A COVID-19 pandemic world and beyond:
The public health impact of Home and Agile Working in Wales

Summary Report

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Contents

Executive Summary

Severe acute respiratory syndrome coronavirus 2, SARS-CoV-2, (commonly known as coronavirus or COVID-19), has changed to the way that people live and work across the world.

In June 2020, a Health Impact Assessment (HIA) of the *'Staying at Home and Social Distancing policy in Wales in response to the COVID-19 pandemic'* was published by Public Health Wales (PHW). It aimed to support key stakeholders and decision makers to better understand some of the wider health and well-being implications of enforced changes such as the 'Staying at home' (otherwise known as 'lockdown') and physical distancing measures which were implemented to address the pandemic in Wales. These policies also had wider implications – some intended and others unintended; the 'Staying at Home and Social Distancing' policy led to an immediate reorientation to homeworking, where feasible, in Wales.

This 'Home and Agile Working' HIA aims to identify the impact of this shift in working practice and to articulate the differential impacts of such a change for organisations, the working population of Wales, their families and local communities. It provides an evidence based appraisal of the implications of home and agile working across the determinants of health, for example, the environment, economy, mental well-being and wider society. It also focuses on any inequalities that may arise across the broad range of population groups in Wales, so that decision and policy makers can make informed decisions about home and agile working so that it facilitates health and well-being, mitigates for any negative impact and reduces any potential inequalities amongst employees.

This HIA assesses the potential and, where possible, observed positive health and well-being impacts and / or any negative impacts or unintended consequences derived from home and agile working. It identifies opportunities for the future and outlines a set of actions that can be implemented by a range of organisations and their employees to maximise health and well-being.

The HIA utilises a range of robust peer reviewed research literature, grey literature and health intelligence, and draws from valuable evidence from key stakeholders.

Key Findings

Mental health and well-being is a cross cutting theme. Home and agile working can bring benefits for example, promotion of work / life balance and enhanced autonomy and control of when and where an employee works; but it can also diminish social interaction and create or increase social isolation and stress (see Section 3.2.3)

Home and agile working can lead to co-benefits for employees and employers for example, better mental well-being through more autonomy for employees has the potential to improve productivity and creativity. It can facilitate sustainable development, environmental and health gain through the promotion of active travel, reduced car use or reduced commuting time to official office bases (see Sections 3.2.3, 3.2.4 and 3.2.5)

Evidence indicates that in the short-term home and agile working can increase efficiency and productivity. However, there is more research needed to explore the longer-term impact of this way of working (see Section 3.2.5)

A wide range of population groups will be affected by an increased shift to home and agile working – some positively and some negatively. Groups identified include women, men, older people, young people and young adults, those with caring responsibilities and those in low-income groups. (see Section 3.1)

Inconsistent organisational policies, terminology, and the application and interpretation of these has a major impact for organisations and employees across a range of sectors and can increase inequalities (see Section 3.2.4 and 3.2.6)

Digital infrastructure and support services, and equity of access to these, are essential in order to maximise the wider benefits that home and agile working can bring to Welsh society, the environment and the economy (see Section 3.2.6)

There are wider benefits to be derived from working in an office or at an official work base or space than carrying out work itself. This includes reduced social isolation, promotion of mental well-being and social cohesion and the provision of opportunities for learning and networking to enhance career development and progression (see Section 3.2.2 and 3.2.3)

In relation to access to a suitable homeworking environment, equipment and digital services, the availability (or not) of these and the way organisations apply their policies can lead to positive or negative experiences amongst those who work from home and can potentially widen health inequalities because of these, along with any potential associated financial costs. (see Section 3.2.6)

The impact on organisations, for example the economic and environmental impacts of continued operation of sites in city centres, should be considered alongside population level impacts. Support should be available for organisations to balance the impact through the post COVID-19 transition to support social and economic recovery and renewal and maximise productivity in Wales (see Section 3.2.5 and 3.2.6)

The HIA identified positive impacts on health and well-being from home and agile working. These include:

- Enhanced mental well-being for employees and their families, for example due to increased autonomy over work, improved work / life balance with more time to spend with family or take physical activity, and reduced commuting (see Sections 3.2.1, 3.2.2 and 3.2.3)

- Potential reduced car use through reduced levels of commuting which could have co-benefits for the environment (see Section 3.2.4)

- Potential increased efficiency and productivity from homeworking and time maximisation (see Section 3.2.5)

- Home and agile working could lead to the reinvigoration of rural communities and economies as employees have the ability to work further from their work base and can move to areas outside of traditional commuter belts. This can support a move to more local foundational economies (see Section 3.2.5)

- Older people may have the opportunity to remain in the workforce longer should they wish to do so by working from home or in a more agile way. Those with disabilities will have additional opportunities to join the workforce in Wales and those with caring responsibilities such as lone and working parents could work flexibly. This can promote both diversity and inclusiveness (see Sections 3.1.1 and 3.1.3)

- Policies and plans that have emerged and been implemented in the accelerated shift to homeworking under the restrictions for COVID-19 control could be maximised and reviewed in a timely manner. This includes organisational policies and guidance and potential governmental legislation (see Section 3.2.6)

The HIA also identified negative impacts / unintended consequences from home and agile working. These include:

- Digital exclusion, digital literacy and the infrastructure in Wales could be a barrier to working from home for many in the workforce (see Section 3.2.4 and 3.2.6)

- Cities and town centres and their social and economic fabric may be diminished if more organisations shift to more regional or local hubs or require more of their employees to work from home (see Section 3.2.5)

- There is an increased risk to physical health and safety from homeworking including increased risk of musculoskeletal conditions and injuries from unergonomically designed spaces and work environments (see Section 3.2.5)

- There is an increased risk to mental health from homeworking including increased social isolation, disconnectedness from colleagues and burnout (see Section 3.2.3)

- Many women in the workforce cannot work from home due to the nature of their work and have additional caring responsibilities alongside working (see Section 3.1.1)

- The potential for an increase in unhealthy health behaviours and increased risks of obesity from more sedentary lifestyles caused by working from home (see Section 3.2.1)

- Risks to the frequency, availability and future viability of public transport for those who are required to work at a specific work location, for example key workers, as less people use public transport to commute to work and more work from home (see Section 3.2.4)

- Home and agile working can be more challenging to safeguard vulnerable groups including those at risk of Violence Against Women, Domestic Abuse and Sexual Violence (VAWDASV) (see Section 3.1.1)

Future Actions (see Section 4.3)

In response to the wide-ranging impacts of homeworking highlighted in this HIA, future actions which could be adopted to promote individual, community and societal well-being which also meets the needs of organisations and employers are outlined below:

There is need to support the mental health and well-being of those who work from home or in an agile way that recognises a person's individual circumstances and preferences. Mental Well-being Impact Assessments (MWIA) can support decision makers within organisations to articulate clearly any impacts of changes, proposals or policies on the mental well-being of their employees (see Section 3.2.3)

Supportive organisational policies and plans, digital infrastructure and consistent management practices should be put in place to enable effective, productive and positive home and agile working for those who wish to work this way and safeguard those who may be vulnerable and at risk, for example from Violence Against Women, Domestic Violence and Sexual Abuse (VAWDASV) (see Sections 3.1.1 and 3.2.6)

Employers should ensure that employees have equity of access and support for IT equipment, digital services and training including for data protection and confidentiality to enable them to work agilely and from home - particularly when homeworking is required for example under any future national or local COVID-19 pandemic restrictions (see Section 3.2.6)

Businesses and organisations that encourage office based and home and agile working should also promote more sustainable forms of travel when doing so, including active travel and reduced car use (see Sections 3.2.1 and 3.2.4)

There is a need for measures or organisational policies and guidance to support those individuals who work from home or agilely to do so safely and effectively. Employees need to be clear about what is expected of them and have access to support and resources / guidance when working outside of the traditional workspaces (see Section 3.2.6)

There is a need for further engagement with employers and employees to gain greater understanding of their experiences, in order to learn lessons from the rapid transition to homeworking during the pandemic; mitigate for any negative impacts in future; and monitor the impacts during the ongoing pandemic response and recovery phases. This will inform future working practices (see Section 3.1 and 3.2.3)

Current organisational policies and processes should be reviewed and amended to take into account the increase in homeworking and to support the continuation of homeworking in some sectors and the promotion of local foundational economies (see Section 3.2.5 and 3.2.6)

Interventions to address health behaviours which can contribute to, and increase unhealthy behaviours such as reduced physical activity, increased snacking at home and increased alcohol consumption through stress should be supported by organisations and include a key focus on those who work at home or agilely. Active travel should be promoted. (see Sections 3.2.1 and 3.2.4).

Conclusion

Due to the pandemic and policies such as the *'Staying at Home and Social Distancing policy'*, home and agile working has become necessary for many organisations and employees and has been implemented in an accelerated and largely unprepared for way, with changes applied rapidly before many of the wider implications were understood.

The HIA identifies a number of positive and negative impacts of home and agile working for physical, mental, social, economic and environmental well-being. There are a number of actions that can be taken to maximise positive impacts and opportunities and mitigate negative effects.

Finally, this assessment provides a greater understanding of the major impacts and can support organisations to foster an approach that promotes health, well-being and equity to enable effective, productive and positive home and agile working experiences. Overall, it demonstrates that these methods of working, both now and in the future, require a balanced, well planned, well managed and holistic approach to support everyone including those who can, and want to, work from home and also those who do not wish to, or cannot do so, for example due to the nature of their employment or personal circumstances.

... a balanced, well planned, well managed and holistic approach to support everyone including those who can, and want to, work from home and also those who do not wish to, or cannot do so ...

A COVID-19 pandemic world and beyond:
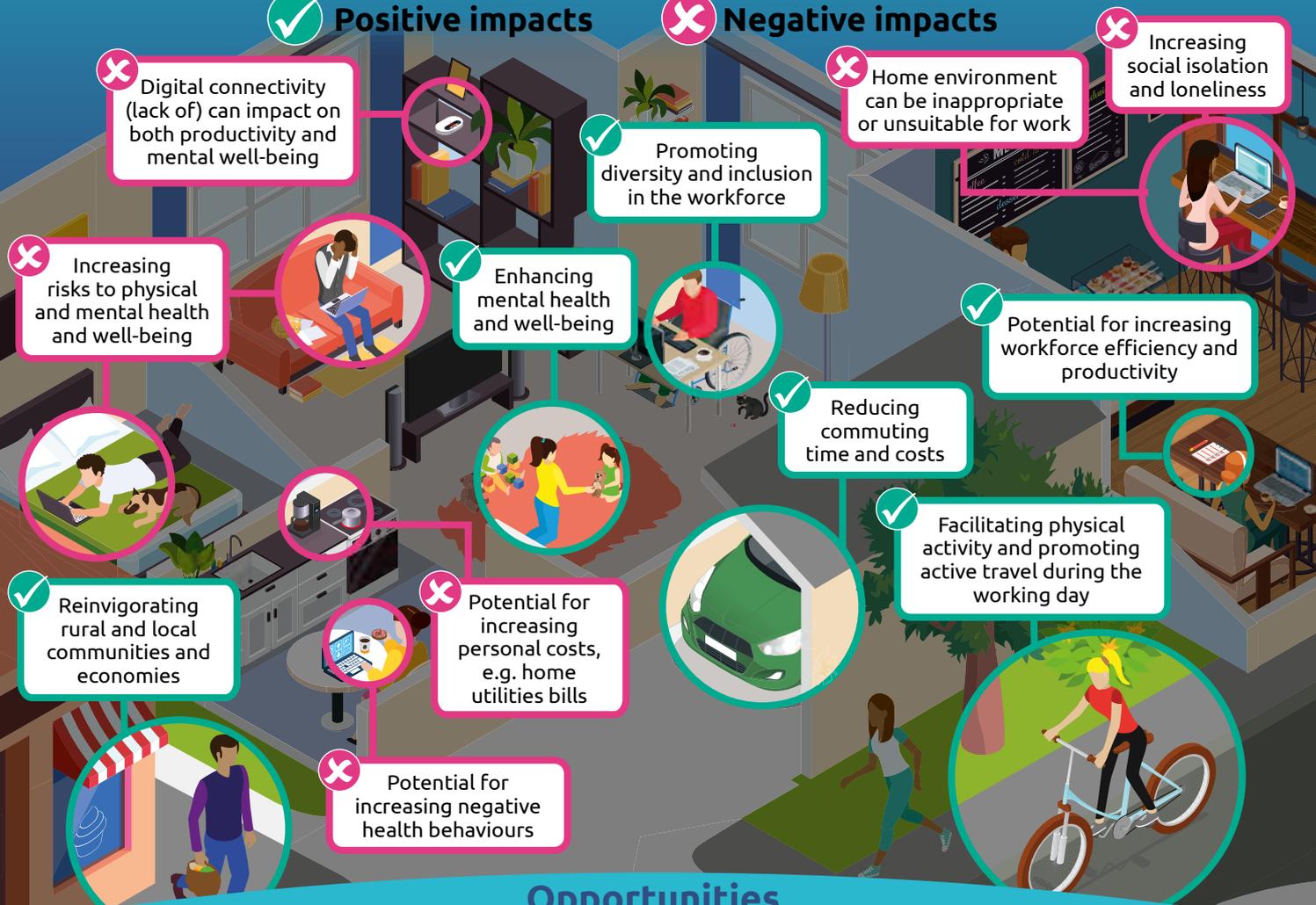## The public health impact of home and agile working in Wales

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Population groups affected

- ❌ **Women, particularly with caring responsibilities**
- ✅❌ **Men**
- ✅❌ **Older people**
- ✅❌ **Young people and young adults**
- ✅ **Rural communities**
- ✅❌ **Lone parent families**

⚠️ Increasing inequalities where people cannot participate in home or agile working, including due to the nature of work or accessing the necessary digital services.

✅ Positive impacts   ❌ Negative impacts

- ❌ Digital connectivity (lack of) can impact on both productivity and mental well-being
- ❌ Increasing risks to physical and mental health and well-being
- ✅ Reinvigorating rural and local communities and economies
- ✅ Promoting diversity and inclusion in the workforce
- ✅ Enhancing mental health and well-being
- ❌ Potential for increasing personal costs, e.g. home utilities bills
- ❌ Potential for increasing negative health behaviours
- ❌ Home environment can be inappropriate or unsuitable for work
- ❌ Increasing social isolation and loneliness
- ✅ Potential for increasing workforce efficiency and productivity
- ✅ Reducing commuting time and costs
- ✅ Facilitating physical activity and promoting active travel during the working day

Opportunities

- Supporting local economies and investment
- Reviewing the terminology around home and agile working to agree a consistent and uniform approach
- Developing local 'hubs' for agile working
- Reviewing economic development and spatial planning policies

Actions

- Supporting a person's individual circumstances and preferences
- Promoting health and well-being and environmental co-benefits
- Supporting employees with positive health behaviours
- Reviewing legislation, organisational policies, plans, training, guidance and culture
- Engaging with employees to better understand the impacts, and learn from experiences during Covid-19

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1 Introduction

Severe acute respiratory syndrome coronavirus 2, SARS-CoV-2 (commonly known as coronavirus or COVID-19) has caused illness (morbidity), death (mortality) and upheaval across the world. The majority of the globe's nations have been affected by the pandemic or 'syndemic'[1] and have established policies to ensure that the risk of transmission within the population is reduced. This has ranged from 'softer' social and physical distancing measures through to 'harder' 'stay at home' and 'lockdown' policies. However, as part of implementation of these policies, there have been a range of supporting measures and policies, each with their own direct and indirect impacts on health, well-being and equity. Within the 'Staying at Home and Social Distancing' policies applied in Wales, there have been requirements for workers to 'work from home if you can' as a way of restricting the transmission of COVID-19 (Welsh Government, 2020).

In June 2020, Public Health Wales published 'A Health Impact Assessment (HIA) of the Staying at Home and Social Distancing Policy in Wales in response to the COVID-19 pandemic' (Public Health Wales, 2020). The policy included the specific requirement for the population of Wales to remain at home at all times (except in specific circumstances) and to work from home where they could. The HIA identified a breadth of implications across the population including for those who could work from home. In relation to homeworking, the HIA identified a number of impacts to emerge from this measure.

The HIA noted that there was a:

- **Major** confirmed **positive** short to long-term impact in enabling employees to remain working flexibly
- **Major** confirmed **negative** short to long term impact for those who cannot work from home; have other pressures and responsibilities for example home schooling; and for those on low incomes who may be at risk of food or fuel poverty

For the purposes of this HIA, **homeworking** is defined as *'the activity of doing paid work from home, especially when you usually travel to work.'* or *'the practice of working at home, rather than in a factory or office.'* (Collins Dictionary, 2020) The assessment also encompasses the concept of **agile working** which has been defined as *'bringing people, processes, connectivity and technology, time and place together to find the most appropriate and effective way of working to carry out a particular task. It is working within guidelines (of the task) but without boundaries (of how you achieve it)'* (The Agile Organisation, 2020).

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1   A syndemic is co-occurring, synergistic with, and exacerbating, existing inequalities through underlying conditions and wider socio-economic factors

This HIA is a more in-depth appraisal of the impacts of homeworking in Wales during the lockdown and the potential impact in the future and who is, or could be, affected. It has been developed through an appraisal of a wide range of evidence and the involvement of key stakeholders. The purpose of the HIA is to better understand the implications of home and agile working and how any impact will be distributed in the working population and communities in Wales. It aims to provide information to policy makers and organisations, their employees and families and communities so that home and agile working can promote and protect health and well-being both during the pandemic and in a post pandemic world, and mitigate for any potential negative impacts which may arise from this way of working.

This report:

- describes both **current and future positive and negative impacts** on a range of policy areas, including opportunities;

- **identifies which population groups have been affected** in Wales;

- highlights **actions** that could be taken now and in the future to maximise any positive impacts and mitigate any negative impacts

1.1 Background

This HIA was carried out to better understand the differential impact of home and agile working in Wales, as we continue to live, work and recover as a society against the background of COVID-19.

> **Data from the National Survey for Wales monthly survey in May 2020, shows that 44% of respondents reported being able to do most or all of their work from home** (Welsh Government, 2020b).

It has been estimated that approximately 40% of workers in Wales are employed in occupations that can be carried out at home (Taylor and Griffith, 2020). However, it has also been acknowledged that homeworking is not an option for many 'keyworkers', including in the sectors of health and social care, manufacturing, essential retail such as supermarkets, postal communication, transport and education. Wales has a higher share of keyworkers (31%) compared to other nations in the UK, for example, 14% of Welsh workers are employed in health and care compared to 7% in London (Rodriguez, 2020). For many in the working population, the inability to work from home resulted in many sectors suspending economic activity as they were not classed as essential businesses[2], for example, the leisure and hospitality industry, or because they were unable to implement protective measures and therefore comply with Welsh Government regulations. This led to many workers being furloughed during the pandemic lockdown period and beyond.

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2   Listed in Schedule 4 of Welsh Government legislation - The Health Protection (Coronavirus Restrictions) (No. 2) (Wales) Regulations 2020. https://gov.wales/sites/default/files/publications/2020-07/the-health-protection-corona-virus-restrictions-no-2-wales-regulations-2020.pdf

Prior to the pandemic, many employers were already operating policies which provided for at least an element of homeworking during the working week. However, the content and implementation of these policies was diverse and further complicated by a range of terminology including 'agile-working', 'flexible-working' and 'homeworking', and an absence of consistent definitions. Further, these policies were likely to have been used by only a small percentage of the workforce. It is only now that they are being fully tested by businesses and organisations (and their employees) as a result of the COVID-19 pandemic. This has been complicated by the speed with which the 'Staying at Home and Social Distancing' policy was introduced on 23 March 2020.

Pre-pandemic homeworking policies are under-pinned by UK Parliament legislation including the Flexible Working Regulations 2014, which enable employees with 26 weeks of service to apply for homeworking. Home workers are protected through legislation including the Working Time Regulations 1998, which state that all workers do not have to work more than 48 hours a week, and the Management of Health and Safety at Work Regulations 1999, which require risk assessments for home workers.
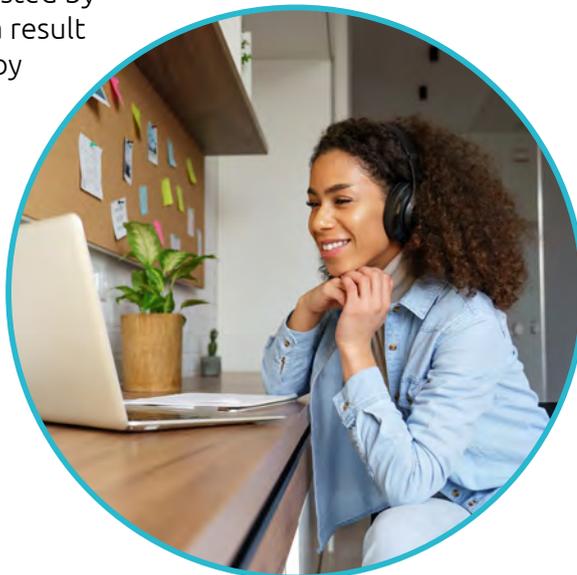
Employer policies pre COVID-19 have included a range of organisational processes for requesting homeworking, and homeworking may also have been classified in one of several ways. For example:

- **Permanent homeworking** – where an employee permanently works from home for all or some of their working hours
- **Temporary homeworking** – where an employee temporarily works from home for a period of time before returning to their normal place of work
- **Occasional homeworking** – where an employee works from home on an ad hoc basis

Current (November 2020) Welsh Government advice remains to 'work from home if you can' to keep Wales safe in the context of the pandemic. There are examples of employers informing staff to not expect to return to the workplace until 2021, alongside examples of employers beginning to return a (small) percentage of staff to the workplace, whilst ensuring control measures are in place to reduce virus spread, such as social distancing.

A large number of resources have been published to support both employers and employees with homeworking, and many have been up-dated in response to COVID-19 and subsequent governmental and organisational policies. These resources, which are in the form of advice, guidance, tools, action plans, tips and frameworks, are published by organisations including the UK Government, Wales TUC, Health and Safety Executive, CIPD, ACAS, Mind and the Mental Health Foundation.

2 Methods

HIA is a process which systematically considers the impact of a policy, plan or proposal on a population, through the lens of the determinants of health and well-being. These determinants include social and community impacts, behaviours affecting health such as smoking or diet, and wider environmental and economic impacts. It is an evidence based method to appraise which population groups have, or may be, impacted by a policy (such as home or agile working) and how they will be affected.

HIA's can identify positive impacts or opportunities, and negative or unintended negative impacts and provide evidence based solutions to address these and any mitigation measures that can be implemented to alleviate negative impact and enhance any positive ones or opportunities. The HIA was participatory and comprehensive in nature and was rapidly carried out between 3 June and 5 August 2020.

It is based on several sources of evidence:
- A community health profile and health intelligence
- Published journal papers
- Survey data and grey literature
- Interviews with 16 key stakeholders and written responses from two others

Only evidence available up to 5 August 2020 was included in the assessment.
The full community health profile and health intelligence, literature review and the interview summaries can be found in the Supporting Information report (see Sections 2, 3 and 4).

This evidence has been synthesised and analysed and used to identify and classify the nature, intensity and likelihood of the impact as summarised in Figure 1. Greater weighting has been given to peer reviewed evidence than grey literature and other contextual publications and reports.

Figure 1: Descriptors of impact

🟢 **Positive /** 🟠 **Opportunity** – Impacts that improve or maintain health status or provide an opportunity to do so

🔴 **Negative** – Impacts that diminish health status

✓✓ **Confirmed** – Strong direct evidence e.g. from a wide range of sources that an impact has already happened or will happen

✓ **Probable** – More likely to happen than not. Direct evidence but from limited sources

❓ **Possible** – May or may not happen. Plausible, but with limited evidence to support

✹✹✹ **Major** – Significant in intensity, quality or extent. Significant or important enough to be worthy of attention, noteworthy

✹✹ **Moderate** – Average in intensity quality or degree

✹ **Minimal** – Of a minimum amount, quantity or degree, negligible

S = Short term `0–1` year   **M** = Medium term `1–5` years   **L** = Long term `5+` years

3 Analysis

This section only presents impacts that have been identified as being major or major-moderate; further information on impacts that are moderate or minimal in nature can be found in the accompanying Supporting Information (See Sections 5 and 6).

3.1 Population Groups

3.1.1 Women

✳✳✳ **Major**	🔴 **Negative**	✅ **Probable**	**S** – **L** **Short – long term**

> In March 2020, for women in Wales the majority of jobs were in health and social work activities (24%; 181,569 jobs), followed by wholesale and retail trade (14%; 92,149 jobs) and education (12%; 84,584 jobs) (Office for National Statistics, 2020a).
>
> Women are more likely than men to hold caring roles and the majority of carers in the UK are women (58%) (Carers UK, n.d; Carers Wales, n.d). 51% of individuals who reported providing help or support to someone outside of their household in April 2020 were female and 45% male (Office for National Statistics, 2020b).

The HIA captured evidence which shows that home or agile working can have a range of negative direct impacts for women.

Studies and interviewees noted that it could particularly affect women with caring responsibilities or who are lone parents (Hupkau and Petrongolo, 2020; Scott, 2020, Amano-Patiño et al, 2020; Gustafsson and McCurdy, 2020; INTs 3, 5, 7,8,9,14). Homeworking has led to women spending more time on unpaid work in the home both before and during COVID-19.
For example, during the lockdown in Wales, many women worked from home whilst also home schooling and supporting wider family members such as parents (Thomas, 2020, Alon et al, 2020; Institute for Social and Economic Research, 2020). This has contributed to reduced mental well-being from trying to balance both caring responsibilities and work (Etheridge and Spantig, 2020) and has disadvantaged women in the time that they could devote to their work (Dolan and Lawless, 2020). Gender norms and beliefs tend to shape systems and policies that can affect women and their employment opportunities and create uneven gender balances and inequalities in respect to employment roles and working hours, for example women are more likely to work part time than men (UK Parliament, 2020). It has been suggested that if workplace practices and cultures regarding leave and agile working were targeted equally then this could lead to a redistribution of caring responsibilities to support

increased female participation in the workforce and address any imbalances (King et al, 2020).

Homeworking can also exacerbate the feelings of isolation and worsen mental well-being in women who are at risk of or experiencing Violence Against Women, Domestic Abuse and Sexual Violence (VAWDASV) (INT 1,11). In some circumstances, homeworking means that they cannot escape their environment or must remain living and working with the perpetrator (Employers Initiative on Domestic Abuse, 2020; Taub 2020 cited in Alon et al, 2020). Stakeholders noted that it is harder to safeguard those at risk of VAWDASV, as remote working makes it difficult to detect signs and signals via video or phone (INT 5,7,8,9,11).

Home and agile working is also not possible for many women in the workforce in Wales. A large proportion of women (47%) who work in the UK do so in public and patient facing roles, for example, in health and social care, education and retail which for the majority, will be based in workplace settings (Hupkau and Petrongolo, 2020; UK Parliament, 2020; INT 1,5,14).

For some, there may be positive impacts such as better work / life balance and opportunities for more family time (Andrew et al, 2020; Thomason and Williams, 2020; INTs 7,8).

3.1.2 Men

✳✳✳ Major	●● Positive and Negative	☑ Probable	S – L Short – long term

For men, homeworking could have either a positive or a negative impact.

Some men do not have the opportunity to work from home due to the nature of their employment, with more men than women employed in key worker roles such as bus / train drivers (Office for National Statistics, 2020).

However, men are more likely to work in roles that are more senior (Institute of Employment Studies, 2020) or work in professions and sectors that enable them to work agilely or work from home (CIPD, 2016) as they are provided with the necessary equipment. One report noted that as organisations move towards more homeworking, this may lead to a cultural shift which enables men to become primary childcare providers (Alon et al, 2020) and allows for a redistribution of caring responsibilities within family units (King et al, 2020).
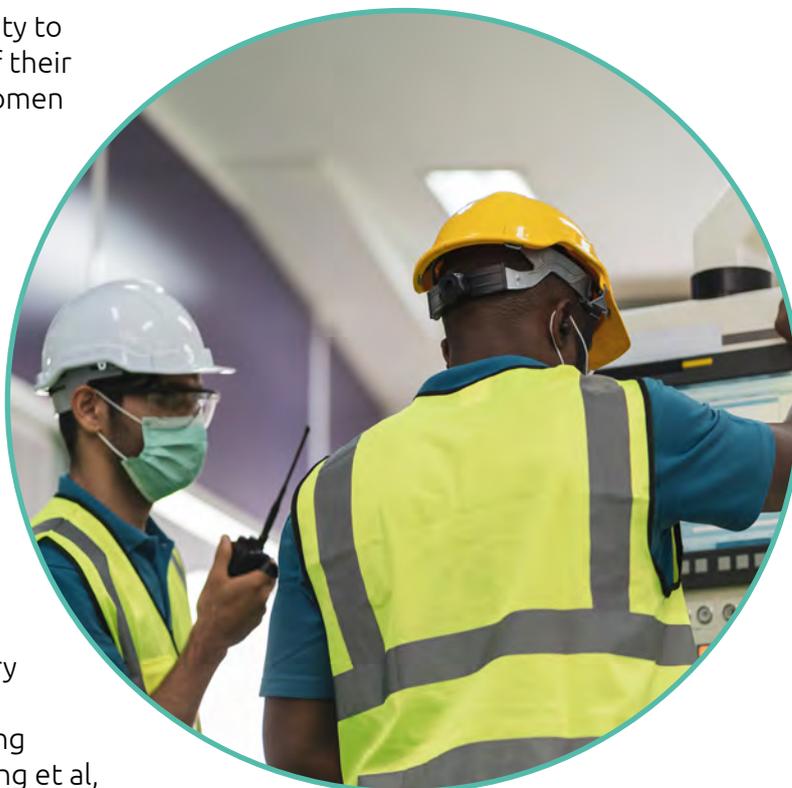
3.1.3 Older people

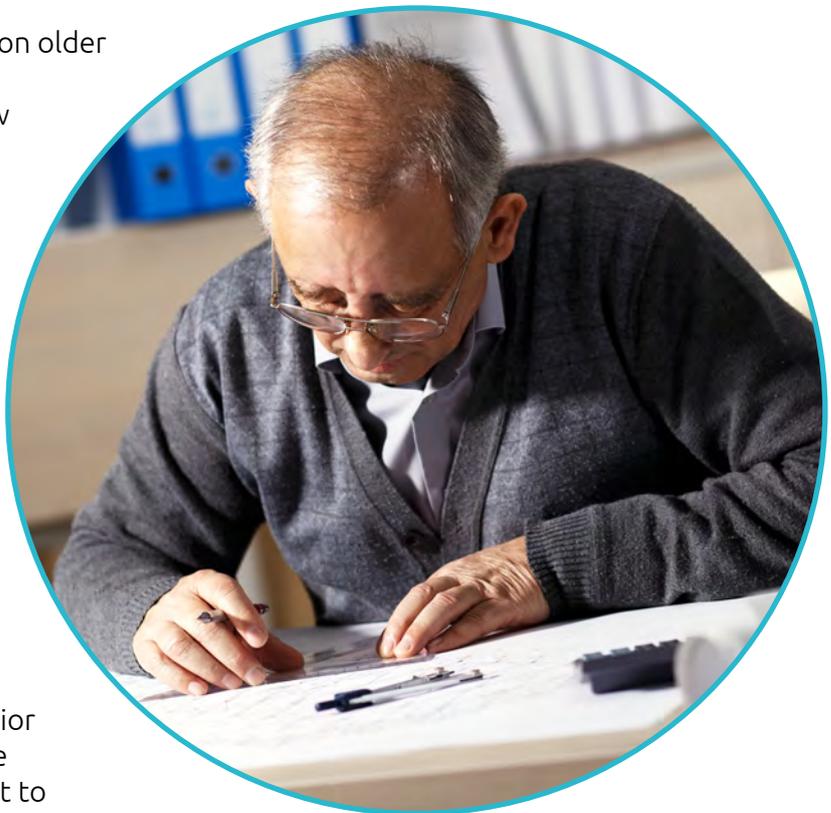| ✹✹✹ – ✹✹ **Major – Moderate**	🔴 **Negative**	✅ **Probable**	Ⓢ **Short term**
✹✹✹ – ✹✹ **Major – Moderate**	🟢 **Positive**	❓ **Possible**	Ⓛ **Long term**

More research needed

> Data from the Office for National Statistics (ONS) Annual Population Survey shows that older workers and individuals with higher skilled occupations were more likely to work from home than younger workers and those with lower skilled occupations (Office for National Statistics, 2020d).
>
> Since 2011, annual records show that the majority of internet non-users in the UK are aged 75 and over and the proportion of those aged 65 and over who are internet non-users has increased (Office for National Statistics, 2019a).

Homeworking could have an impact on older people in a range of ways. For some individuals within this group, the new platforms and technological aspects could induce stress and anxiety as they learn how to use and interact with others via them (INTs, 7, 8,11). This could potentially lead to some older people choosing to leave employment or retire earlier (Coibion et al, 2020).

Alternatively, evidence suggested that for many older people in the working population, homeworking can extend their time in employment (Choudhury et al, 2020) and provide different types of employment opportunities. As older people tend to be more senior in organisations, they may have more opportunity and access to equipment to enable home and agile working (CIPD, 2020). This is dependent on older people having the ability to access and use digital technology (Marston et al, 2020).

3.1.4 Young people and young adults

✴✴✴ **Major**   🟢🔴 **Positive and Negative**   ✔️ **Probable**   S – L **Short – long term**

> Data from the Labour Market Survey shows that in April 2020, across the UK, those aged 16 to 24 were the least likely to work from home (30.2%) and those aged 25 to 34 were the most likely (54.3%) (Office for National Statistics, 2020e).

For young people and young adults there could be positive and / or negative implications from any shifts to home and agile working in Wales. On the one hand, more agile and home based working can provide opportunities to advance their careers post-secondary and tertiary education whilst remaining in, or returning to, the communities they were raised in, should they wish to do so (O2, 2020; INTs 1,14). On the other hand, socialising and socialisation in the work place has an important role to play in developing younger employees' opportunities, communication and interactive skills, networks and mentoring so that they can learn and build a platform for a successful future (BBC Online, 2020; CIPD, 2020). Working from home without support and in isolation could further impact young people's mental health and well-being and without the social or digital skills that workplaces can foster could make it difficult for them to reach out for support. One report noted that during lockdown, a quarter of adults and young people who tried to access support for mental well-being reasons did not do so due to being uncomfortable using phone or video technology – the main driver for homeworking (Mind, 2020).

The working environment can also have a major impact – particularly in a household / setting in which other adults and young people are working and studying. For those still living with their parents, young people and young adults may have to work out of their bedrooms or they may not have access to sufficient space (University of Stirling, 2020; INT 14). It must also be noted that a large proportion of young people in Wales work in sectors where work cannot be carried out at home, for example, hospitality, leisure and retail with almost a third of under 25's working in these sectors (Joyce and Xu, 2020; INTs 1,5).

3.1.5 Rural communities

✸✸✸ – ✸✸	●●	💭❓	S – L
Major – Moderate	**Positive or Negative**	**Possible**	**Short – long term**
✸✸✸ – ✸✸	●	💭❓	L
Major – Moderate	**Positive**	**Possible** (in relation to digital connectivity and Infrastructure)	**Long term**

In 2019, Ofcom (2020) reported that 3% of premises (50,000 premises) in Wales were unable to receive decent broadband from a fixed line, of which the majority (12%; 42,000 business and residential premises) were located in rural areas.

Between weeks commencing 24 February and 20 April 2020, there was a 19.95% increase in network traffic in Wales reported by Openreach (BT); all UK regions experienced an increase in network traffic with the largest increase seen in London and the smallest in Wales (ISPreview, 2020).

Home and agile working has been identified as having a possible major positive impact for those who live and work in rural communities in Wales.

Shifts to this form of working can be positive for a wide range of populations and enable access to employment opportunities, for example for young people and young adults who want to return to or remain in the area they were born and raised in; or for skilled workers to access wider geographical opportunities which may have been inaccessible to them before (O_2, 2020). It allows people to continue to live close to family, friends and familiar places, and be employed in sectors and quality employment that they may not previously have had access to, unless they moved (or commuted) to a city or town or specific area. This could also have potential positive implications for the Welsh language in an area as people remain or return. Wales could capitalise on skilled workers moving from more urban areas to rural areas if they telecommute more, rather than physically commute (Moeckel, 2016). For example, more affluent households may be drawn by larger houses with private gardens and accessible blue and green space in rural areas (RTPI, 2020). This could have implications for the housing sector but it could also enable second homes in Wales to become primary residences and this could facilitate local community diversification, regeneration or economic, social and sustainable growth.

A major barrier to remaining in communities of origin, diversification and growth is the equitable access to digital infrastructure and technology, with issues with broadband and digital speeds in some communities in Wales (INTs 2, 3, 5, 7).

3.1.6 Lone parent families

| ✳✳✳ Major	🟢🔴 Positive or Negative	❓✅ Possible – Probable	🇱 Long term
✳✳✳ Major	🟢🔴 Positive or Negative	✅ Probable	🇸 Short term i.e. in lockdown

In 2019, there were 14.5% lone parent families (131,000 families) recorded in Wales, which was slightly lower than the number recorded for the United Kingdom (UK) and a decrease over the past five years from the number reported in 2014 (156,000 families) (Office for National Statistics, 2019b).

In the UK in 2019, of 1.8 million lone-parent families with dependent children, most (69.9%) were employed and half (49.6%) worked full-time (Office for National Statistics, 2019c).
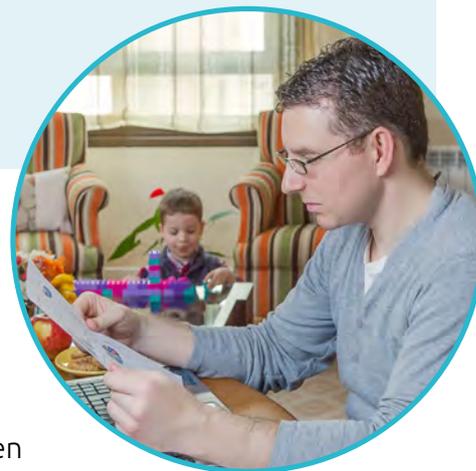
For many lone parent families, home and agile working provides greater flexibility in when, where and how they work, which can enable them to balance and work around family responsibilities (World Economic Forum, 2020). It can promote work / life balance for better health and well-being and allow for different working and shift patterns which can take into account caring responsibilities, for example, evening working when children are in bed (Alon et al, 2020; INT 5).

Several stakeholders stated that even if employers and the home environment are amenable to working from home, challenges will still remain for lone parents (INTs 7,8,9 14) such as managing caring or educational responsibilities, for example, homework and outside hobbies. This was reinforced by one study that was carried out pre COVID-19 and lockdown, which noted the differences between coupled parents and lone parents' ability to work from home - with a larger proportion of coupled parents able to work from home or more agilely than lone parents (Gustaffsson and McCurdy, 2020). Social isolation and the impact of home working in tandem with lone parenting without familial or other support can have a major impact on mental health and well-being too (Etheridge and Spantig, 2020, King et al, 2020: INT 5). See also Sections 3.1.1 (Women) and 3.2.3 (Mental Well-being).

3.1.7 Research and evidence gaps for population groups

For some groups there needs to be **more research or evidence** gathered to gain a better understanding of the implications of a shift to home or agile working; currently there is not enough evidence to make an informed assessment or the evidence available has raised further questions.

These groups include:
- Those with physical or learning disabilities and challenges (see Section 3.2.4)
- Working parents, lone parents or those with caring responsibilities (see Section 3.1.6)
- Those who live on their own (see Section 3.2.3)
- Older people (see Section 3.1.3)
- Critical workers including those in health and social care sectors (see Section 3.2.5)
- Those who are at risk of VAWDASV (see Section 3.1.1)

3.2 Determinants of Health and Well-being

3.2.1 Behaviours affecting health

Physical activity including active travel

✺✺✺ – ✺✺	● ●	❓ – ✅	S – L
Major – Moderate	**Positive or Negative**	**Possible – Probable**	**Short – long term**

Diet and Nutrition

| ✺✺✺ – ✺✺	● ●	❓	S – L
Major – Moderate	**Positive or Negative**	**Possible**	**Short – long term**

> According to data from the National Survey for Wales 2018-19, 53% reported undertaking the guideline amount of 150 minutes of physical activity in the previous week, of which the majority were men, and 33% reported being inactive (undertaking less than 30 minutes of activity in the previous week) (Welsh Government, 2019a). Those aged 75 years and over and those who were materially deprived were more likely to be inactive (Welsh Government, 2019a).
>
> Results from the National Survey for Wales 2018-19 show 24% of adults reported eating five portions of fruit or vegetables the previous day and 18% reported an average weekly consumption of alcohol of above 14 units (Welsh Government, 2019a). Over half of respondents were overweight or obese (59%), of which the majority (66%) were men, and just under a quarter of respondents were obese (23%) (Welsh Government, 2019a).

The HIA captured evidence which suggests that home or agile working can have a range of both positive and negative impacts in relation to diet and nutrition, physical activity and active travel.

Positively, some studies showed that reduced commuting time could provide opportunities for employees to exercise, take more physical activity and engage in health promoting employer programmes such as Public Health Wales' innovative 'Time To Move' pilot scheme. The evaluation of the programme noted that participants stated that having 'flexible work hours' was one of the top 5 enablers to them taking physical activity (53.5%) along with the mental and physical health benefits they derived from it. Whilst the report does not explicitly refer to home or agile working within it, home working can provide the flexible conditions necessary to facilitate taking physical activity (Sharp et al, 2020). Several interviewees reinforced

... reduced commuting time could provide opportunities for employees to exercise, take more physical activity ...
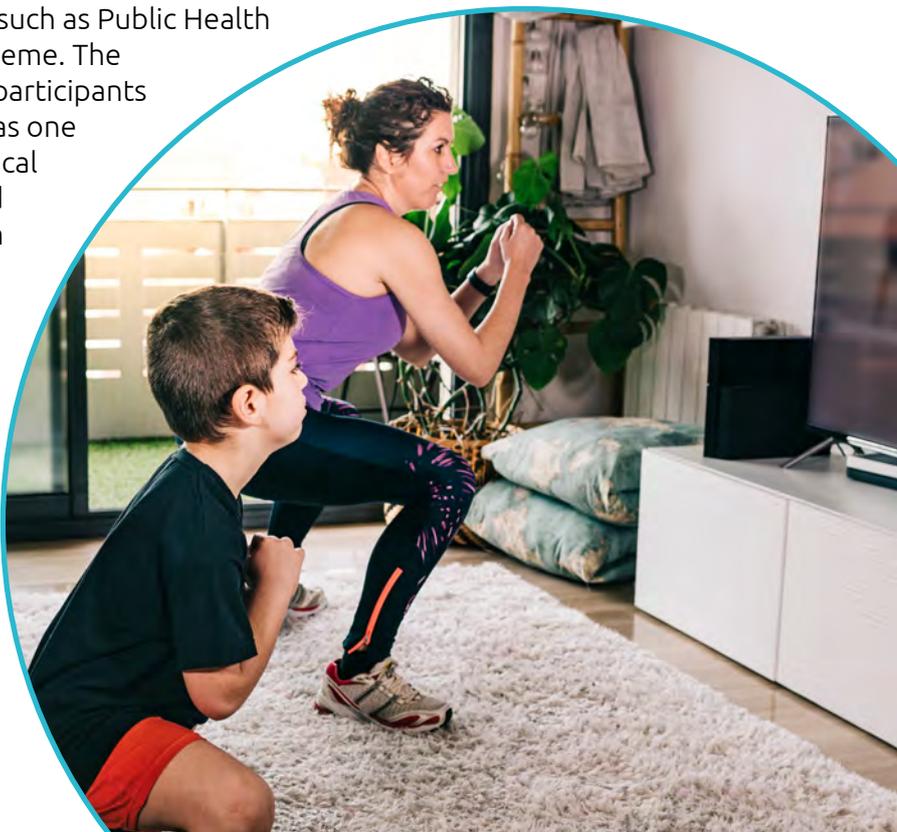
this and noted that for those who had different working patterns it meant that they could take physical exercise more easily and when they wanted (INTs 5,7,8,9,10,12,14). For those who cannot work from home, there is an opportunity for policies and infrastructure to encourage more active forms of commuting.

Negatively, for diet and nutrition there have been a range of surveys and one study published which suggest that snacking whilst based at home can lead to an increase in food and calorie intake and weight gain (Di Renzo et al, 2020;

... snacking whilst based at home can lead to an increase in food and calorie intake and weight gain ...

Jacobs, 2020; Kings College et al, 2020; PHW, 2020). A rolling public engagement survey carried out under the 'Stay at Home' policy in Wales noted that 38% of respondents were snacking more (crisps / biscuits / cake) whilst at home (Public Health Wales - Week 3, 2020), and a survey by the Institute of Employment Studies of 500 homeworkers found that a third of interviewees stated that they were eating less healthily (Bevan et al, 2020). However, evidence identified that being at home can lead to more 'cooking from scratch' and less 'eating on the go' (Kings College et al, 2020).

For physical activity, whilst for some working from home can provide opportunities for activity through having more time, for others it could also have an unintended negative effect of reducing levels of active travel, physical activity and impact health outcomes as a result. This could be caused through working longer hours or taking less steps than when office based and by promoting a more sedentary lifestyle (Jakobsson et al, 2020). In the comparable scenario of lockdown, one international survey noted that being at home had a negative impact on all intensities of physical activity ranging from vigorous through to moderate (Achraf et al, 2020).

Many stakeholders reported that levels, frequency and intensity of health behaviours such as physical activity and addictions could also be highly dependent on an individual's circumstances, pressures and responsibilities (Bouziri et al, 2020; INTs 5,7,8,9,10,12,14) and in a recent survey of 500 home workers, 20% admitted to increased alcohol consumption during lockdown (Bevan et al, 2020). Overall, there is a limited literature in relation to nutrition, physical activity and health behaviours and more investigation in this area is needed.

3.2.2 Social and Community factors

Social networking

✹✹✹ Major	● Negative	☑ Probable	S – L Short – long term

Social isolation at work

✹✹✹ Major	● Negative	☑ Probable	M – L Medium – long term

Impact on families

✹✹✹ Major	● Positive	☑ Probable	S – L Short – long term
✹✹✹ Major	● Negative	❓ Possible	S – L Short – long term

Those with caring responsibilities

✹✹✹ Major	● ● Positive or Negative	☑ Probable ☑☑ (**Confirmed** in relation to child care under lockdown)	S – L Short – long term
✹✹✹ Major	● ● Positive or Negative	❓ **Possible –** Dependent on employer / organisational policies and culture	S – L Short – long term

Findings from an Opinion and Lifestyles survey undertaken in Great Britain, show between 17th and 27th April 2020, 22.8% of respondents reported finding working from home difficult and 22.4% of respondents reported that they had been asked to work from home (Office for National Statistics, 2020g). Between 24th April and 3rd May 2020 the figures reported were 19.3% and 16.7% respectively (Office for National Statistics, 2020g).

Results from the National Survey for Wales monthly survey in May 2020 show that 72% of respondents said they are sometimes lonely and 11% reported being lonely (Welsh Government, 2020b).

Compared to baseline, there was a 47% reduction in visits to places of work in the UK, at 3rd July 2020 (Google Analytics, 2020).

During lockdown, the amount of time spent on providing childcare in the UK increased by 35% compared with five years ago and women reported spending more time caring for a child than men (where the child in the household was aged under 8 years of age) (Office for National Statistics, 2020c).

Carers Wales (n.d.) report that the 2011 census showed there were 370,230 carers in Wales and in 2019 this had increased to 487,000 (Bevan Foundation, 2020). Of all the UK countries, Wales had the highest proportion of carers in 2018 (NHS Confederation, 2018).

Evidence gathered for the assessment identified impacts across several determinants including for social networking, social isolation at work, and impacts on families and those with caring responsibilities in particular.

... for some workers the loss of personal contact, face-to-face connectedness and social networks can lead to, or increase, social isolation ...
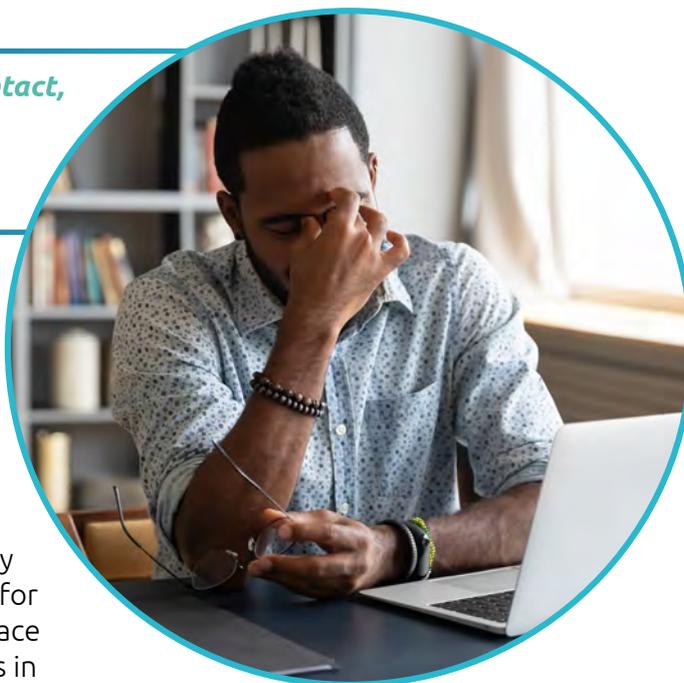
Negative impacts identified in the literature and surveys carried out in recent years include that for some workers the loss of personal contact, face-to-face connectedness and social networks can lead to, or increase, social isolation and have indirect effects on productivity and well-being (CIPD, 2020; Cowan, 2020; Sim, 2020; University of Stirling, 2020). This may be particularly true for some who live on their own, where the workplace can be their only social interaction. Participants in the interviews reinforced this and also noted that 'water cooler' and 'kitchen conversations' are highly valuable and can enhance a sense of belonging to an organisation and teams (INTs 5,9,10,17). The demands of working from home can also have an impact on family life – particularly working women, and it may be much harder to balance the demands of working and family life and caring responsibilities whilst working from home (King et al, 2020; Taylor and Griffith cited in Thomas, 2020; INTs 5,9,10,17).

However, whilst there may be negative impacts, the evidence also identified some positive impacts. This included for those with families and caring responsibilities, who as a result of reduced or no commuting, could increase their time spent with family (particularly if children and young people in a family are in education) and it could promote more time to look after children or elderly parents (Jacobs, 2020, World Economic Forum, 2020).

3.2.3 Mental Well-being

✳✳✳ **Major**   🟢🔴 **Positive or Negative**   ✅✅ **Confirmed**   S – L **Short – long term**

Stress, anxiety and burnout

✳✳✳ **Major**   🔴 **Negative**   ✅ **Probable**   M – L **Medium – long term**

Between 2013 and 2018 there was an increase in the proportion of people reporting high life satisfaction; feeling that life is worthwhile; and happiness in Wales. However, overall, results from the recent 2020 Annual Population Survey suggest that people in Wales have worse mental well-being than those in other UK nations (Public Health Wales, 2020). Those who live in the least deprived areas of Wales reported higher levels of mental well-being than those in the most deprived areas (Public Health Wales, 2020). In 2018 those individuals aged 16 and over in employment were more likely to report positive well-being than those who were unemployed (Public Health Wales, 2020).
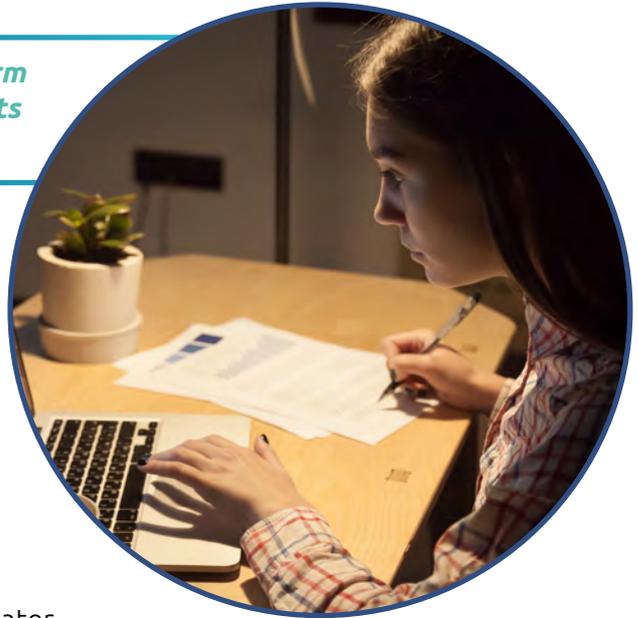
Results from the National Survey for Wales monthly survey in May 2020 show that 72% of respondents said they are sometimes lonely and 11% reported being lonely (Welsh Government, 2020b). Also, 23% reported a high level of anxiousness yesterday and 18% reported a medium level of anxiousness yesterday (Welsh Government, 2020b).

Mental health and well-being has been identified as a cross cutting theme in the evidence base for this HIA. There were a number of published research papers and grey literature reports which focus on this topic in respect to working remotely or working from home (Cowan, 2020; Bevan et al, 2020; Sim, 2020). The impact can be characterised as positive or negative, depending on individual circumstances and levels of organisational support, and the nature of organisations adopted positions and policies.

Positively, reduced commuting can provide time for additional opportunities to enhance mental well-being such as taking physical activity, engaging in hobbies and socialising with friends and family (INTs 7,8). Agile working can also promote increased autonomy for some and a sense of control over work and work / life balance. It can promote greater flexibility in working time and patterns to meet an individual's personal circumstances and when they feel most productive. One recent study highlighted that the pandemic has provided a lens through which employees and organisations have come to realise that social connectedness, including in the work place is of major importance (Moult cited in Jacobs, 2020). Organisations need to support better mental well-being and reduce social isolation at work for those who work agilely and they can do this in a variety of ways (Bevan et al, 2020). Examples of recent good practice in Wales obtained from interviewees included: relaxing the organisations flexible working hour time parameters to enable staff to complete their hours out of 'normal' 9am-5pm working hours, whilst at the same time not placing an expectation on other staff to respond to emails if they were sent outside of these hours (INT 5); launching an online management training course which recognises the different skills that are needed to manage staff remotely (INT 5); and making changes to organisational policies and guidance so that more employees can more easily work from home (INT 12).

Several reports and interviewees stated that mental well-being could be negatively affected by homeworking in a myriad of ways (Holmes et al, 2020; Health and Safety Executive, n,d; Institute of Employment Studies, 2020; Mind, 2020a; INTs 5,7,9,10). These include increased social isolation and disconnection from work colleagues for some (Sim, 2020) and one recent survey carried out by the Institute of Employment Studies (Bevan et al, 2020) of 500 home workers found that one third said that they felt lonely. Other negative impacts include; greater 'homeworking fatigue' in the long-term for home workers after any initial positive impacts have diminished; an increase in working hours through an inability to separate the work environment from the home environment which can lead to 'burnout'; and increased organisational expectations around availability and productivity which can increase anxiety and stress. There is a risk that employees will face increased pressures through working at different times and on different shift patterns to colleagues, such as feeling the need to respond to emails even when they have completed their contracted hours for the day (Bevan et al, 2020; INTs 7,8,9,10,12,17). Some interviewees believed that home working could have potential positive implications for work / life balance and reduced anxiety with one citing their organisational staff survey about home working found that 57% of respondents stated that home working was positive for their work life balance compared to 24% who stated it was detrimental (INTs 7,8).

Population groups noted to be at increased risk of negative mental well-being impacts include: those who live on their own and may feel or become more isolated; women (King et al, 2020); lone parents; health care workers such as General Practitioners; and those who are experiencing Violence Against Women, Domestic Abuse and Sexual Violence (VAWDASV) and who are working and living with a perpetrator (Jacobs, 2020).

In the context of COVID-19 and the pandemic, many workers may also have increased anxieties around travelling to and from an office or workplace again. Several stakeholders believed that to ensure that good mental well-being is promoted, both now and in the future, then a flexible approach should be adopted in order to allow for a mix of home and office based working for employees who can work from home and equity of access to be able to do so, should they wish (INTs 6,8,14,17). In tandem, organisations need to provide support for better mental health and well-being around this transitional issue.

3.2.4 Environmental factors

Housing / homeworking environment including health and safety and working conditions

| ✸✸✸ Major | ● Negative | ✓✓ Confirmed | S – L Short – long term |

Office infrastructure and environment

| ✸✸✸ Major | ● Negative | ❓ Possible | S – L Short – long term |

Office workspaces and places

| ✸✸✸ Major | ● Negative | ❓ Possible | L Long term |

Transport and active travel

| ✸✸✸ – ✸✸ Major – Moderate | ●● Positive / Opportunity | ✓ Probable | S – L Short – long term |

In 2018-19, 17% of adults aged 16 and over reported musculoskeletal illness (StatsWales, 2019c). During adulthood musculoskeletal disorders and mental health are the two main causes of years lived with disability (YLD) for individuals in Wales (Public Health Wales Observatory, 2018). In 2018-19, there were 498,000 workers with new or long-standing work-related musculoskeletal disorders recorded, of which 41% related to upper limbs or neck, 40% to back and 19% to lower limbs (Health and Safety Executive, 2019).

In 2018-19, 29% of all working days lost due to work-related ill health in Great Britain were due to work-related musculoskeletal disorders (Health and Safety Executive, 2019).

During lockdown, the average adult in the UK spent 1 hour and 6 minutes less a day commuting or using transport, with those in paid employment experiencing the greatest reduction in travel time (1 hour and 9 minutes) (Office for National Statistics, 2020c). A smaller reduction was experienced by those with lower household incomes (Office for National Statistics, 2020c).

Data from the Department for Transport (2020) shows significant reductions in use of public transport during lockdown and in May 2020 Welsh Government commented that compared to the same period last year, public transport use had fallen by around 95% (Welsh Government, 2020a).

There were also reductions in motor vehicle use in the UK, with data showing levels falling to below 50% of that reported for the equivalent day in February 2020, for all days during the first six weeks of the lockdown (Department for Transport, 2020).

Working from home and / or agilely can bring particular challenges in terms of the environment that a person can work in and the space, equipment and infrastructure that they have access to. Evidence reviewed as part of the HIA suggested that for many there can be a negative impact as their home / housing environment can be inappropriate or unsuitable for work due to lack of space, light or access to digital services.

A number of stakeholders and studies raised the issue of the nature and quality of the homeworking environment and the impact on health and well-being (Bouziri et al, 2020; RTPI, 2020; INTs 5,7,8,9,10,11,12,14,15,17). It has been highlighted that physical health and safety issues, for example, increased injury in the home or musculoskeletal conditions, could be exacerbated due to a lack of an ergonomically appropriate environment (Bevan et al, 2020). Risk assessments to identify occupational hazards and the promotion of exercises and ergonomic equipment are important (Bouziri et al, 2020; Montreuila and Lippel, 2002; INTs 3,5,9,10) particularly as working from home becomes more permanent and prevalent during and post the COVID-19 pandemic. Many employees during the pandemic have been working in environments such as kitchen tables which are unsuitable in the long term. It was noted that there could be an increase in inequalities as some workers may not be able to, or want to, work agilely or from home. Even if they can work agilely then there may not be space, or equitable access to equipment or to digital platforms. It could also have negative impacts for those who are living in Homes of Multiple Occupation (HMOs) or shared accommodation or where more than one adult or child is homeworking or studying; or when children return home after the school day (Holliss, 2016; INTs 3,5,7). However, it was highlighted by some interviewees that working from a home environment could foster opportunities for some population groups to join the workforce such as those with disabilities and lone parents (INTs 7, 11). However, more research is required in this area.

For transport and the environment, stakeholders identified that agile or homeworking could have a positive or negative impact. Under the 'Staying at Home' policy in Wales, it was identified that there was notable reduced car use and less commuter journeys made and that this could lead to better environmental conditions such as cleaner air and reduced noise levels (INTs 2,7,9,10). Similarly, one recent report noted that *'online meetings and conferences are likely to be maintained leading to positive environmental effects including less traffic congestion'* (Sim, 2020) whilst another recent study notes that in some areas of Wales air quality improved under lockdown but in others it diminished (Ricardo, 2020). This was also reinforced by a United Nations report (United Nations, 2020). However, there is no long-term research around homeworking and the impact on the environment or energy use. The reduced use of public transport and any reduction in numbers of users who travel to and from work could have implications for the long-term sustainability, frequency and viability of public transport services (RTPI, 2020). This has implications for employees who cannot work from home and who provide critical services, for example, health and social care workers (RTPI, 2020). Positively, public transport services have remained in operation during the pandemic.

It has been stressed by some that a shift to more agile working methods needs to be encouraged and viewed in the context of wider societal and environmental co-benefits that will come from it, for example, land use and housing developments that will consider the future as well as current needs; reduced car use; a potential for improved air

One stakeholder stated that, *'this is the greatest opportunity we have ever had to shift the way we travel'*

quality; and better mental health and well-being derived from not commuting at all or infrequently (Holliss, 2020; OECD, 2020; RTPI, 2020; INTs 6, 15). One stakeholder stated that, *'this is the greatest opportunity we have ever had to shift the way we travel'* and promote cleaner and healthier forms of transport and travel (INT 6). Positively, home and agile working can also promote more flexible models of working for example, the delivery of health or social care services digitally and agilely, and

provide workers with flexibility in how, where and when they work (Healthwatch[3] et al, 2020; RCGP, 2020; Holliss, 2017).

One interviewee believed that the current pandemic response presents a timely opportunity to consider how impacts can be addressed in organisational policies and government legislation to ensure that working hours and working conditions when not in an office-based environment meet the acceptable standards (INT 11). There is also a window of opportunity to consider the design of office environments and the use of workspaces and places to promote sustainability, good health and well-being and social connectedness.

... whilst homeworking is feasible for many, there are also many for whom it is not ...

The rapid acceleration to homeworking during the COVID-19 pandemic has highlighted that whilst homeworking is feasible for many, there are also many for whom it is not, for example delivery, key workers such as taxi or HGV drivers (INT 11).

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3   Healthwatch is a UK governmental statutory mechanism intended to strengthen the collective voice of users of health and social care services and members of the public, both nationally and locally. https://www.napp.org.uk/healthwatch.html#:~:text=Healthwatch%20is%20a%20governmental%20statutory,public%2C%20both%20nationally%20and%20locally.&text=LHW%20also%20provide%20or%20signpost,about%20health%20and%20care%20services

3.2.5 Economic factors

Types of employment and sectors including health and social care, hospitality, retail, transport and business and administrative sectors

✹✹✹ Major	🟢🔴 Positive or Negative	✅✅ Confirmed	Ⓢ – Ⓛ Short – long term

Income including those on low incomes

✹✹✹ – ✹✹ Major – Moderate	🟢🔴 Positive or Negative	❓ Possible	Ⓢ – Ⓛ Short – long term

Productivity

✹✹✹ – ✹✹ Major – Moderate	🟢🔴 Positive or Negative	❓ Possible	Ⓢ – Ⓛ Short – long term

Local foundational economies

✹✹✹ – ✹✹ Major – Moderate	🟠 Opportunity	❓ Possible	Ⓛ Long term

Localised office workplaces or spaces including city and town centres

✹✹✹ Major	🟠 Opportunity	❓ Possible	Ⓛ Long term
✹✹✹ – ✹✹ Major – Moderate	🔴 Negative	✅ Probable	Ⓢ – Ⓛ Short – long term

Data from the Office for National Statistics (ONS) Annual Population Survey shows that between January and December 2019, of respondents living in Wales, 4.4% reported mainly working from home, 9.9% reported working from home in the week prior to the interview and 24.9% reported ever working from home (Office for National Statistics, 2020d). Older workers and individuals with higher skilled occupations were more likely to work from home than younger workers and those with lower skilled occupations (Office for National Statistics, 2020d).

Results from the National Survey for Wales monthly survey in May 2020 showed that 13% of respondents had a mortgage holiday agreed during the COVID-19 pandemic, 14% reported keeping up with bills and commitments but said this was a struggle from time to time and 3% reported keeping up with all bills and commitments but that this was a constant struggle (Welsh Government, 2020b).

12% of customers surveyed in 2018/19 said they were struggling to pay their water bill (Discover Water, 2020).

Findings from the 2018-19 National Survey for Wales shows that 14% of adults are classified as materially deprived (Welsh Government, 2019a). Of all households in Wales, on average 12% were recorded as experiencing fuel poverty in 2018 (Welsh Government, 2019b). However, rates differ depending on local authority area in Wales, with larger proportions of households in Gwynedd and Ceredigion living in fuel poverty (23% and 21% respectively) than those in the Vale of Glamorgan, Torfaen and Bridgend (all with less than 9% of households living in fuel poverty) (Welsh Government, 2020c).

The HIA identified a range of peer-reviewed literature, grey literature and stakeholder evidence that highlighted both positive and negative economic impacts of home and agile working for the population, for example, income streams, local economic development and productivity. Some of these are dependent on the local or regional context and personal circumstances. Home and agile working can promote opportunities for some but for others there could be unintended negative impacts (Bick et al, 2020, Montreuila and Lippel, 2002, Rodriguez, 2020).

Negatively, it was highlighted that homeworking could increase inequalities as some workers may not be able to work agilely or from home due to the nature of their employment, the sectors they work in or equity of access to equipment and digital infrastructure (Breach, 2020; CIPD, 2020; RTPI, 2020; Thomas, 2020). Opportunities to work from home are dependent on the sector of employment, with a higher proportion of employees in the UK in the information and communication industry (53%) reporting having worked from home in 2019 (Office for National Statistics, 2020f). This is compared to only 10% in the accommodation and food services industry, 1.8% of individuals in the transportation sector, 11% of those in the storage sector and 2.1% in the accommodation sector who reported mainly working from home or ever being able to work from home (Office for National Statistics, 2020d). One study noted that higher earners are more likely to be able to work from home (Resolution Foundation, 2020). In the UK, those employed in the private sector (17% compared to 3% for the public sector) or who are older are more likely to work from home (Office for National Statistics, 2019d and 2020d). For those who can work agilely, communicating and working from different locations via technology can be challenging and dependent on reliable broadband and access to 4G technology. One study highlighted that 52% of home and remote workers did not feel that they were treated equally to their colleagues (Farooq et al, 2020).

In relation to income, it was identified that there could be a negative impact due to an increase in homeworking costs, for example, through more expense on utility / food bills from spending more time at home; or working out of a coffee shop (INT 11); because of the lack of affordability to have adequate equipment for work purposes if this is not met by an employer (INT 3); or the nature of the employment is low paying and does not have the flexibility to be carried out at home and therefore they have travel and associated costs (CIPD, 2020). It could particularly affect those on low incomes, as any increases in expenditure would be a greater proportion of their overall total income. Conversely, for others, a reduction in commuting and associated costs could have a positive impact on their income (University of Stirling, 2020).

Peer-reviewed studies have demonstrated that there can be an increase in workforce productivity and one short-term study suggests that this could be by as much as 13% (Choudhury et al, 2020; Bloom et al, 2013). It was highlighted that using a common set of digital tools could also increase productivity by 3% (Choudhury et al, 2020) and modular and back office tasks could be completed at home even more efficiently (CIPD, 2020). It must be noted that these were short-term studies and that there is a research gap in relation to the long-term impact of home or agile working on productivity. These studies were also carried out in international settings that may have different cultures and contexts to Wales. In addition, it has been suggested that there could be a decrease in productivity for those who have other responsibilities, for example, home schooling under lockdown in Wales could have detracted from work commitments (Amano-Patiño et al, 2020).

Evidence also suggested a positive correlation between the economic development of a country's GDP and the share of jobs which can be carried out at home (Rodriguez and Ifan, 2020). Finally, some types of employment and sectors could promote new and more flexible working models and patterns, and utilise opportunities to change workforce demographics to become more inclusive and diverse (Healthwatch et al, 2020). Whilst this highlights positive benefits to the economy of home working, it was identified that career progression and salaries could be affected (particularly for young people) if they could not network or access training and mentoring face to face due to working from home or agilely (CIPD, 2020).

Participants in interviews, the grey literature and media coverage highlighted opportunities and supportive policies to strengthen local communities and their economies (BBC online, 2020; Welsh Government, 2020; INTs 1,2,7,15). Employees working from home or agilely could lead to an increase in the use of local businesses and services and assist the creation of thriving and sustainable local town / village centres and

... opportunities and supportive policies to strengthen local communities and their economies ...

communities. Home and agile working could also promote the development and siting of more localised 'hubs' for employers and foster an increase in local procurement, for example catering and cleaning services, as employees could have the option to work agilely from head offices in major cities or from an alternative location in closer proximity to home. This would support Welsh Government's 'community rooted' policies for example, for growing foundational economies and regional investment plans (Welsh Government, 2020; Welsh Government, 2019e). However, it could have a detrimental impact on cities or towns and their communities and economies, if offices are closed and there are less business visitors, or more affluent professionals move to less urban environments. This could lead to some Welsh cities and towns becoming very different places and spaces to those at present (Welsh Government, 2020; YouGov, 2020; INT 2).

A permanent shift to increased homeworking could have major implications for the Welsh economy as a whole – from influencing levels of productivity across the regions, to reducing the demand for cleaning, catering and retail services for offices and their workers in towns and cities. One recent publication noted that although new employment opportunities may arise elsewhere, it will be essential that government and organisations manage this transition in a supportive way (Rodriguez and Ifan, 2020).

Policy makers in economic development and planning may need to reflect on the pandemic context and a post pandemic world and decide if they continue to promote cities as centres of growth (INT 1) or invest in more mixed use communities in which people live, relax and work in diverse ways (RTPI, 2020).

3.2.6 Organisational and National Policies and Infrastructure

Organisational policies

| ✳✳✳ Major | 🟢🔴 Positive or Negative | ✅✅ Confirmed | S – L Short – long term |

Digital services and infrastructure

| ✳✳✳ Major | 🔴 Negative | ✅ Probable | S – L Short – long term |

Digital services, skills and literacy

| ✳✳✳ – ✳✳ Major – Moderate | 🔴 Negative | ✅ Probable | S – L Short – long term |

Government policies and legislation

| ✳✳✳ Major | 🟢 Positive | ❓ Possible | S – L Short – long term |

The National Survey for Wales found 87% of households had home access to the internet in 2018-19 (Welsh Government, 2019a). Of the respondents aged 16 and over, 89% stated that they used the internet. Most were aged 16 to 49 (98%) and this was double the percentage of individuals 75 and over who reported using the internet (49%) (Welsh Government, 2019a). Although the numbers of adults reporting using the internet in Wales has increased since 2012-13 (Welsh Government, 2019a), the survey data indicates 11% are 'digitally excluded' (Welsh Government, 2019d).

Data from the National Survey for Wales 2018-19 showed 92% of households in the least deprived areas had internet access compared with 83% of households in the most deprived areas (Welsh Government, 2019d). Furthermore, employed individuals were more likely to have access to the internet at home than the unemployed or economically inactive, and those in private rented or owner occupied accommodation were more likely than those in social housing (Welsh Government, 2019d). Those educated to degree level or above were more likely to have five digital skills compared with those with no qualifications (Welsh Government, 2019d).

In 2019, Ofcom (2020) reported that superfast broadband coverage reached 93% of residential homes in Wales over the past year. Ofcom data shows 50,000 business and residential premises in Wales [3% of all properties in Wales] were unable to receive decent broadband from a fixed line, of which 42,000 premises were located in rural areas compared with 8,000 in urban areas (Ofcom, 2020). 18,000 premises in Wales were recorded as being unable to access decent broadband from fixed, Wireless Internet Service Provider (WISP) or mobile Fixed Wireless Access (FWA) connection (Ofcom, 2020).

Strategic factors such as organisational and government policies (including for example, health, spatial planning and organisational development) and digital infrastructure could have positive and negative impacts on physical health and mental well-being (Bick et al, 2020; CIPD, 2020; Fadel, 2020). Organisational structures and policies have an important role to play in relation to addressing, managing and recovering from outbreaks and global pandemics such as COVID-19 (Fadel et al, 2020). This is not only through the involvement of occupational and health and safety practitioners to ensure hygiene and safety guidance and practices are implemented but through also encouraging homeworking as part of outbreak control measures.

Whilst technology is a major enabler of home and agile working (United Nations cited by Marston et al, 2020), the ability to work more agilely is so much more than IT equipment, Broadband and Wi-Fi. Employer policies, cultures and management practices have a significant role in facilitating positive implementation of this approach (CIPD, 2020). When positively embedded in an organisational culture, and promoted and implemented well, some have reported that this approach to work can reap benefits and provide some control to employees (1 Million for Work Flexibility, 2020; Choudhury, 2019). Organisations may also implement home working due to additional cost savings (World Economic Forum, 2020) but for some organisations it could lead to additional costs for example, due to the provision of equipment for both a home and office based setting.

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The characterisation of the impact is dependent, however, on the implementation of policies, employers' attitudes and the ability of the employee to be able to access work via digital infrastructure and have the ability to use digital technology (CIPD, 2020). Some interviewees highlighted several organisations' good work that had been carried out in relation to flexible policies to allow more agile working, for example, working outside of 'normal' hours and thinking through long-term implications (INTs 5, 12). Some studies have shown that allowing workers greater autonomy and control via home and agile working can enhance creativity and increase productivity (Moran, 2020, Choudhury, 2020).

Working agilely or from home may be challenging for some line managers in the management of their teams and for workers to feel motivated, involved and connected both socially and digitally. Policies are often inconsistent in their terminology across organisations and can mean different things to different workers (1 Million for Work Flexibility, 2020). In some instances, a range of policies are used to support home, agile, remote or flexible working (INTs 5,6,8,12,16). This was particularly true under lockdown when organisations had to mobilise quickly to facilitate both the pandemic legislation and continue to work effectively and provide services to the population. Several interviewees noted that the lockdown situation was enforced; where challenges had been identified these may potentially have been different, or indeed overcome in a non-pandemic context (INTs 5,8,7,12,14,16).

Alongside the inconsistency in terminology, it was noted by several interviewees that a further complication was inconsistency in policy application - even within organisations - by line managers or due to the overarching culture (INTs 5,7,8,17). Organisations can unintentionally increase inequalities for groups within their workforce as policies are not uniformly interpreted and applied or as some studies note, those who are more senior with higher earnings are more likely to have access and opportunity to work agilely whilst less senior employees are more restricted and required to work from an office or official base (Stanford University, 2020; CIPD, 2016).

A major negative impact for Wales was identified as digital connectivity - which remains a Welsh Government priority (Welsh Government, 2020). Digital infrastructure access or inaccessibility to a stable network or broadband has the potential to impact detrimentally on productivity and mental well-being through stress and frustration. Digital exclusion through lack of digital knowledge, skills and literacy will also have a major impact for home and agile working, as much as having the correct infrastructure and equipment. Both digital infrastructure and literacy

can have consequences for inequalities and populations (geographical or specific groups, for example, older people in the workforce who may be less familiar with IT and the myriad of platforms now being utilised by organisations) by affecting access to employment opportunities.

ONS data show that 19% of the population in Wales had no basic digital skills in 2018, which was considerably higher than all other regions of the UK (Office for National Statistics, 2019a). Digital literacy is vital and in itself can have a positive impact by making agile and homeworking less stressful, more efficient and productive. Conversely, it can have a negative impact on productivity and mental health and well-being, if employees have not been provided with support and training to ensure that they have the level of knowledge and skills needed to work effectively (Bouziri et al, 2020; INTs 6,7,8,17,14). Employers and employees also need to be mindful of the importance of protocols and enhanced systems and training in respect to data protection and confidentiality when providing services from a home or agile setting and protection from digital methods of fraud such as 'phishing' emails (Royal College of General Practice, 2020; INTs 9, 10).
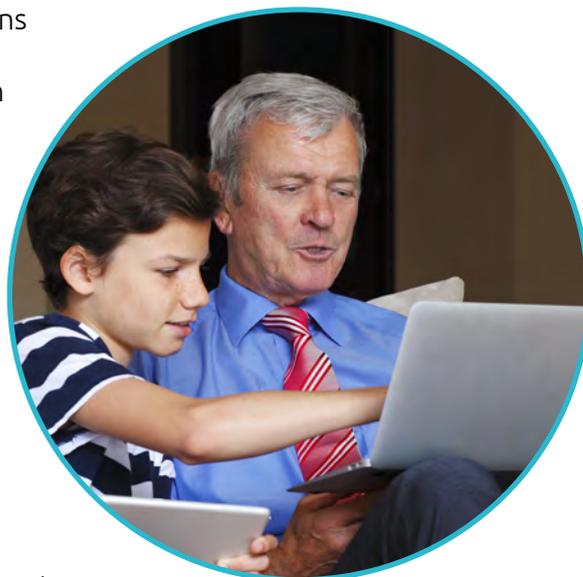
Governmental policies can also be drivers or inhibitors to maximising any potential opportunities for the future. Current Welsh Government policy aims to empower urban, rural and coastal communities to identify and develop solutions to the social and economic barriers that they face in order to drive and foster health and well-being (Welsh Government, 2020). Homeworking and shifts to more agile ways of working across a range of sectors could support this ambition. Also, one interviewee noted the importance of legislation and regulation to protect employees' health and well-being and the need to involve worker representatives as part of this process (INT 11). This supports findings in a recent report by the International Labour Organisation (International Labour Organization, 2020).

More research is needed to gain a better understanding of the issues identified.

4 Key Findings

Mental health and well-being is a cross cutting theme. Home and agile working can bring benefits for example, promotion of work / life balance and enhanced autonomy and control of when and where an employee works; but it can also diminish social interaction and create or increase social isolation and stress (see Section 3.2.3)

Home and agile working can lead to co-benefits for employees and employers for example, better mental well-being through more autonomy for employees has the potential to improve productivity and creativity. It can facilitate sustainable development, environmental and health gain through the promotion of active travel, reduced car use or reduced commuting time to official office bases (see Sections 3.2.3, 3.2.4 and 3.2.5)

Evidence indicates that in the short-term home and agile working can increase efficiency and productivity. However, there is more research needed to explore the longer-term impact of this way of working (see Section 3.2.5)

A wide range of population groups will be affected by an increased shift to home and agile working – some positively and some negatively. Groups identified include women, men, older people, young people and young adults, those with caring responsibilities and those in low-income groups. (see Section 3.1)

Inconsistent organisational policies, terminology, and the application and interpretation of these has a major impact for organisations and employees across a range of sectors and can increase inequalities (see Section 3.2.4 and 3.2.6)

Digital infrastructure and support services, and equity of access to these, are essential in order to maximise the wider benefits that home and agile working can bring to Welsh society, the environment and the economy (see Section 3.2.6)

There are wider benefits to be derived from working in an office or at an official work base or space than carrying out work itself. This includes reduced social isolation, promotion of mental well-being and social cohesion and the provision of opportunities for learning and networking to enhance career development and progression (see Section 3.2.2 and 3.2.3)

In relation to access to a suitable homeworking environment, equipment and digital services, the availability (or not) of these and the way organisations apply their policies can lead to positive or negative experiences amongst those who work from home and can potentially widen health inequalities because of these, along with any potential associated financial costs. (see Section 3.2.6)

The impact on organisations, for example the economic and environmental impacts of continued operation of sites in city centres, should be considered alongside population level impacts. Support should be available for organisations to balance the impact through the post COVID-19 transition to support social and economic recovery and renewal and maximise productivity in Wales (see Section 3.2.5 and 3.2.6)

4.1 Opportunities

- The COVID-19 pandemic has presented an opportunity for organisations (including governments and employee and workers' representatives) to review the terminology around home and agile working and agree a consistent and uniform approach so that better health and well-being can be facilitated and inequalities can be addressed (see Section 3.2.6)

- There is an opportunity to create and enhance local communities in Wales (including rural communities) to promote sustainable and thriving local foundational economies and societies via the development of local hubs to support home and more agile ways of working (see Sections 3.2.4 and 3.2.5)

- There are opportunities for young people and young adults, and families to remain in their communities of origin and access employment opportunities which previously may have required moving or commuting (see Sections 3.1.4 and 3.2.2)

- There is an opportunity to review current sustainable economic development and spatial planning policies. This could ensure that home and agile working, and the changes that an increased shift to this way of working may bring, is considered and included, for example, land use planning and the types and design of housing that may be needed in the future. This could mitigate for future pandemic responses requiring homeworking, and enhance population health, safety and well-being (see Section 3.2.4)

- There is an opportunity for government and employers to develop dedicated guidance or legislation for home and agile working, to protect employees' physical and mental health and well-being and promote co-benefits that may occur from this (see Section 3.2.6)

- Improved insights on the impacts of organisational changes to policies and procedures made during the pandemic can lead to a better understanding of the needs of different populations. For example, changes to organisational policies could help employers better meet the needs of working parents or those who live alone, by enabling changes in patterns and methods of working (see Section 3.1)

4.2 Evidence Gaps

For some groups there needs to be **more research or evidence** gathered to gain a better understanding of both the **short and longer-term** implications of a shift to home or agile working; currently there is not enough evidence to make an informed assessment or the evidence available has raised further questions. Further research is also required to better differentiate whether some of the impacts identified during the pandemic, for example, changes in food consumption patterns or physical activity levels were due to lockdown or due to shifts in home working patterns.

These determinants and groups include:
- Those with physical or learning disabilities and challenges (see Section 3.2.4)
- Working parents, lone parents or those with caring responsibilities (see Section 3.1.6)
- Those who live on their own (see Section 3.2.3)
- Older people (see Section 3.1.3)
- Critical workers including those in health and social care sectors (see Section 3.2.5)
- Those who are at risk of VAWDASV (see Section 3.1.1)
- Mental health and well-being (longer term; see Section 3.2.3)
- Environment and climate change (see Section 3.2.4)
- Productivity (longer term; see Section 3.2.5)
- The impact on health behaviours for example, diet and physical activity (see Section 3.2.1)

4.3 Future Actions

In response to the wide-ranging impacts of homeworking highlighted in this HIA, future actions which could be adopted to promote individual, community and societal well-being which also meet the needs of organisations and employers are outlined below:

There is need to support the mental health and well-being of those who work from home or in an agile way that recognises a person's individual circumstances and preferences. Mental Well-being Impact Assessments (MWIA) can support decision makers within organisations to articulate clearly any impacts of changes, proposals or policies on the mental well-being of their employees (see Section 3.2.3)

Supportive organisational policies and plans, digital infrastructure and consistent management practices should be put in place to enable effective, productive and positive home and agile working for those who wish to work this way and safeguard those who may be vulnerable and at risk, for example from Violence Against Women, Domestic Violence and Sexual Abuse (VAWDASV) (see Sections 3.1.1 and 3.2.6)

Employers should ensure that employees have equity of access and support for IT equipment, digital services and training including for data protection and confidentiality to enable them to work agilely and from home - particularly when homeworking is required for example under any future national or local COVID-19 pandemic restrictions (see Section 3.2.6)

Businesses and organisations that encourage office based and home and agile working should also promote more sustainable forms of travel when doing so, including active travel and reduced car use (see Sections 3.2.1 and 3.2.4)

There is a need for measures or organisational policies and guidance to support those individuals who work from home or agilely to do so safely and effectively. Employees need to be clear about what is expected of them and have access to support and resources / guidance when working outside of the traditional workspaces (see Section 3.2.6)

There is a need for further engagement with employers and employees to gain greater understanding of their experiences, in order to learn lessons from the rapid transition to homeworking during the pandemic; mitigate for any negative impacts in future; and monitor the impacts during the ongoing pandemic response and recovery phases. This will inform future working practices (see Section 3.1 and 3.2.3)

Current organisational policies and processes should be reviewed and amended to take into account the increase in homeworking and to support the continuation of homeworking in some sectors and the promotion of local foundational economies (see Section 3.2.5 and 3.2.6)

Interventions to address health behaviours which can contribute to, and increase, unhealthy behaviours such as reduced physical activity, increased snacking at home and increased alcohol consumption through stress should be supported by organisations and include a key focus on those who work at home or agilely. Active travel should be promoted (see Sections 3.2.1 and 3.2.4).

5 Conclusion

This HIA has identified a broad range of positive and negative implications from home and agile working for the workforce in Wales, both in the short and longer term. These findings can support policy makers, organisations, employees and representatives to think through how an accelerated transition to home and agile working can affect them in a myriad of ways.

The HIA has highlighted a number of positive impacts for example, for mental well-being by providing autonomy to employees to enable them to work flexibly around other commitments, enhance productivity and it could facilitate local community growth. It has also identified a number of negative impacts including for mental health and well-being through increased social isolation and stress; divergence in organisational terminology and policies; and variation in employees' digital literacy and access to digital infrastructure. Home and agile working could also offer a range of opportunities for groups such as young people who wish to remain working and living in Wales, promote workforce diversity and enable a better work / life balance for some employees. Importantly, this HIA has identified that these impacts are not distributed evenly throughout the population and within groups themselves.

Due to the pandemic and policies such as the 'Staying at Home and Social Distancing policy', home and agile working has become necessary for many organisations and employees and has been implemented in an accelerated, and largely unprepared for way, with changes applied rapidly before many of the wider implications were understood. Therefore, this HIA can provide a greater understanding of the major impacts and can support organisations to foster an approach that **promotes health, well-being and equity to enable effective, productive and positive home and agile working experiences.**

Overall, it demonstrates that these methods of working, both now and in the future, require a **balanced, well planned, well managed and holistic approach** to support everyone including those who can, and want to, work from home and also those who do not wish to, or cannot do so, for example due to the nature of their employment or personal circumstances.

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GIG CYMRU
NHS WALES

Iechyd Cyhoeddus Cymru
Public Health Wales

Our Priorities
2018-2030

Supporting the development of a sustainable **health and care system focused on prevention** and early intervention

Building and mobilising knowledge and skills to improve health and well-being across Wales

Protecting the public from infection and environmental threats to health

Influencing the wider determinants of health

Working to Achieve a Healthier Future for Wales

Securing a **healthy future** for the next generation

Improving mental well-being and resilience

Promoting healthy behaviours

Working together with trust and respect to make a difference

Our Values: