased demand on NHS and social care services of returning UK Nationals

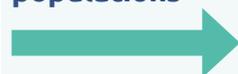
Potential health outcomes**



Based on negative impacts

- › Reduced health and well-being of UK citizens with rare diseases
- › Potential decline in health and well-being of UK citizens living in the EU

Vulnerable populations



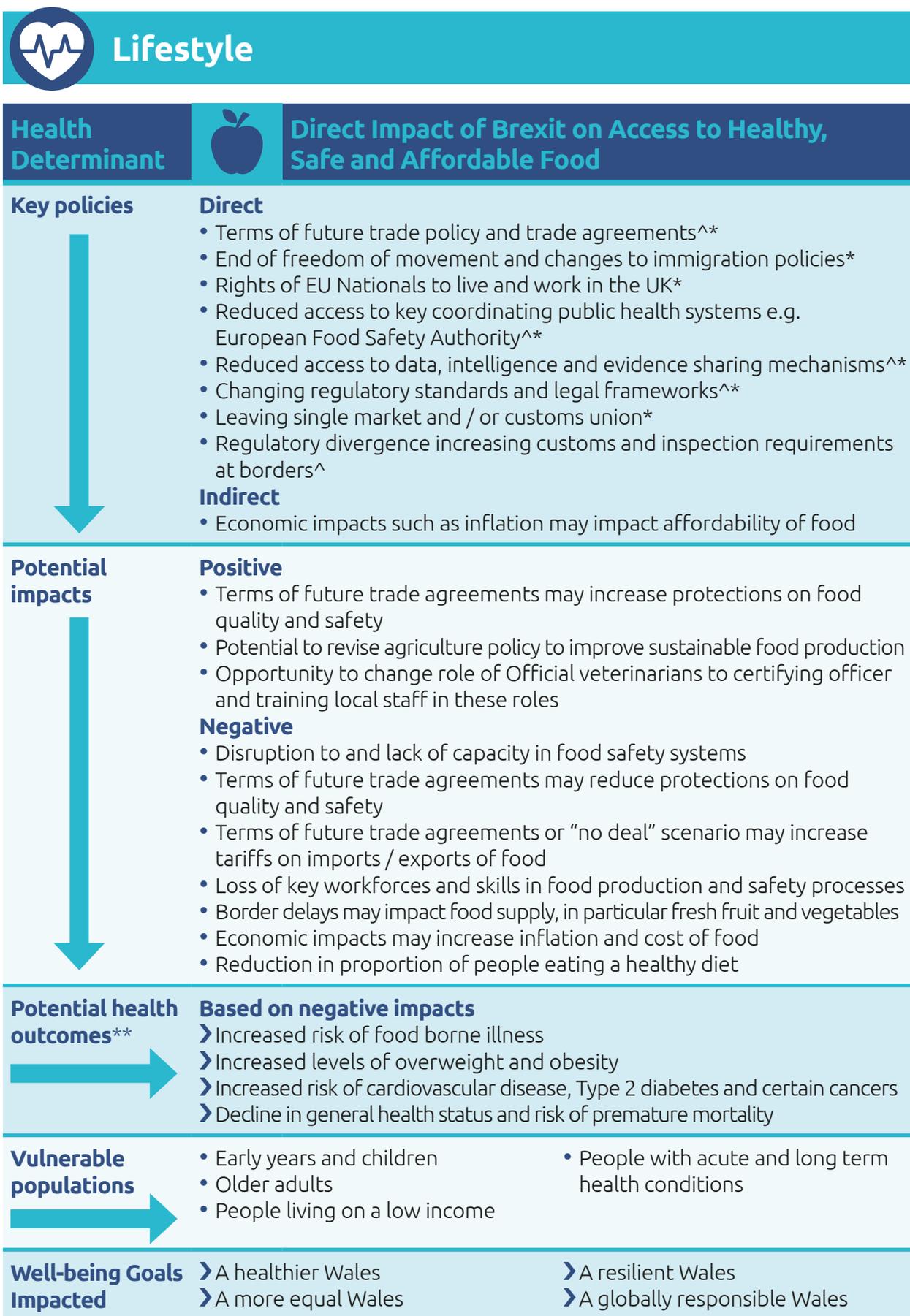
- Early years and children
- Young adults
- Older adults
- People with acute and long term health conditions
- People with rare diseases

Well-being Goals Impacted

- › A healthier Wales
- › A more equal Wales
- › A globally responsible Wales

[^]Devolved policy area * Non-devolved policy area

**These have been inferred from the available evidence



[^]Devolved policy area ^{*} Non-devolved policy area
^{**}These have been inferred from the available evidence



Lifestyle

Health Determinant



Direct Impact of Brexit on the Regulation and Use of Alcohol and Tobacco Products

Key policies



Direct

- Leaving single market and / or customs union*
- Changing regulatory standards and legal frameworks^{^*}
- Terms of future trade policy and trade agreements^{^*}
- Regulatory divergence increasing customs requirements at borders[^]

Indirect

- Economic decline, inflation and linked reduction in funding for public sector, infrastructure and key community assets
- Increased uncertainty over the future

Potential impacts



Positive

- Any economic decline may lead to a reduction in alcohol consumption
- Terms of future trade agreements or “no deal” scenario may increase regulation and / or increase tariffs on imports of alcohol and tobacco products
- Economic impacts may increase inflation and cost of alcohol and tobacco products

Negative

- Terms of future trade agreements may reduce regulation on alcohol and tobacco products
- Industry bodies take opportunity to exploit market changes
- Economic decline and loss of employment may increase consumption of tobacco and alcohol products

Potential health outcomes^{**}



Based on positive impacts

- › Potential decrease in use of alcohol and tobacco products

Based on negative impacts

- › Increased use may impact on mental health and well-being; may lead to cardiovascular disease, respiratory disease, certain cancers and gastrointestinal conditions and premature mortality

Vulnerable populations



- Early years and children
- People at risk of unemployment
- People living on a low income

Well-being Goals Impacted

- › A healthier Wales
- › A more equal Wales

[^]Devolved policy area * Non-devolved policy area

^{**}These have been inferred from the available evidence



Living Environment

Health Determinant	 Direct Impact of Brexit on Working Conditions: Health and Safety, Rights and Equality, Working Hours
Key policies 	Direct <ul style="list-style-type: none"> • Changing regulatory standards and legal frameworks^{^*} • Terms of future trade policy and trade agreements^{^*} • Leaving single market and / or customs union[*] • The loss of jurisdiction of the EU Charter of Fundamental Rights in the UK[*]
Potential impacts 	Positive <ul style="list-style-type: none"> • Opportunity to strengthen regulations and legislation on Health and Safety law • Opportunity to strengthen workers rights and equality within the workplace • Opportunity to improve working conditions Negative <ul style="list-style-type: none"> • Risk of losing positive advancement in Health and Safety law • Risk of decline in working rights and equality within the workplace • Risk of decline in working conditions
Potential health outcomes** 	Based on positive impacts <ul style="list-style-type: none"> › Increased opportunity to improve mental well-being in the workplace Based on negative impacts <ul style="list-style-type: none"> › Potential reduction in health and well-being due to a decline in working conditions › Potential increase in stress and anxiety due to a reduction in workers rights and equality in the workplace › Potential increased risk of accidents and adverse health outcomes if decline in Health and Safety regulation
Vulnerable populations 	<ul style="list-style-type: none"> • Young adults • Women • Working adults • People with acute and long term health conditions • People at risk of unemployment • Children / early years (affected by maternity/paternity leave and part time working rights)
Well-being Goals Impacted	<ul style="list-style-type: none"> › A healthier Wales › A more equal Wales › A prosperous Wales

[^]Devolved policy area ^{*} Non-devolved policy area

^{**}These have been inferred from the available evidence



Living Environment

Health Determinant	 Direct Impact of Brexit on Environmental Regulations e.g. Air & Bathing Water Quality and Carbon Emissions
Key policies 	Direct <ul style="list-style-type: none"> • Changing regulatory standards and legal frameworks^{^*} • Terms of future trade policy and trade agreements^{^*} • Leaving single market and / or customs union[*] • The loss of jurisdiction of the EU Charter of Fundamental Rights and European Court of Justice in the UK[*] • Reduced access to key coordinating public health systems^{^*} • Reduced access to data, intelligence and evidence sharing mechanisms^{^*}
Potential impacts 	Positive <ul style="list-style-type: none"> • Opportunity to enhance environmental regulatory protections Negative <ul style="list-style-type: none"> • Potential loss of positive advances made to date under EU environmental standards and regulations • Risk of deregulation in environmental standards following new trade deals • Risk of widening health inequalities as higher concentration of pollutants are currently found in deprived areas and urban areas
Potential health outcomes^{**} 	Based on negative impacts <ul style="list-style-type: none"> › Potential reduction in health and well-being from the effects of global warming › Increased respiratory and cardiovascular disease due to a decline in air quality › Increased risk of water borne infections due to a decline in bathing water quality
Vulnerable populations 	<ul style="list-style-type: none"> • Children and young people • Older adults • People with acute and long term health conditions • People living in deprived areas • People living in urban areas
Well-being Goals Impacted	<ul style="list-style-type: none"> › A healthier Wales › A more equal Wales › A prosperous Wales › A more resilient Wales › A globally responsible Wales

[^]Devolved policy area * Non-devolved policy area

^{**}These have been inferred from the available evidence

Economic conditions

Health Determinant	Direct Impact of Brexit on Employment and Skills	
<p>Key policies</p> 	<p>Direct</p> <ul style="list-style-type: none"> • Terms of future trade policy and trade agreements^{^*} • Leaving single market and / or customs union* • Regulatory divergence increasing customs requirements at borders* • End of freedom of movement and changes to immigration policies^{^*} and rights of EU Nationals to live and work in the UK* • Loss or reduced access to EU funding for research & development, infrastructure, areas of deprivation and skills & and economic development^{^*} <p>Indirect</p> <ul style="list-style-type: none"> • Economic decline, inflation and linked reduction in funding for public sector, infrastructure and key community assets • Uncertainty over the future e.g. future UK Shared Prosperity Fund and impact on business investment 	
<p>Potential impacts</p> 	<p>Positive</p> <ul style="list-style-type: none"> • Opportunities to increase employment, skills and training • Wales could attract workers via offering improved quality of life and working conditions • Potential for alternative models of funding to invest further in skills and job creation <p>Negative</p> <ul style="list-style-type: none"> • Increased pressure on recruitment and retention of staff, due to reduction of EU citizens working in Wales • Increased unemployment in sectors highly exposed to import & export markets • Decline in workplace, equality and employment protections • Risk of unemployment in areas dependent on single large employer • Potential rise in inflation and economic downturn with increased risk of fuel and food poverty 	
<p>Potential health outcomes**</p> 	<p>Based on positive impacts</p> <ul style="list-style-type: none"> ➤ Increase in health and well-being due to increased employment ➤ Potential reduction of alcohol use if higher unemployment <p>Based on negative impacts</p> <ul style="list-style-type: none"> ➤ Negative impact on mental health and well-being due to uncertainty about the future and economic decline ➤ Increased risk of death, cardiovascular disease, depression, alcohol use disorders and suicide due to loss of employment 	
<p>Vulnerable populations</p> 	<ul style="list-style-type: none"> • Working adults and families (including children and young people) • BME groups • People at risk of unemployment • Small business (employers and employees) 	
<p>Well-being Goals Impacted</p>	<ul style="list-style-type: none"> ➤ A healthier Wales ➤ A more equal Wales ➤ A prosperous Wales 	

[^]Devolved policy area * Non-devolved policy area
^{**}These have been inferred from the available evidence

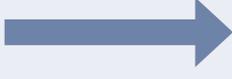


Economic conditions

Health Determinant	 Direct Impact of Brexit on Economic Conditions: EU Funding	
Key policies 	<p>Direct</p> <ul style="list-style-type: none"> • Terms of future trade policy and trade agreements^{^*} • Leaving single market and / or customs union* • Loss or reduced access to future EU funding for research & development for health related technology and treatment advancement and for areas of deprivation • Leaving key academic / research collaborations with reduced access to data, intelligence & evidence sharing mechanisms^{^*} <p>Indirect</p> <ul style="list-style-type: none"> • Economic decline, inflation and linked reduction in funding for public sector, infrastructure and key community assets • Increased uncertainty over the future e.g. future of UK Shared Prosperity Fund and other replacement funding 	
Potential impacts 	<p>Positive</p> <ul style="list-style-type: none"> • Potential for alternative models of funding to be tested to better meet communities needs and aspirations • Opportunity to strengthen existing collaborative relationships with EU partners and exploring and building on non EU relationships and collaborations • Opportunity to develop new agriculture policy and payments based on sustainable food production / supply and decrease Wales's carbon footprint <p>Negative</p> <p>Communities</p> <ul style="list-style-type: none"> • Potential to widen the gap in health inequalities due to loss / reduced investment in deprived areas <p>Agriculture</p> <ul style="list-style-type: none"> • Uncertainty and high volume of change in Common Agricultural Policy and payments <p>Research & development</p> <ul style="list-style-type: none"> • Loss of development of health related technologies / treatments • Loss or reduction in access to academic expertise from EU countries and in the retention / recruitment of non-UK EU National academics and of UK researchers / academics 	
Potential health outcomes** 	<p>Based on negative impacts</p> <ul style="list-style-type: none"> ➤ Negative impact on mental health and well-being due to uncertainty about the future and economic decline ➤ Increase in health inequalities due to loss of funding for areas of deprivation 	
Vulnerable populations 	<ul style="list-style-type: none"> • People who live in deprived communities • People who work in research & development 	<ul style="list-style-type: none"> • Rural and agricultural communities • People in need of health and social care who benefit from new treatments developed through EU research funds and collaborations
Well-being Goals Impacted	<ul style="list-style-type: none"> ➤ A healthier Wales ➤ A more equal Wales 	<ul style="list-style-type: none"> ➤ A prosperous Wales ➤ A globally responsible Wales

[^]Devolved policy area * Non-devolved policy area
^{**}These have been inferred from the available evidence

Citizens and Human Rights

Health Determinant	 Direct Impact of Brexit on Citizens and Human Rights
Key policies 	Direct <ul style="list-style-type: none"> • The loss of jurisdiction of the EU Charter of Fundamental Rights in the UK* • Loss of jurisdiction of the European Court of Justice* • End of freedom of movement and changes to immigration policies^{^*} • Loss of rights of EU Nationals to live / work in the UK* Indirect <ul style="list-style-type: none"> • Economic decline, inflation and linked reduction in funding for public sector, infrastructure and key community assets
Potential impacts 	Positive Opportunity to strengthen working conditions, workers rights and equality Negative <ul style="list-style-type: none"> • Potential to widen the gap in health inequalities due to loss of Fundamental Rights • Loss / reduction of consumer protection • Risk of decline in workers rights and equality within the workplace • Risk of decline in working conditions
Potential health outcomes** 	Based on negative impacts <ul style="list-style-type: none"> ➤ Decline in mental health and well-being due to loss or reduction in Fundamental Rights ➤ Widening health inequalities
Vulnerable populations 	<ul style="list-style-type: none"> • Children and young people • Women • Working adults • BME groups • Sex and gender groups
Well-being Goals Impacted	<ul style="list-style-type: none"> ➤ A healthier Wales ➤ A more equal Wales ➤ A prosperous Wales

[^]Devolved policy area * Non-devolved policy area

**These have been inferred from the available evidence

7 Future Action

Detailed recommendations on the issues identified is beyond the scope of this report. The tables below represent a list of areas for future action that government and other public services need to ensure are being monitored and addressed. Each of the identified areas for action requires a co-ordinated and collaborative multi-agency response, to ensure that effective and timely interventions are implemented, in order to maximise opportunities and minimise any negative impacts on health and well-being. The actions identified in the table are an assessment of need for action and are not a reflection of whether action is already being undertaken.

The actions can be categorised as follows²⁴:

Action needed	Action is needed to prevent or mitigate potential negative impacts or maximise opportunities for health
Active engagement needed	Action is needed, for example to influence policy development within Wales, UK and Europe and future trade agreements
Research priority	Research is needed in the next 12-18 months to fill significant evidence gaps or reduce the uncertainty in the current level of understanding, in order to assess the need for additional action
Watching brief	The evidence in these areas should be kept under review, with long term monitoring and surveillance of impact levels and adaptation activity so that further action can be taken if necessary

²⁴ This HIA has used an amended version of the urgency ratings from the UK Climate Change Risk Assessment (Committee on Climate Change, 2017) to enable areas for action to be identified and prioritised across the determinants of health and population groups identified in the HIA.

7.1 Action categories for the determinants of health

Determinant of health	Action category	Rationale
<p>Access to health and social care</p> 	Action needed	<p>Affects the whole population, but particularly vulnerable groups.</p> <p>In the short to medium term there is one confirmed (staffing) and five probable negative impacts identified (medicines, medical devices and clinical trials, health protection, rare diseases, reciprocal (cross-border) health care and social care).</p> <p>See Section 4.2.9 for full analysis.</p>
<p>Lifestyles: Food: safety, standards and access</p> 	Action needed	<p>Affects the whole population.</p> <p>The scale of change and contingencies required are significant and in a short time frame. The UK may not remain a member of the European Food Safety Authority nor have access to current food safety systems. In terms of food supply, loss of labour and customs changes are key issues in the short term. Inflation may affect affordability of food and impact on health and health inequalities.</p> <p>See Section 4.2.1 for full analysis.</p>
<p>Lifestyles: Alcohol and Tobacco</p> 	Active engagement needed	<p>Affects large sections of the adult population.</p> <p>Active engagement is needed to strengthen key legal and regulatory mechanisms in new trade agreements or legislation e.g. labelling.</p> <p>See Sections 4.2.2 and 4.2.3 for full analysis.</p>
<p>Living Environment: Environmental regulations</p> 	Active engagement needed	<p>Affects the whole population.</p> <p>Active engagement is needed to improve environmental standards and regulations in new trade deals and legislation e.g. Air Quality.</p> <p>See Section 4.2.5 for full analysis.</p>
<p>Living environment: Working conditions</p> 	Active engagement needed	<p>Affects a large proportion of the population, early years and family life.</p> <p>Active engagement is needed to improve working conditions following new trade deals and legislation.</p> <p>See Section 4.2.8 for full analysis.</p>

Determinant of health	Action category	Rationale
<p>Economic conditions: Employment and skills</p> 	<p>Active engagement needed</p>	<p>Affects the adult working age population, children and young people, and future generations.</p> <p>Could impact on health inequalities.</p> <p>Significant potential for impact on economy and jobs. Active engagement is needed to support policy change and investment to enable positive impacts.</p> <p>See Section 4.2.6 for full analysis.</p>
<p>Economic conditions: EU funding</p> 	<p>Active engagement needed</p>	<p>Affects the whole population.</p> <p>Directly affected by Brexit, resulting in significant potential for reduced access to key funding streams (structural, research and development and agricultural) for Wales. Active engagement is needed to influence future funding models and rules for access.</p> <p>See Section 4.2.7 for full analysis.</p>
<p>Human rights</p> 	<p>Active engagement needed</p>	<p>Affects the whole population.</p> <p>Active engagement is needed to protect and improve key social, working and equality protections in new trade deals and legislation.</p> <p>See Section 4.2.4 for full analysis.</p>
<p>Mental well-being</p> 	<p>Research priority</p>	<p>Affects the whole population</p> <p>There is some evidence that Brexit could have an impact based on the experience of previous economic downturns (e.g. increase in suicide) due to uncertainty or potential political and social upheaval, but further insight and evidence is needed. This could be qualitative research and / or monitoring rates of depression and suicide.</p> <p>See Section 4.3.1 for full analysis.</p>
<p>Community resilience and cohesion</p> 	<p>Research priority</p>	<p>Affects the whole population</p> <p>There is plausible evidence that Brexit could have an impact but further insight and evidence is needed e.g. community safety and resilience.</p> <p>See Section 4.3.1 for full analysis.</p>

7.2 Action categories for population groups

Population group	Action category	Rationale
Children born into families with a parent from Non UK EU Country	Action needed	4% (around 20,000) of all Wales-resident children live in a household where at least one person is an EU citizen. Around 7,000 are aged 0 to 4. This group are potentially exposed to uncertainty and disruption to their family lives and education, dependent on future immigration policy. See Section 4.4.6 for full analysis.
Families impacted by uncertain / new immigration regulations (e.g. EU citizens living in Wales)	Action needed	Uncertainty on future immigration rules may affect security of livelihood and living arrangements. In particular, for those who have lived and worked in the UK for less than 5 years. See Section 4.4.6 for full analysis.
People in need of health and social care services	Action needed	23% of adults (696,000 people) in Wales have a long term illness. This group is vulnerable to any increasing pressures on health and social care resulting from Brexit. See Section 4.4.6 for full analysis.
People who are living on low income	Active engagement needed	This group already experiences poor health outcomes. Brexit could have a cumulative impact with welfare reform. People on low income are highly exposed to inflation on essential goods e.g. food and clothing. See Section 4.4.2 for full analysis.
People who are unemployed / at risk of unemployment	Active engagement needed	This group already experiences poor health outcomes. Economic decline and future trade terms may impact on jobs. Policy intervention is needed to leverage positive opportunities. See Section 4.4.2 for full analysis.
People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding	Active engagement needed	This group already experiences poor health outcomes. These areas are likely to experience significant future loss of community, infrastructure and economic development funding. Policy intervention is needed to leverage positive opportunities e.g. on any new funding models. See Section 4.4.3 for full analysis.

Population group	Action category	Rationale
People living in areas where large employers may move away	Active engagement needed	Economic decline and future trade terms may impact on jobs. An existing framework on Mass Unemployment Events provides a public health approach to preparing and responding to such events. See Section 4.4.3 for full analysis.
Small business owners	Active engagement needed	89.1% of enterprises in Wales are micro enterprises. Potential negative impact on this group are due to the uncertainty of any future trade and regulation deals, potential increased paperwork and checks, costs or workforce issues. See Section 4.4.6 for full analysis.
Children	Active engagement needed Research priority	There are a wide range of potential long term impacts as a result of reduced public finance, reduction in rights, and changes in working, living and economic conditions for families e.g. potential for increase in misuse of alcohol, impact on mental health and well-being which could lead to an increase in Adverse Childhood Experiences. See Section 4.4.1 for full analysis.
Farmers / rural communities	Active engagement needed Research priority	Highly relevant to Welsh population. There is potential for large-scale change and transition, as well as uncertainty in the short to medium term. Policy intervention is needed to leverage positive opportunities. See Section 4.4.3 for full analysis.
Young adults	Active engagement needed Research priority	There are already existing concerns about the mental health of young people. Policy intervention is needed to leverage positive opportunities in areas such as skills. Potential negative impacts have been identified but further insight and evidence is needed. See Section 4.4.1 for full analysis.
Port areas in Wales	Research priority	An impact is possible, but the nature of the impact is currently uncertain. See Section 4.4.3 for full analysis.
Black and minority ethnic groups	Research priority	Evidence suggests a negative impact related to hate crime, but more research is needed to understand the scale and nature of the impact. See Section 4.4.4 for full analysis.
Women / Men	Watching brief	The nature of the impact is dependent on future policy and trade terms. See Section 4.4.5 for full analysis.
Coastal areas	Watching brief	An impact is possible, but the nature of the impact is currently uncertain. See Section 4.4.3 for full analysis.

8 Summary Of Findings

8.1 Potential Positive Impacts

The HIA identifies a number of potential positive impacts or opportunities for health and well-being in the medium to long term following the UK's withdrawal from the EU. As mentioned earlier, these are based on the premise that action is taken to maximise benefits or any opportunities presented by Brexit and are highly contingent on policy commitments and / or interventions in the short and medium term from Welsh Government and public services. These include (in no particular order of importance):

- Working with the UK Government to restructure future funding models for Wales
- Increasing skills and training opportunities for the population, including for health care staff in Wales
- Maintaining and growing collaborative relationships with partners in European countries and exploring and building on non EU relationships and collaborations in relation to academia and research and development
- Reviewing agriculture policy to focus on sustainability, with the potential to increase local sustainable food production and supply, and to decrease Wales's carbon footprint
- Enhancing key social, workplace, equality, food and environmental regulatory protections
- Strengthening tobacco and alcohol regulatory, legislative or fiscal measures in law, regulation or future trade agreements



8.2 Potential Negative Impacts

The HIA identifies potential negative impacts from the UK's withdrawal from the EU, many of which are in the short to medium term and are across the breadth of the key determinants of health and include (in no particular order of importance):

Health care services

- Potential increased pressure on National Health Service (NHS) and social care staffing levels as a result of recruitment and retention issues
- Reduced or delayed access to new medicines, clinical trials and devices due to the UK leaving key regulatory and coordinating bodies
- Loss of access to European Reference Networks and rapid access to specialist clinical care for rare diseases

Access to healthy, safe and affordable food

- Disruption to food safety and standards systems, labour and supply chains
- Food standards regulations could be adversely impacted through future trade agreements or policy changes
- Any increase in inflation as a result of Brexit may increase the cost of food, which will particularly impact on people on low incomes. This needs to be seen in the context of the recent growth of food bank use across Wales

Public health / health security

- Reduced health protection capability due to the UK no longer participating in key EU public health coordinating systems and evidence sharing mechanisms

Changes relating to EU legislation, regulations and standards

- Standards of social, workplace, equality, employment and environmental protections could be adversely impacted through future trade agreements or policy changes
- Loss of jurisdiction of the EU Charter of Fundamental Rights for UK citizens

Employment

- Potential for increased unemployment in sectors highly exposed to import and export markets due to changes in tariffs, non-tariff barriers and customs regulations

Access to EU funding

- Loss or reduced access to future EU funding for infrastructure, tackling inequalities and poverty and economic development
- Uncertainty of future agricultural payments model

Research and Development

- Loss or reduced access to future EU funding for research and development
- Loss or reduced access to EU research collaborations and networks

Mental health and well-being

- Impact on mental health and well-being through uncertainty about the future, strained family and community relationships, economic decline, levels of community resilience to major change, and reduced community cohesion and tolerance

8.3 Duration of Impact

The HIA has also assessed the impact of Brexit in the short to medium term and the medium to long term on the population (in no particular order of importance):

Short to medium term

- The economic status of the UK and Wales post Brexit could have a positive or negative impact across the wider determinants of health and well-being and is dependent on the nature of any trade agreements and UK Government economic policy
- There will be major disruption if contingency planning and mitigating actions are not functional when needed, for example in areas such as medicines, health protection, food supply, social care staffing and other workforce issues
- The uncertainty about the nature of the UK's departure from the EU could have a negative impact on population mental well-being. Community cohesion and resilience could also be affected
- There are a number of potential detrimental health and well-being impacts linked to the regulatory agenda and leaving key coordinating agencies, including disruption to supply chains for food and medicines, food safety systems and environmental health determinants
- Further research, engagement and monitoring is needed to assess the impact on the vulnerable populations identified in the HIA





Medium to long term

- The economic status of the UK and Wales post Brexit could have a positive or negative impact across the wider determinants of health and well-being and is dependent on the nature of any trade agreements and UK Government economic policy
- Enabling employment, training and skill opportunities through Welsh Government levers and policy could maximise any potential positive opportunities of Brexit
- Wales could seize the chance to build on its natural resource and sustainable development policy and create more favourable working conditions which could attract key workers
- Wales could continue to strengthen relationships with other devolved UK nations and with individual agencies. Maintaining existing relationships and collaborations with EU partners wherever possible will remain important but there are also opportunities to build new partnerships with the World Health Organization (WHO) and other international health organisations
- Key social, public health and environmental protections could be enhanced or reduced e.g. air quality, working conditions, labelling for alcohol or tobacco products
- Equality and rights legislation, depending on final policy positions, could be enhanced or reduced
- People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding will need to be supported and action taken to develop new models of funding
- Action to address inequalities in community, economic and infrastructure investment will need to be developed to address the long term impact of Brexit

In order to maximise any identified opportunities, policy actions will need to be taken in the immediate to short term.

8.4 Potential impact on determinants of health and well-being

The Table below summarises the potential impacts identified by the HIA analysis. It demonstrates explicitly the breadth and complexity of potential impacts on the determinants of Health. The condensed findings in the table below do not provide the level of detail of the Section 4 of this report and signposts the reader to the relevant sections where the full appraisal of evidence to describe the potential nature, direction, likelihood, intensity and duration of impact can be found. It is strongly recommended that this table is read in conjunction with the relevant sections in order to avoid misinterpretation and to fully understand the analysis using the specific terminology found in the Table on page 24 to describe the impact throughout.

Direct impacts on the determinants of health

Table 1 summarises the key impacts of Brexit in Wales on the determinants of health and well-being, based on current evidence and before any mitigation is put in place.

Table 1: Key impacts of Brexit in Wales on the determinants of health

Determinant of health and well-being	Direct impact	Positive / opportunity			Negative			Rationale
		Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	
Access to healthy, safe and affordable food	Food safety system	Confirmed	Major	Short	Confirmed	Major	Short	Negative: the food safety system in the UK is highly exposed to Brexit related change and uncertainty and requires major capacity building in relation to legislation, organisations, policies, and workforce in a very short timescale. See Section 4.2.1 for full analysis.
		Probable	Moderate	Medium	Probable	Moderate	Medium	
		Possible	Minimal	Long	Possible	Minimal	Long	
		Probable	Major	Short-Med	Probable	Major	Short-Med	

Access to healthy, safe and affordable food (continued)									
Food safety regulation	Possible	Moderate	Long	Possible	Moderate	Long	Positive: opportunity to introduce tighter regulation and legislation. Negative: loss of EU food safety legislation and the need to replace this at pace. See Section 4.2.1 for full analysis.		
	Possible	Major	Med-Long	Possible	Major	Med-Long	Positive or negative impact possible, dependent on the nature of future policy and trade deals. See Section 4.2.1 for full analysis.		
	Possible	Moderate	Long				Positive: opportunity for more sustainable food production in Wales. See Section 4.2.1 for full analysis.		
Food supply	Possible	Major		Possible	Major	Short	Negative: workforce challenges in the agriculture sector, customs and tariff changes, and changing regulations. Negative impact is probable in a "no deal" scenario. See Section 4.2.1 for full analysis.		
	Possible	Moderate		Probable	Major	Short-Med	Negative: Any increase in inflation or reduced economic growth impacting on affordability of food and incomes. Cumulative impact with welfare reform and rising food bank use in Wales. See Section 4.2.1 for full analysis.		
Cost of food									

Alcohol	Alcohol consumption patterns	Possible	Moderate	Short-Med-Long	Possible (increase)	Moderate	Short-Med-Long	Positive: decreased consumption following income reduction or increase in price. Negative: increased consumption due to stress. See Section 4.2.2 for full analysis.
	Alcohol regulation	Possible	Moderate	Med-Long	Possible	Moderate	Med-Long	Positive or negative as a result of strengthened or weakened regulatory mechanisms in new trade agreements or legislation. See Section 4.2.2 for full analysis.
Tobacco	Use of tobacco	Possible	Moderate	Short-Med-Long	Possible (increase)	Moderate	Short-Med-Long	Positive: reduced smoking as a result of income reduction or increase in price. Negative: increased smoking as a result of stress. See Section 4.2.3 for full analysis.
	Tobacco regulation	Possible	Moderate	Med-Long	Possible	Moderate	Med-Long	Positive or negative impact due to strengthened or weakened regulatory mechanisms in new trade agreements or legislation. See Section 4.2.3 for full analysis.
Human rights	Loss of application of the EU Charter of Fundamental Rights in UK				Possible	Moderate	Med-Long	Negative: loss of social, workplace and equality rights protections, currently not fully recognised in UK law. See Section 4.2.4 for full analysis.
Environmental regulations	Regulations e.g. air quality, bathing water quality	Possible	Major	Med-Long	Possible	Major	Med-Long	Positive or negative impact due to strengthened or weakened future policy or as a result of trade agreements. See Section 4.2.5 for full analysis.

Economic conditions: employment and skills	Workforce challenges in sectors linked to health and well-being	Confirmed	Major	Short-Med-Long	Negative: Sectors particularly dependent on skills from the EEA in Wales include the veterinary sector, the food and drink manufacturing industry, and health and social care. Significant number of academic staff in Welsh universities are from the EU / EEA. Proposed immigration and freedom of movement changes linked to Brexit pose challenges to future retention and recruitment. See Section 4.2.6 for full analysis
Potential to attract skilled workers into key sectors to Wales from within the UK and non-EU nations	Possible				Positive: provision of attractive working and living conditions in Wales, opportunity to develop skills of UK workforce. See Section 4.2.6 for full analysis
	Moderate				
Job security in sectors linked to exports / imports and exposure to changes in tariff and non-tariff barriers	Long	Probable	Major	Short-Med-Long	Negative: Manufacturing plays a greater part in the Welsh economy than elsewhere in the UK and the principal market for Welsh manufacturers is the EU. Any tariff changes, reduction in business investment and reduced economic growth poses risks to job security. See Section 4.2.6 for full analysis
	Moderate	Probable	Moderate	Med-Long	Positive: increased opportunity for accessing training and employment opportunities and developing the skills base in Wales. Negative: uncertainty regarding replacement of the EU Funds that have supported skills and educational opportunities. See Section 4.2.6 for full analysis.
Skills and employability	Possible				
	Long				

Economic conditions: employment and skills (continued)	Job availability / vacancies	Possible	Minimal	Short-Med-Long	Positive: potential for increase in job vacancies, however, skills and demographic factors may mean that not all vacancies can be easily filled. (Available jobs may not all be quality employment / "good work" that benefits health). See Section 4.2.6 for full analysis.
Economic conditions: EU Funding	Community, economic and infrastructure investment for addressing inequalities	Possible	Moderate	Med-Long	Positive: opportunity to develop a new model and level of funding to meet the needs of the Welsh population. Negative: uncertainty regarding replacement of the EU Funds that have provided regional investment and been aimed at reducing regional inequalities. See Section 4.2.7 for full analysis.
	Agricultural and land management policy / funding	Probable	Major	Med-Long	Positive: opportunity to shape and tailor agricultural policy in Wales. Negative: major changes in policy and payments framework, affecting farmers, landowners and rural communities and resulting in considerable uncertainty. See Section 4.2.7 for full analysis.
	Research and development funding for health related technologies and treatments		Major	Med-Long	Negative: reduced access to EU Research and Development funding streams, and loss of collaboration opportunities. See Section 4.2.7 for full analysis and Section 4.2.9 for health care related research.

Working conditions	Including: health and safety, workers' rights and equality, working hours	Possible	Major	Med-Long	Possible	Major	Med-Long	Positive: potential for future policy to transfer / strengthen worker's rights in Wales. Negative: loss of key protective EU legislation for workers' rights. Future policy and trade agreements could have positive or negative impacts. See Section 4.2.8 for full analysis
Access to safe and timely health and social care services	Health care staffing	Possible	Moderate	Long	Confirmed	Major	Short-Med	Positive: opportunity to train more UK nationals to work in health care. Negative: recruitment, retention and recognition of qualifications challenges in NHS linked to Brexit, create cumulative impact on staffing with the existing demands on the sector. See Section 4.2.9 for full analysis.
	Access to medicines, medical devices and clinical trials	Possible	Moderate	Long	Probable	Major	Short-Med	Positive: opportunity for development in the UK pharmaceutical sector, increasing UK based manufacturing, opportunity to seek other international collaborations. Negative: disrupted medicine and consumables supply chains, reduced access to, or exclusion from EU trials, changes to regulations, and uncertainty on long-term participation in key regulatory and oversight agencies such as EMA, ECJ. See Section 4.2.9 for full analysis.
	Health protection / health security				Probable	Moderate	Short-Med	Negative: loss of intelligence (surveillance and monitoring) and co-ordinated response to cross border health threats. See Section 4.2.9 for full analysis.

Access to safe and timely health and social care services (continued)	Probable	Major	Short-Med	Negative: uncertainty on reciprocal health care in "no deal" scenario or beyond any transition period. See Section 4.2.9 for full analysis.
Reciprocal (cross-border) health care	Probable	Minimal*	Short-Med	Negative: potential for reduced access or exclusion from European rare disease networks involving loss of intelligence and evidence sharing, impact on rapid access to diagnosis and new treatments. See Section 4.2.9 for full analysis.
Rare diseases	Probable	Major	Short-Med	Negative: In Wales, the number of EU citizens working in social care has grown by 56% since 2011 whilst numbers of non-EU nationals has fallen. Proposed immigration and freedom of movement changes linked to Brexit pose challenges to future recruitment and will have a cumulative impact on existing sector workforce capacity and demographic challenges. See Section 4.2.9 for full analysis.
Social care staffing	Probable	Major	Short-Med	See Section 4.2.9 for full analysis.

*This impact is minimal at population level, but for individuals with rare disease it would be major.

8.5 Potential impact on population groups in Wales

The Table below summarises the potential impacts identified by the HIA analysis. It demonstrates explicitly the breadth and complexity of potential impacts on the population in Wales. The condensed findings in the table below do not provide the level of detail of the Section 4 of this report and signposts the reader to the relevant sections where the full appraisal of evidence to describe the potential nature, direction, likelihood, intensity and duration of impact can be found. It is strongly recommended that this table is read in conjunction with the relevant sections in order to avoid misinterpretation and to fully understand the analysis using the specific terminology found in the Table on page 24 to describe the impact throughout.

Key Population groups impacted

The impacts of Brexit can either affect: the whole population (for example, through food supply, environmental regulations); large sections of the population (for example through working conditions); or key vulnerable population groups (for example children, people in need of health and social care). Table 2 provides an analysis of the impact on population groups in Wales who are expected to be particularly affected by Brexit.

Table 2: Summary of the main population groups in Wales that are anticipated to be affected by Brexit

Determinant of health and well-being	Direct impact	Positive / opportunity			Negative			Rationale
		Likelihood	Intensity	Duration	Likelihood	Intensity	Duration	
Sex and gender related groups	Women (in relation to working conditions, rights and employment)	Confirmed	Major	Short	Confirmed	Major	Short	Negative: uncertain future of equality protection at work, exposure to unemployment, possible increase in informal caring role. See Section 4.4.5 for full analysis.
		Probable	Moderate	Medium	Probable	Moderate	Medium	
		Possible	Minimal	Long	Possible	Minimal	Long	
					Possible	Moderate	Short-med-long	

Sex and gender related groups (continued)	Employment of low and mid educated men (if trade terms with EU change to World Trade Organization (WTO) rules)	Possible	Moderate	Short-med-long	Negative: Industries that would be very highly exposed to changes in trade tariffs with the EU under WTO rules are important employers of men with low education in Wales, employing around 21% of low educated men. See Section 4.4.5 for full analysis.
	Age Related Groups	Children	Possible	Moderate	Short-med-long
	Children born into families with a parent from Non UK EU Country	Probable	Major	Short-med-long	Negative: uncertainty regarding future immigration rules and settlement status affecting family security, education and living arrangements. See Section 4.4.6 for full analysis.

Age Related Groups (continued)	Young adults	Possible	Minimal	Short-Med-Long	Probable	Major	Short-med-long	Positive: opportunity to develop skills base in Wales and increased job availability. However, opportunity is limited by skills and demographic factors. Negative: reduced access and uncertainty on replacement for EU funds to support skills and education opportunities, reduced access to EU employment and study, impact on employment opportunities due to any reduced economic growth. See Section 4.4.1 for full analysis.
Income related groups	People living on low income, including people living in food and fuel poverty				Probable	Major	Short-med-long	Negative: reduced resilience to any economic impacts such as price rises, fall in real wages, reduced employment, and reduced access and uncertainty on replacement for EU regional funding. Cumulative impact with welfare reform and food poverty. See Section 4.4.2 for full analysis.
Groups who suffer discrimination or social disadvantage	People at risk of unemployment / who are unemployed	Possible	Minimal	Short-Med-Long	Probable	Major	Short-med-long	Positive: increased job availability, but opportunity is limited by skills and demographic factors. Negative: risk of job losses due to any reduced economic growth See Section 4.4.2 for full analysis.
Groups who suffer discrimination or social disadvantage	Black and minority ethnic groups				Probable	Moderate	Short-med	Negative: increase in hate crime, reduced tolerance, erosion of equality rights, impact on employment in service industries if "Hard Brexit". See Section 4.4.4 for full analysis.

Geographical groups	Possible	Moderate	Med-Long	Probable	Major	Med-Long	Positive: opportunity for new model and level of funding to meet needs of Welsh population. Negative: uncertainty regarding future regional funding for community, economic development and infrastructure investment in Wales. See Section 4.4.3 for full analysis.
People living in areas with poor economic and health indicators / areas of Wales that have been significant beneficiaries of EU funding	Possible	Moderate	Med-Long	Probable	Major	Med-Long	Positive: opportunity for new model and level of funding to meet needs of Welsh population. Negative: uncertainty regarding future regional funding for community, economic development and infrastructure investment in Wales. See Section 4.4.3 for full analysis.
Farmers / rural communities	Probable	Major	Long	Probable	Major	Short-Med	Positive: release from the Common Agricultural Policy, ability to access new markets, and opportunity to shape agricultural policy in Wales. Negative: loss of income streams from EU, increased uncertainty around replacement funding. See Section 4.4.3 for full analysis.
Port towns	Possible impact but currently insufficient evidence to define impact						See Section 4.4.3 for full analysis.
Coastal towns e.g. tourism workforce and bathing water quality	Possible impact but currently insufficient evidence to define impact						See Section 4.4.3 for full analysis.
People living in areas where large employers may leave	Possible			Possible	Major	Short-med-long	Negative: academic analysis and other evidence from some large companies suggests possible impacts on investment and future operations in Wales. See Section 4.4.3 for full analysis.

Other vulnerable groups	Probable	Major	Short-med-long	Negative: The Welsh population is significantly exposed to changes in the capacity of health and social care services, for example as a result of a greater health need such as a higher proportion of residents having a long term illness. Recruitment and supply challenges within the NHS and social care sector, alongside the health consequences attributed to any economic difficulties and unemployment, has the potential to increase pressures on health and social care services. See Section 4.4.6 for full analysis.
People in need of health and social care	Probable	Major	Short-Med	Negative: uncertainty of any future trade and regulation deals, potential increased paperwork and checks, workforce issues such as loss of EU staff. See Section 4.4.6 for full analysis.
Small business owners / employers who import or export goods and services	Probable	Moderate	Short-Med	See Section 4.4.6 for full analysis.
Non UK EU Citizens and families living in Wales	Probable	Major	Short-med-long	Negative: uncertainty regarding future immigration rules and settlement status affecting security of livelihood and living arrangements. See Section 4.4.6 for full analysis.

*This relates to the opportunity to further strengthen rights of children in Wales, although this is already a strong focus in Welsh policy with the adoption of the UN Rights of the Child. Therefore, the scope to improve is minimal.

9 Conclusion

This HIA draws on a range of evidence sources (including expert stakeholder knowledge, critically appraised literature and health intelligence information) to identify the **potential** implications of Brexit for population health and well-being in Wales - both negative and positive. As Brexit has not yet occurred at the time of writing, it has not been possible to access evidence of **actual impact** in most cases. However, this HIA offers important early findings to enable effective planning and decision making.

Many of the **direct impacts** of Brexit will affect the entire Welsh population, for example through food supply and standards; large sections of the population, for example by impacting on working conditions; or specific groups, such as people in need of health and social care services.

In terms of the **determinants of health and well-being**, the analysis of impact shows that nearly all potential *positive impacts / opportunities* are 'possible', that is they may happen but there is limited evidence to support this. The majority of potential *negative impacts* identified are considered to have either a moderate or major impact, and most are estimated to have either a probable or confirmed impact. Of note, the four areas identified as having a confirmed major negative impact in Wales are:

- Workforce challenges in sectors linked to health and well-being
- EU agricultural and land management policy / funding
- EU research and development funding for health-related technologies and treatments
- Recruitment and retention of health care staff

In relation to **population groups**, potential *positive impacts and opportunities* have been identified for five of the 16 groups considered, although in the main these are 'possible'. For all the population groups considered, *negative impacts* have been identified. Most negative impacts are identified as 'probable', and for the majority the impacts are considered to be major.

The HIA has identified a number of mechanisms through which population **mental health and well-being** could be affected by Brexit; surveillance and research are urgently needed to better understand these issues. Another key finding of the report is that any **reduction in economic growth**, rising inflation and consequent reductions in public spending due to Brexit are important mechanisms through which health impacts may occur, with the terms of **international trade agreements** impacting the determinants of health and well-being.

Stakeholder evidence highlighted the unique policy context in Wales, driven by devolution and a focus on **sustainable development**. These could provide a number of positive opportunities for the people of Wales, such as more sustainable food production and land management. More detail on these findings is contained in this report in Section 3 (Trade, the Economy and Health), Section 4 (Appraisal of the Evidence) and Section 5 (The Wider Policy Implications for Wales).

There is an immediate need for organisations across all sectors to engage now and ensure that **effective collaboration and co-ordination** maximises opportunities in the Brexit process for better population health and well-being. The use of policy levers, particularly around the economy and trade; employment, skills and training; and resource

management and agriculture must be cognizant of their impacts on well-being and avoid weakening health protecting regulations already in place (See this report, Section 4). Such coordination requires a lead organisation or agency in each field (for example health, agriculture, employment) and overall leadership to ensure integrated and timely planning. This HIA has provided some of the intelligence required to underpin such a lead function but has also identified that there will be a deficit of integrated intelligence unless on-going mechanisms are put in place. As seen earlier in this report, the impact of Brexit and the need for an integrated response is likely to extend long after the withdrawal date (29th March 2019) and therefore such plans should take a much longer (3-10+ year) view. In the short to medium term the intelligence contained in this HIA could be routinely updated to help to underpin such collaboration, co-ordination and monitoring.

Stakeholders who contributed to the HIA suggested early **investment in key community assets** and activities, to build community cohesion and resilience and mitigate negative impacts as a result of current uncertainty or future impacts on employment, economy and subsequently mental health and well-being (See Section 4.3.3 in this report). The Well-being of Future Generations (Wales) Act 2015 (WFG Act) provides a framework for Welsh public bodies, for example requiring them to work towards a Wales of cohesive communities with a vibrant culture and thriving Welsh Language. Within such a framework the HIA has identified a range of potential mitigations to issues that may otherwise impact mental health and well-being through uncertainty, economic difficulties or impacts on employment arising from Brexit. Such activities should build on Welsh assets including:

- Welsh arts and culture
- Our agricultural assets and natural environment to ensure they are sustainably developed to support the health, well-being and prosperity of our residents
- Our other international relationships (non-EU based) so that Wales can develop greater international collaboration and leadership through, for instance, United Nations bodies such as the WHO
- Using the above to enhance our international reputation and make Wales an attractive place to invest and reside



Progress is being made in Wales to ensure health and business continuity and to address immediate issues such as health protection and health security threats. There is a need now to think ahead of the immediate situation, in order to ensure longer term strategic thinking positions policy and investment according to the opportunities and assets highlighted above. Part of this requires fostering, co-ordinating and strengthening **partnerships** across the four UK nations, across Europe and globally to enhance existing collaborations and develop new ones. Whilst immediate collaborations may focus on policy, research and developments that mitigate detrimental consequences of Brexit, they should also provide a starting platform for inter-agency and international co-ordinated work for the future. The health and well-being impacts of Brexit (whether positive or negative) and emerging risks and opportunities need to be continually monitored and reflected in collaborative arrangements and work. The sustainable approach already established by the WFG Act provides a useful template to ensure partnerships are long term and focus on protecting and improving health and well-being for current and future generations.

Recommended Actions

This HIA has identified a number of significant impacts on population health and well-being in Wales which could arise as a result of Brexit. Whilst detailed recommendations are beyond the scope of this report, areas for future action have been highlighted, which require government and other public services and sectors in Wales to develop a collaborative and co-ordinated multi-agency response to maximise any opportunities and benefits and minimise any negative impacts. Specific actions arising from this report include:

1. Policy makers and public services should consider the range of potential impacts of Brexit identified in this report (see Section 4) and the areas for future action (Section 7) and ensure co-ordinated actions are in place to address each. The report should also be considered by multi-agency structures that have been set up to prepare for and respond to Brexit, in order to provide co-ordination across activities and ensure interdependencies between them have been identified and addressed.
2. A number of population groups, for example non UK EU Citizens, deprived and rural communities, have been identified as especially vulnerable to harms from the Brexit process (see Section 4). Policies and actions should be prioritised in order to address impacts on such population groups where Brexit may be most detrimental. All actions (not just those in health) should explicitly demonstrate how they have taken into consideration the protection and improvement of health and well-being of all residents in Wales, but especially the most vulnerable.
3. Leadership across the totality of Brexit issues needs to continue to provide overall direction to Wales' response, and critically, reassurance that plans work appropriately across agencies as well as across time scales (short, medium and long term).
4. Public bodies should establish a joint organisational framework, such as a 'Risk and Impact Framework' to help develop, co-ordinate, implement and monitor their response to Brexit. The social determinants of health, for example education and employment, and areas of immediate risks to health (including mental health) and health care, for example staffing should be part of this framework. The framework should be informed by intelligence systems that routinely monitor the impacts of Brexit in Wales in general but in particular on the groups anticipated to be most affected (see Section 4).

5. Data and intelligence across agencies relating to the potential impacts of Brexit (see Section 4) should be combined and used in a regularly updated dashboard to inform joint policy and strategic decision making. This should include retrospective data from before the referendum, to establish a baseline before Brexit uncertainties began and to examine impacts related to Brexit that may have already taken place, for example on mental health, recruitment, investment in Wales.
6. Organisations and partnerships should use the Well-being of the Future Generations (Wales) Act 2015 to frame their response to Brexit. This includes ensuring that the impacts on and the needs of children and young people who will be most affected in the future (including future generations) are considered (see Section 4). Action needs to focus on prevention of negative impacts and protection of well-being, recognising links with the social determinants of health.
7. Further research is needed on the impact of Brexit on mental health and well-being, community resilience and cohesion, children and young adults, farmers and rural communities, port areas and black and minority ethnic groups (Section 7). This should supplement data in the dashboard and could be used in combination to model future impacts for Wales.
8. The public health workforce currently lacks the experience and skills to influence and contribute to trade agreements (see Section 3). The public health system should consider how to build knowledge, skills and capacity to ensure health and well-being are considered at the forefront of such processes. Other public services may have similar deficits that need addressing.
9. PHW, in partnership with Welsh Government and other key stakeholders, should monitor and evaluate the utilisation of this HIA. PHW (with input from the SAG) should routinely update and share the key findings of this HIA, in order to inform the response of policy and decision makers, public services and multi-agency groups in Wales.

10 Limitations

In order to provide timely evidence to Public Health Wales and stakeholders, this HIA has been undertaken in a short timescale (July to December 2018). This has limited the depth of evidence collation and analysis undertaken. The scale and complexity of the impacts of Brexit means that the HIA has focused on major direct and indirect impacts; it is recognised that there may be other impacts that are, as yet, unidentified. **It is important to state that the majority of impacts stated in this report are potential rather than actual.**

The withdrawal of the UK from the EU is an unprecedented situation and there has been ongoing uncertainty regarding the UK Government's negotiating position. Therefore, there is limited evidence on the precise impacts of any Brexit scenario and as a result this HIA has not evaluated specific Brexit scenarios, but focused on the potential impacts of the UK leaving the existing framework of the EU.

Evidence of the impact of Brexit on a wide range of policy areas is either unknown or highly contested and many assumptions have been made within the high-level evidence used within this report. Where possible, these have been included to provide the rationale for why certain impacts have been highlighted.

Attribution can be challenging in public health and impact on health outcomes are difficult to capture from a complex event such as Brexit with its myriad of shaping factors and context. Any changes can also be due to other changes or factors in a population e.g. austerity.

This HIA is focused on a distinct Welsh political, social, cultural and economic context, which limits its transferability, although elements may be transferable to other devolved nations. However, it is hoped the findings of the HIA will be useful to agencies and decision makers both within Wales and beyond.

Finally, it is also recognised that assessing and responding to the impacts of Brexit is a work in progress - this HIA will be continue to be reviewed and monitored to reflect changing contexts, evidence and events.

11 About Public Health Wales

Public Health Wales is the National Public Health Institute in Wales providing professionally independent public health advice and services to protect and improve the health and well-being of the population of Wales and with a vision of *Working to achieve a healthier future for Wales*.

Public Health Wales has four statutory functions:

- To provide and manage a range of public health, health protection, health care improvement, health advisory, child protection and microbiological laboratory services and services relating to the surveillance, prevention and control of communicable diseases
- To develop and maintain arrangements for making information about matters related to the protection and improvement of health in Wales available to the public; to undertake and commission research into such matters and to contribute to the provision and development of training in such matters
- To undertake the systematic collection, analysis and dissemination of information about the health of the people of Wales in particular including cancer incidence, mortality and survival; and prevalence of congenital anomalies; and
- To provide, manage, monitor, evaluate and conduct research into screening of health conditions and screening of health related matters

The strategic priorities for Public Health Wales, contained in its Long Term Strategy 2018 – 2030, are:



More information on Public Health Wales is available at www.publichealthwales.org



12 About Wales Health Impact Assessment Support Unit

The Wales Health Impact Assessment Support Unit, Public Health Wales, was established in 2004 to support the development of HIA in Wales. Its remit is to advise, train, facilitate and build capacity in HIA and raise awareness of how the process can support and contribute to improving health and well-being and reducing inequalities. The Unit has a strong research function and has published a number of guides, evidence reviews and resources to support the practise of HIA by specialists and non-specialists.

More information on WHIASU, case studies and training opportunities can be accessed at: www.whiasu.wales.nhs.uk.

13 Glossary

Term	Definition
Brexit	The United Kingdom withdrawal from the European Union. A “soft Brexit” is defined as the UK continuing to participate in the single market, but not within a customs union (which would entail some non-tariff barriers). A “hard Brexit” is defined as withdrawal without any deal, which would result in the UK trading with the EU on WTO terms (which would entail tariff barriers and significant non-tariff barriers).
Blue Flag Scheme	An European Union eco-label awarded to beaches and marinas with good environmental management. European funding is granted to ensure and advertise clean and safe beaches and marinas for the public and to educate local authorities, private tourism operations and the public about the need and the means to protect the environment, in particular coastal and lacustrine environments.
CE Marking	<p>The letters ‘CE’ appear on many products that are traded on the single market in the European Economic Area (EEA). The CE marking is required for many products. It shows that the manufacturer has checked that these products meet EU safety, health or environmental requirements, is an indicator of a product’s compliance with EU legislation and allows the free movement of products within the European market</p> <p>By placing the CE marking on a product a manufacturer is declaring, on his sole responsibility, conformity with all of the legal requirements to achieve CE marking. The manufacturer is thus ensuring validity for that product to be sold throughout the EEA. This also applies to products made in third countries which are sold in the EEA and Turkey.</p>
Collaboration	Working together with other public bodies and stakeholders through intersectoral action to assist in achieving health and well-being in all policies.
Common Agricultural Policy (CAP)	The Common Agricultural Policy (CAP) is a system of subsidies and support programmes for agriculture operated by the European Union. CAP combines direct payments to farmers together with price / market supports.
Direct	Characterised by close logical, causal, or consequential relationship.
Engagement	Involving the people, communities and stakeholders whose well-being is being considered.
Equity (or inequity)	The absence (or presence) of avoidable or remediable differences among populations or groups defined socially, economically, demographically or geographically.

Term	Definition
European Economic Area (EEA)	The European Economic Area (EEA) unites the EU Member States and the three EEA EFTA States (Iceland, Liechtenstein, and Norway) into an Internal Market governed by the same basic rules. These rules aim to enable goods, services, capital, and persons to move freely about the EEA in an open and competitive environment, a concept referred to as the 'four freedoms'.
European Food Safety Authority (EFSA)	European Food Safety Authority (EFSA) provides scientific advice and communicates on existing and emerging risks associated with the food chain.
European Internal Market Information System (IMIS)	The Internal Market Information System (IMIS) is an online, secure messaging system developed by the European Commission. It allows national, regional and local authorities to communicate quickly and easily with their counterparts in other member states. IMIS is accessible via the internet without the need to install any additional software.
European Medicine Agency (EMA)	The Agency is responsible for the scientific evaluation, supervision and safety monitoring of medicines in the EU. EMA protects public and animal health in 28 EU Member States, as well as the countries of the European Economic Area, by ensuring that all medicines available on the EU market are safe, effective and of high quality.
European Reference Networks (ERN)	European Reference Networks (ERN) create a clear governance structure for knowledge sharing and care coordination across the EU to improve access to diagnosis and treatment, as well as the provision of high-quality health care for patients. They are networks of centres of expertise and health care providers that are organised across borders.
European Union (EU)	The EU is a unique economic and political partnership between 28 European countries that together cover much of the continent.
European Union Charter of Fundamental Rights	The EU Charter of Fundamental Rights sets out certain political, social and economic rights that EU institutions must respect when exercising their powers. This means that the European Council, the European Parliament, the European Court of Justice, and any other body or institution of the European Union must respect these rights when they are making laws, deciding cases, or acting in an official capacity. EU Member States (such as the UK) need only respect these rights when they are implementing European Union law. This means that the UK is only required to take the Charter into account when it is incorporating some part of EU law into its national law. While this is rare, it can involve some important areas like immigration and employment law

Term	Definition
Food Standards Agency (FSA)	Non-ministerial department responsible for food safety and food hygiene across the UK.
Gross Value Added	In economics, gross value added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy. In national accounts GVA is output minus intermediate consumption; it is a balancing item of the national accounts' production account.
Health	A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity.
Health Impact Assessment (HIA)	A combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on both the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.
Health in All Policies (HiAP) (Healthy public policy)	An approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity. It improves accountability of policymakers for health impacts at all levels of policy-making. It includes an emphasis on the consequences of public policies on health systems, determinants of health and well-being.
Health inequality	Differences in health status or in the distribution of health determinants between different population groups.
Health inequity	Systematic differences in health between social groups that are considered unfair and unjust and that are avoidable.
Health Protection	Health Protection is a term used to encompass a set of activities within the Public Health function. It involves: ensuring the safety and quality of food, water, air and the general environment; Preventing the transmission of communicable diseases; Managing outbreaks and the other incidents which threaten public health. The profile of Health Protection has increased significantly in recent years with issues such as immunisation, food borne infections, pandemic flu, health care associated infection and communicable diseases regularly being in the public eye.
Indirect	Not directly caused by or resulting from something.
Inequality	Inequalities are found between social groups and can be measured in different, ways e.g. by geography, social class or social position, population (ethnicity, gender, sexuality etc).
Intersectoral action	The process by which the aims and actions of one sector (e.g. education) are considered in relation to the aims and actions of other sectors (e.g. health or social affairs).

Term	Definition
Local Health Board	A public body (in Wales) responsible for planning, funding and delivering primary care services, hospital services for inpatients, outpatients, and community services, including mental health services and services provided through community health centres. It also has a key role in promoting health and well-being and preventing ill-health.
Long term thinking	Balancing the need to take immediate action to address current issues with the need to meet the long term needs of Wales.
Mental health	A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.
National Health Service (NHS)	The name of the public health services of England, Scotland and Wales, also commonly used in Northern Ireland. In Wales, responsibility for the NHS is devolved.
Office for National Statistics (ONS)	The UK's largest independent producer of official statistics and the recognised national statistical institute of the UK.
Policy	Broadly speaking, a policy is a principle or a plan to guide decisions, actions and outcomes. Policies may be written documents or unwritten practices. Often, there can be a difference between policy as intent and policy in effect. Policies are highly context specific and influenced by social, cultural, economic and political structures.
Policy cycle	Generally, the policy cycle consists of the following stages: <ul style="list-style-type: none"> • Agenda setting (identify the problem, conduct research, set agenda); • Policy formation (develop policy options and strategies, negotiate, formulate policy); • Policy implementation (implement and enforce policy); and • Policy review (monitoring, evaluation and reporting).
Policy Statements	Declaration of the plans or intentions of an organisation or government.
Poverty	To be in poverty is to lack or to be denied certain resources that would allow meaningful participation in society. These resources can be material (such as income) or they can be social (such as lack of education). Relative poverty generally means when a person can't afford an ' ordinary living pattern ', i.e. they're excluded from the activities and opportunities that the average person enjoys. Absolute poverty generally means that a person cannot afford the 'basic needs of life' , i.e. food, clothing, shelter.
Power	The capacity of individuals and communities to represent their needs and interests strongly and effectively.

Term	Definition
Public body	Persons and organisations required to pursue the economic, social, environmental and cultural well-being of Wales in a way that accords with the sustainable development principle.
Public health	The art and science of preventing disease, prolonging life and promoting health through the organized efforts of society
Public Health Wales (PHW)	Public Health Wales is part of the NHS and is the national public health agency in Wales that exists to protect and improve health and well-being and reduce health inequalities for people in Wales.
Reciprocal Health care Agreement	The United Kingdom has Reciprocal Health care Agreements with a number of non- European Economic Area (EEA) countries and territories. If a person from a country with a Reciprocal Health care Agreement needs urgent or immediate medical treatment, it will be provided at a reduced cost or, in some cases, free.
Regulation	A law, rule or directive made and maintained by an authority.
Resilience	Resilience is a concept which operates at the level of the individual, the community and wider society. It is also a dynamic process by which individuals, communities and / or societies adapt positively to adversity.
Social determinants of health	The specific features of society and the pathways by which these societal conditions affect health are social determinants. The unequal distribution of power, income, goods and services mean that social factors (such as the circumstances in which people are born, grow up, live, work, and age) will determine health.
Stakeholder	A person or group with a direct or indirect interest in a specific process or issue.
Stakeholder engagement	An inclusive process of consultation and engagement with Stakeholders to obtain information, views and opinions.
Sustainable development	Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.
Tariff	A tax applied to imported products (for example, foodstuffs).
Technical barriers to trade	In the context of trade agreements, these refer to technical regulations and standards that are applied to imported products (for example, labelling requirements).
Trade agreement	An agreement between two or more countries that governs the flow of trade in goods and services between them.

Term	Definition
Wales Health Impact Assessment Support Unit (WHIASU)	The Wales Health Impact Assessment Support Unit provides advice, guidance and assistance through the provision of awareness raising, training, guides and online resources.
Well-being	A state in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. Well-being incorporates economic, social, cultural and environmental dimensions.
Welsh Government	The Welsh Government is the devolved government for Wales. Led by the First Minister, it works across devolved areas that include key areas of public life such as health, education and the environment.
Years Lived with Disability (YLD)	Years lived with disability (YLDs) are a measurement of the burden of disease. YLDs are calculated by multiplying the prevalence of a disorder by the short or long term loss of health associated with that disability (the disability weight).

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