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Iechyd Cyhoeddus  
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Public Health  
Wales

**Name of Meeting**  
Board

**Date of Meeting**  
30 September 2021

**Agenda item:**  
4.1

## Research & Evaluation Division in Public Health Wales

<b>Executive lead:</b>	Iain Bell, Director, Knowledge Directorate
<b>Author:</b>	Alisha Davies, Head of Research and Evaluation, Knowledge Directorate Richard Kyle, Deputy Head of Research and Evaluation
<b>Approval/Scrutiny route:</b>	BET

### Purpose

This paper has been produced at the request of the Chair of the Board to provide an overview of the research activities underway in the Research & Evaluation Division, Public Health Wales.

The Board is asked to consider this report.

### Recommendation:

APPROVE <input type="checkbox"/>	CONSIDER <input checked="" type="checkbox"/>	RECOMMEND <input type="checkbox"/>	ADOPT <input type="checkbox"/>	ASSURANCE <input type="checkbox"/>
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The Board is asked to:

- **Consider** research activities underway within the Research & Evaluation Division.

### Link to Public Health Wales [Strategic Plan](#)

Public Health Wales has an agreed strategic plan, which has identified seven strategic priorities and well-being objectives.

This report contributes to the following:

<b>Strategic Priority/Well-being Objective</b>	All Strategic Priorities/Well-being Objectives
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### Summary impact analysis

<b>Equality and Health Impact Assessment</b>	An Equality and Health Impact Assessment has not yet been undertaken.
<b>Risk and Assurance</b>	None

<b>Health and Care Standards</b>	This report supports and/or takes into account the <a href="#">Health and Care Standards for NHS Wales</a> Quality Themes
	All themes
<b>Financial implications</b>	Research generated income is highlighted.
<b>People implications</b>	None.

## 1. Purpose / Situation

The purpose of this paper is to provide an overview of the recent research and evaluation activities specifically within the Research and Evaluation Division in Public Health Wales to the Board.

This paper follows a visit by the Chair of the Board to the Research and Evaluation Division where the timeliness, relevance and breadth of the activities underway were discussed. This paper highlights key research led by the Research and Evaluation Division supporting the Public Health Wales response and recovery to COVID-19, with strong alignment to the organisational strategic plan and themes within the *Welsh Health Equity Status Initiative*, and the wider policy landscape, in particular Welsh Government's *Programme for Government*.

This paper forms part of the overall research landscape of Public Health Wales. Work is underway to fully map all research activity across the organisation and to develop an over-arching research strategy. The strategy and mapping will be taken to the first meeting of the Knowledge, Research and Intelligence Committee early in the New Year

## 2. Background

Public Health Wales' role in leading and contributing to research is aligned to our organisational core purpose and position of leadership for public health in Wales, as stated in the organisational strategic objective "Building and mobilising knowledge and skills to improve health and well-being across Wales" (<https://phw.nhs.wales/about-us/our-priorities/>).

In line with IANPHI, the [Public Health Wales Research and Evaluation Strategy](#) states that the organisation aspires to be a system leader for population health research. The **aim** of the Research and Evaluation (R&E) Division is to provide a leadership role in the development and delivery of public health research aligned to the key policy agendas of public health. We achieve this through:

- highly active research and evaluation programme across five themed areas of activity: Resilience and Community, Employment and Health, Children and Young People, Housing and Health, and a cross-cutting COVID-19 Response and Recovery;
- a federated approach to development, delivery and impact;
- active involvement in bid development, opportunities and innovation;

- development and maintenance of strong network of academic collaborators across Wales and the wider UK;
- supporting others across Public Health Wales through the Research and Development (R&D) Office.

Public Health Wales' development and delivery of the organisational strategy for research and research activities are reported to the Board via the Knowledge, Research and Information Board Committee. This committee was paused during the COVID-19 response and, when reinstated, regular updates will be reinstated.

### **3. Description/Assessment**

The R&E Division is a multi-disciplinary team with expertise in qualitative and quantitative research and evaluation methods. In 2020/21 the R&E Division were re-deployed to support the COVID-19 operational response. Alongside that commitment the Division continued, where possible, to be flexible to develop and deliver embedded research activities into the response, and addressing population health harms of COVID-19.

An overview of the alignment of the Research and Evaluation Division activities to the Public Health Wales strategic plan, Welsh Health Equity Status Initiative (WHESRI) is illustrated in Figure 1.

**Figure 1.** Research and Evaluation Division programmes mapped across Public Health Wales Strategic priorities and Welsh Health Equity Status Initiative (WHESRI) themes, 2020/21.

Responsive, flexible, aligned to policy and practice agendas.

		Whole Division				
		Health & health services	Health & income security and social protection	Health & living conditions	Health & social and human capital	Health & employment and working conditions
PHW Strategic priority area	<b>Research &amp; Evaluation Division Activities</b>					
SP1: Wider determinants	Vulnerability: Understanding homelessness	✗		✗		
	Employment: Precarious employment (National survey)		✗			✗
	Employment: Equitable access to good and fair work (review)		✗			✗
SP2: Mental wellbeing & resilience	Resilience/Community: Emerging drivers of vulnerability (qual)		✗	✗	✗	✗
	Community response, volunteering and COVID-19 (mixed)*				✗	✗
	Vulnerability: Supporting unpaid Carers during COVID-19 (qual)	✗			✗	✗
	Children and young people's mental health (quant)*	✗		✗	✗	
SP5,6: Health system, health protection	Shielded population health care use & mental health (quant)*	✗				
	Digital exclusion and health (quant)	✗		✗		✗
	Nurses health and wellbeing survey (quant)	✗				✗
	Cancer, COVID-19 and inequalities (quant)	✗				
	Behavioural Insights amongst COVID-19 contacts (mixed)	✗	✗	✗	✗	✗

A summary of the achievements by the Research and Evaluation Division in 2020/21 are provided below.

## 4 Key research achievements during 2020/21

### 4.1 Secured £4.6M external research income

In 2020/21 the R&E Division led or was a collaborator in 5 successful competitive research grant applications, securing a total of **£4.6M** from external research funders. Of this, **£943,125** was directly awarded to the R&E Division (Table 1).

The R&E Division is the Chief Investigator in three programmes and a collaborator in two studies, demonstrating the effective collaborations with external academic partners across the UK.

**Table 1.** Grant income awarded to the Research & Evaluation Division, 2020/21

Mth, year award	Role	Title	PHW Funding	R&E Division Funding	Total award
Apr 2020	PI	National Centre of Population Health and Wellbeing Research (Lead Swansea Uni) (Funder: Health and Care Research Wales).	£559,244#	£511,322	£3,356,120
Jun 2020	Co	AD ARC Administrative Data   Agricultural Research Collection. (Lead Queens Uni) (ADRUK)	£0	£0	£597,366
Oct 2020	CI	Networked Data Lab (Health Foundation)	£318,156	£318,156	£ 405,750
Jan 2021	CI	Sustaining community-led action in recovery: learning lessons from the community response to COVID-19 in Wales (Health Foundation)	£105,984	£105,984	£180,776
Jan 2021	CI	Self-isolation Financial Support (Welsh Government)	£ 3,500	£ 3,500	£23,400
Jul 2021	Co	Moral distress in Nurses (Burdett Trust)	£4,163	£4,163	£82,026
<b>Total</b>			<b>£991,047</b>	<b>£943,125</b>	<b>£4,645,438</b>

Key: CI - Chief Investigator, PI - Principal Investigator, Co - Collaborator.

# This funding also supported work in the WHO Collaborating Centre

## 4.2 Peer reviewed academic papers and research reports

In 2020/21, the R&E Division published 13 peer reviewed academic papers (Appendix 1) and 7 research reports (Appendix 2) for a policy and practice audience.

These outputs span key areas relevant to Public Health Wales and have strategic importance in contributing to the evidence base in Wales, enhancing the reputation of the Division and Public Health Wales, and enabling the maintenance of existing and development of new academic partnerships with institutions across Wales and the wider UK.

## 4.3 Demonstrable impact

The research developed and delivered by the Division has made a significant contribution to response and recovery from COVID-19. Key highlights are listed below (Table 2) and provided in detail in sections 4.3.1 and 4.3.2.

**Table 2.** List of key research highlights supporting response and recovery to COVID-19.

<b>4.3.1 Research focused on COVID-19 response</b>	
i.	Real-time behavioural insights research informing advice and support for contacts of COVID-19.
ii.	Examining the impact of shielding on health care use and mental health to inform future support needs.
iii.	Understanding the impact of COVID-19 on inequalities in cancer screening uptake by ethnicity to inform action.
<b>4.3.2 Research focused on population harms of COVID-19</b>	
i.	Generating evidence on the impact of COVID-19 on employment and health in Wales.
ii.	Understanding the impact of COVID-19 on the health and wellbeing of the nursing and midwifery workforce.
iii.	Understanding the impact of COVID-19 on children and young people's mental wellbeing.
iv.	Research into the drivers of resilience and community response during COVID-19.
<b>4.3.3 Developing population cohort through routine data to examine longer term harms</b>	
i.	Unpaid carers
ii.	Homeless populations

### 4.3.1 Research focused on COVID-19 response

#### i. Real-time behavioural insights research informing advice and support for contacts of COVID-19

The R&E Division developed and implemented two embedded research studies, ACTS (COVID-19 Adherence Confidence Text Survey) and CABINS (COVID-19 Contact Adherence to Self-Isolation Behavioural Insights Survey), to generate real-time insights amongst contacts of COVID-19 on the challenge to self-isolation, risk perception, access to support, and awareness of the Welsh Government Self-isolation Support Scheme.

**Impact:** Weekly data reports of a national text messaging survey amongst all contacts of COVID-19 in Wales, and in depths insights from complementary qualitative research, were provided to GOLD and informed the COVID-19 incident management response, risk communication by Public Health Wales, contact tracing teams across Wales and Welsh Government.

Following successful delivery, Welsh Government funded a further embedded study specifically on the financial challenges of self-isolation and experiences of the Self-isolation Support Scheme to inform decisions on modifications and communications about the scheme.

A research [report](#) collated valuable insights into people's experiences of contact tracing and self-isolation in Wales, factors influencing adherence and the challenges people face. The findings were welcomed by behavioural insights and public health colleagues, contributing to shared learning in public health agencies across the UK.

#### ii. Examining the impact of shielding on health care use and mental health to inform future support needs.

Funded by the Health Foundation the [Networked Data Lab](#) is led by the R&E Division and is a collaboration across Public Health Wales, Swansea University, Digital Health and Care Wales and Social Care Wales. In 2020/21 the Data Lab examined changes in the patterns of hospital care use in Wales amongst the clinically extremely vulnerable (shielding) population in Wales, and the impact of shielding on their mental health. Emergency department attendances and admissions decreased among the shielded population, and of those who were diagnosed with depression and/or anxiety, a fifth had no previous history of mental ill-health.

**Impact:** Results identified unmet need among shielding population to inform decision-making around COVID-19 recovery and specifically mental health support for shielding populations. The findings have contributed to a UK wide Health Foundation report (to be released in Sept

2021). Our Wales specific [report](#) was published in July 2021 and was welcomed by the Knowledge and Analytical Service in Welsh Government.

**iii. Understanding the impact of COVID-19 on inequalities in cancer screening uptake by ethnicity to inform action.**

This on-going research aims to examine inequalities in the uptake of bowel and cervical cancer screening in Wales during the COVID-19 pandemic amongst (1) Black, Asian and Minority Ethnic groups and (2) shielding populations compared to the general population eligible for the two population-based screening programmes.

**Impact:** The findings will help identify specific low uptake groups and inform future action to target interventions to increase bowel and cervical cancer screening uptake among those groups in Wales. The findings will be shared with the Wales Screening Committee, the Wales Cancer Network, the NHS Wales Cancer Implementation Group, the Welsh Government TAG, and the Wales COVID-19 Evidence Centre to inform action.

#### **4.3.2 Research focused on population harms of COVID-19**

The R&E Division is leading a number of research studies on the population harms of COVID-19. Key highlights include:

**i. Generating evidence on the impact of COVID-19 on employment and health in Wales.**

The R&E Division led the development and delivery of a national longitudinal survey on the impact of COVID-19 on employment and health of individuals and households in Wales. A representative household survey was conducted at two time points and includes a cohort of individuals who have consented to being followed-up using linked health and care records in the SAIL Databank. This will enable examination of individual and household level health outcomes (e.g., health outcomes of children living with furloughed parents/carers).

**Impact:** The findings informed discussions at the TAG Socio-economic Harms Sub-group and have been presented at national webinars. A [research briefing](#) and [peer reviewed academic paper](#) reporting the characteristics of those most vulnerable to employment changes during the pandemic have been produced. The ongoing research focuses on examining:

- how employment precarity changed during the pandemic, and the association with health and wellbeing;
- changes to the Welsh public's views on their priorities for future work, employment conditions (e.g., training) and home working

supportive of good health and wellbeing, to inform the Welsh Government's *Programme for Government*.

The Division has also carried out a scoping review on the impact of the COVID-19 pandemic on the underlying factors contributing to inequalities in access to securing and retaining good, fair work (due to be published shortly). This complements recent work published by the Wider Determinants of Health Unit and will inform the development of further research.

## **ii. Understanding the impact of COVID-19 on the health and wellbeing of the nursing and midwifery workforce.**

The nursing and midwifery workforce accounts for the largest occupational group within the healthcare workforce in Wales, with over 30,000 nurses, midwives and health care support workers currently working for the NHS. In 2019 a national survey amongst the nursing and midwifery workforce in Wales, [published](#) by the R&E Division, reported that younger and early career professionals were at greater risk of health challenges.

Given the pressure the COVID-19 pandemic on the NHS workforce, there is an urgent need to better understand and inform support for this NHS workforce into recovery. In 2021, the R&E Division repeated the national survey to examine how the COVID-19 pandemic has impacted the working patterns, health and wellbeing of the nursing and midwifery workforce in Wales. Over 2,900 student and registered nurses, midwives and healthcare support workers have responded, and a report of the study's findings will be published later this year.

**Impact:** Partners in the survey's development and dissemination include the Royal Colleges of Nursing and Midwives, Health Education and Improvement Wales, Council of Deans of Health, and all Higher Education Institutions in Wales. Evidence from the survey will inform strategic plans for these organisations and development of interventions to support the health and wellbeing of the nursing and midwifery workforce in Wales.

## **iii. Understanding the impact of COVID-19 on children and young people's mental wellbeing**

The R&E Division are a collaborator within the National Centre for Population Health and Wellbeing Research and leading a research programme examining the impact of the COVID-19 pandemic on the

mental health of shielded children and children living in shielded households in Wales.

We have developed a novel algorithm to identify children living in households with a shielded patient, and children who themselves were advised to shield within the SAIL Databank. We are exploring health outcomes across primary and secondary care for these groups to examine differences in anxiety and depression, before and during the pandemic compared to the general population.

**Impact:** Findings will provide insight into the patterns of health care use for mental-health related conditions among shielded children and children living in shielded households, understanding of the level of demand for mental health care among these groups during the pandemic, and identification of the demographic groups who are most in need of mental health support during COVID-19 recovery. This evidence will inform action plans for recovery from the mental health impacts of the COVID-19 pandemic within Wales.

#### **iv. Research into the drivers of resilience and community response during COVID-19**

The R&E Division has carried out two studies on resilience and community response. Firstly, a qualitative study captured the insight from third sector organisations in Wales supporting vulnerable groups during COVID-19 pandemic, to help understand how to better identify vulnerable groups to help protect and mitigate against the effects of system level shocks, such as COVID-19 and its associated socio-economic harms.

**Impact:** The Voluntary and Community Sector (VCS) leaders, including the Wales Centre for Voluntary Action (WCVA), welcomed the [report](#) (published in July 2021), noting that the insight it provides on the role of the VCS in the COVID-19 response and recovery will support action to develop partnerships between the VCS and statutory sectors during COVID-19 recovery.

Secondly, in partnership with the University of Bristol and WCVA the R&E Division were successful in securing research income from the Health Foundation to support the research programme - *Sustaining Community-led action in recovery: learning lessons from the community response to COVID-19 in Wales*. The aim of this study is to understand the role of community-led action as a protective factor against widening health inequalities during, and in recovery from, the COVID-19 pandemic. This will be achieved through a national volunteering survey (2,102

responses), qualitative research (VCS 51 volunteers or strategic leads) and analysis of social media data to carry out sentiment analysis exploring the potential “near-live” data on community mood and application for example in the [COVID-19 Community Response Map](#).

**Impact:** Evidence from the study is relevant to current UK and international response and recovery from COVID-19, extending beyond this pandemic to civil contingency planning for future emergency events (including health, environmental, or social adversities) as well as the sustainability of longer-term transformational change in health and social care. In Wales, the findings will be directly relevant to the Transformation of Health and Social Care, Public Service Boards (PSB) and Regional Partnership Boards (RPB), as they implement the *Well-being of Future Generations Act*, and put the *Social Services and Well-being Act* into practice.

#### **4.3.3 Developing population cohort through routine data to examine longer term harms**

The R&E Division is leading UK innovation in data linkage generating unique individual level population cohorts within the SAIL Databank environment to enable examination of longer-term impact of COVID-19 on health across specific vulnerable groups, and future evaluation of policy or practice interventions delivered at an individual, regional or societal level to support these groups. The first in the UK, the two electronic cohorts (e-cohorts) developed to date are:

i. **Unpaid carers e-cohort**

This e-cohort collates all those who identify as unpaid carers across routine health records in a population. Carers organisations in Wales have welcomed this development and value its potential to address the long-standing lack of robust evidence to inform policy development and support for unpaid caring in Wales.

ii. **Homelessness e-cohort**

This e-cohort generates a cohort of people experiencing homelessness through data linkage of healthcare records. This has enabled the rapid assessment and [publication](#) of COVID-19 related mortality amongst this population, and examination of the long-term health conditions and healthcare usage of individuals with lived experience of homeless before and during COVID-19 pandemic (due to be published on World Homeless Day, 10 October 2021). Use of the e-cohort is now being used to examine vaccine equity.

## 5 Opportunities and next steps

In line with Public Health Wales' ambition to be a leading National Public Health Institute, the Research & Evaluation Division is actively realigning its programmes and priorities to become an internationally recognised Population Health Research Institute. This will position the Division as a provider and enabler of robust evidence and insight aligned to core organisational and Welsh Government priorities as established in the *Wellbeing of Future Generations Act* and Public Health Wales' priorities established through WHESRI.

Despite redeployment, during the COVID-19 pandemic the Research & Evaluation Division seized opportunities to develop new research programmes to support the response (e.g., through development of a Community Response Map, behavioural insights among contacts of cases of COVID-19, emerging vulnerability, and unpaid caring). In addition, by building on the solid foundation of research established and expertise developed in preceding years, existing programmes of research were pivoted towards COVID-19 to enable grant capture (e.g., Communities and Resilience), academic collaboration, and delivery of early insights on the emerging harms of COVID-19 and its association with the wider determinants of health (e.g., Employment and Health). By identifying areas of unmet population need and evidence gaps in support of addressing these needs, the Research & Evaluation Division also developed novel approaches to ensure that the longer-term harms of COVID-19 will be able to be understood and addressed (e.g., through creation of e-cohorts of unpaid carers and people with lived experience of homelessness). Combined, this represents the strength of a relatively small Division to identify future organisational and Government priorities and respond rapidly, while maintaining a focus on the delivery of robust evidence that is able to stand up to academic scrutiny.

COVID-19 has challenged the Research & Evaluation Division to work differently at a distance and amidst significant demands of health protection responsibilities in support of the enhanced organisational response. Yet, it has also presented considerable opportunities for the Division. Recent engagement with surveys of volunteering and the health and wellbeing of the nursing and midwifery workforce highlight the increasing visibility of the R&E Division's work among public and professional stakeholders. Academic collaboration through successful grant awards and publications, as well as contribution to policy groups such as TAG, highlight the reputation and demand for the evidence that the R&E Division generates. Continued recruitment of talented public health researchers throughout the pandemic demonstrates the Division's

ability to attract first-class researchers who are driven by a shared desire to ensure that research and evidence has impact, and shapes and improves the health and wellbeing of the population of Wales. COVID-19 has tested the R&E Division and it has emerged as a leader of public health evidence and insight in Wales.

As the R&E Division moves into recovery the Division will continue to build on this reputation, particularly by harnessing data assets within Public Health Wales and through the SAIL Databank and NDR to ensure the continued visibility, impact and influence of the Research & Division's programmes of research and evaluation activity aligned to WHESRi and Welsh Government Programme for Government.

## **6 Recommendation**

Board is asked to **consider** the report of the Research & Evaluation Division's activities during 2020/21.

**Appendix 1: Peer reviewed papers from the Research and Evaluation Division published in academic journals during 2020/21**  
(R&E Division authors underlined)

Title	Authors	Journal
<i>Wider determinants – Employment and health</i>		
<a href="#">Characteristics of those most vulnerable to employment changes during the COVID-19 pandemic: a nationally representative cross-sectional study in Wales</a>	<u>Ben Gray</u> , <u>Richard Kyle</u> , <u>Jiao Song</u> , <u>Alisha Davies</u>	Journal of Epidemiology and Community Health
<a href="#">Differences in the impact of precarious employment on health across population subgroups: a scoping review</a>	<u>Ben Gray</u> , <u>Amy Hookway</u> , <u>Lucia Homolova</u> , <u>Alisha Davies</u>	Perspectives in Public Health
<i>Wider determinants – Digital exclusion</i>		
<a href="#">Addressing the digital inverse care law in the time of COVID-19: potential for digital technology to exacerbate or mitigate health inequalities</a>	<u>Alisha Davies</u> , <u>Matthew Honeyman</u> , <u>Bob Gann</u>	Journal of Medical Internet Research
<i>Wider determinants – housing and homelessness</i>		
<a href="#">Creating an e-cohort of individuals with lived experience of homelessness and subsequent mortality in Wales, UK</a>	<u>Jiao Song</u> , <u>Charlotte Grey</u> , <u>Alisha Davies</u>	Journal of Public Health
<i>Community resilience and response</i>		
<a href="#">Mapping Population Vulnerability and Community Support During COVID-19: a case study from Wales</a>	<u>Nina H Di Cara</u> , <u>Jiao Song</u> , <u>Valerio Maggio</u> , <u>Christopher Moreno-Stokoe</u> , <u>Alastair R Tanner</u> , <u>Benjamin Woolf</u> , <u>Oliver S P Davis</u> , <u>Alisha Davies</u>	International Journal of Population Data Science
<i>Child health</i>		
<a href="#">Mediators and Effect Modifiers of the Causal Pathway Between Child Exposure to Domestic Violence and Internalizing Behaviors Among Children and Adolescents: A Systematic Literature Review</a>	<u>Bethan Carter</u> , <u>Shantini Paranjothy</u> , <u>Alisha Davies</u> , <u>Alison Kemp</u>	Trauma, Violence, and Abuse
<a href="#">Common health conditions in childhood and adolescence, school absence, and educational attainment: Mendelian randomization study</a>	<u>Amanda Hughes</u> , <u>Kaitlin Wade</u> , <u>Matt Dickson</u> , <u>Frances Rice</u> , <u>Alisha Davies</u> , <u>Neil Davies</u> and <u>Laura Howe</u>	npj Science of Learning
<a href="#">Welsh Primary Schoolchildren’s Perceptions of Electronic Cigarettes: A Mixed Methods Study</a>	<u>Lorna Porcellato</u> , <u>Kim Ross-Houle</u> , <u>Zara Quigg</u> , <u>Jane Harris</u> , <u>Charlotte Bigland</u> , <u>Rebecca Bates</u> , <u>Hannah Timpson</u> , <u>Ivan Gee</u> , <u>Julie Bishop</u> , <u>Ashley Gould</u> , <u>Alisha Davies</u>	International Journal of Environmental Research and Public Health
<i>Health promotion</i>		

<a href="#">Factors influencing initiation of health behaviour conversations with patients: cross-sectional study of nurses, midwives, and healthcare support workers in Wales</a>	<a href="#">Diana Bright</a> , <a href="#">Benjamin Gray</a> , <a href="#">Richard Kyle</a> , <a href="#">Sian Bolton</a> , <a href="#">Alisha Davies</a>	Journal of Advanced Nursing
<i>Prison health</i>		
<a href="#">Estimating the burden of Type 2 Diabetes in the UK prison environment for the next decade.</a>	<a href="#">Ben Gray</a> , <a href="#">Christie Cradock</a> , <a href="#">Zoe Couzens</a> , <a href="#">Evie Bain</a> , <a href="#">Gareth Dunseath</a> , <a href="#">Steve Luzio</a> , <a href="#">Giri Shankar</a> , <a href="#">Steph Perrett</a>	Primary Care Diabetes
<a href="#">Abundance of undiagnosed cardiometabolic risk within the population of a long-stay prison in the United Kingdom</a>	<a href="#">Ben Gray</a> , <a href="#">Christie Cradock</a> , <a href="#">Zoe Couzens</a> , <a href="#">Evie Bain</a> , <a href="#">Gareth Dunseath</a> , <a href="#">Steve Luzio</a> , <a href="#">Giri Shankar</a> , <a href="#">Steph Perrett</a>	European Journal of Public Health
<i>Novel research methodologies</i>		
<a href="#">First jump time in simulation of sampling trajectories of affine jump-diffusions driven by <math>\alpha</math>-stable white noise</a>	<a href="#">Jiao Song</a> , <a href="#">Jiang-Lun Wu</a> , <a href="#">Fangzhou Huang</a>	Communications on Pure & Applied Analysis
<a href="#">Robust causal inference for long-term policy decisions: cost effectiveness of interventions for obesity using Mendelian randomization</a>	<a href="#">Sean Harrison</a> , <a href="#">Padraig Dixon</a> , <a href="#">Hayley Jones</a> , <a href="#">Alisha Davies</a> , <a href="#">Laura Howe</a> , <a href="#">Neil Davies</a>	PLOS Medicine

## Appendix 2: Research reports published by the Research and Evaluation Division during 2020/21

	Title	Authors	Links
<i>Covid response</i>			
	Self-isolation confidence, adherence and challenges: Behavioural insights from contacts of cases of COVID-19 starting and completing self-isolation in Wales		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Wider determinants – Employment and health</i>			
	Who are most vulnerable to employment changes during the COVID-19 pandemic? Key findings from a national survey.		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Wider determinants – Digital exclusion</i>			
	Digital technology and health inequalities: a scoping review		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Community resilience and response</i>			
	Building Resilience in the fishing sector in Wales		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Nursing workforce in Wales</i>			
	Towards a healthy and sustainable workforce for the future. The current health and wellbeing of the nursing and midwifery workforce in Wales.		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Child health</i>			
	Responding to ACEs in Sport: an evaluation of two ACE-awareness workshops to inform the response to ACE prevention and mitigation in the sports sector		English version available <a href="#">here</a> . Welsh version available <a href="#">here</a> .
<i>Novel research methodologies</i>			
	Making sense of Mendelian randomisation and its use in public health research		Available <a href="#">here</a> .