

Institution: Swansea University
Unit of Assessment: 2
1. Unit context and structure, research and impact strategy

This UoA conducts high-quality research that informs and addresses the aspirations outlined in local, national, and international policy and legislative agenda making a real-life positive difference to people, communities, and society. Colleagues actively engage with policymakers and practitioners in Wales, the UK and internationally, with our research underpinning global policy and practice, improving people's health and social well-being.

The UoA is in a College consisting of four interconnected departments: Public Health, Policy and Social Sciences; Nursing; Inter-professional Studies; and Psychology. Due to the breadth of our interdisciplinary expertise the College returns research to UoAs 2, 4 (Psychology) and 20 (Social Work and Social Policy). For REF2014 colleagues were submitted to UoA3b Nursing, recognising that a substantial proportion of our researchers in the four connected departments produce work with significant public health impacts, and with the aim of deepening collaborations, the University took advantage of the opportunity to bring together these colleagues and develop a submission into UoA2 Public Health for REF2021. In line with our strategy to grow research and build critical mass this affords an opportunity to reposition ourselves to better reflect the diversity of high-quality public health and health services research we produce. This submission to UoA 2 includes colleagues across departments doing research, engagement and impact work in public health, health services and primary care and reflects the diversity of multiple disciplines engaging in evidence generation and implementation to improve health and well-being.

This submission presents the work of 11.5 FTE (headcount 13) Category A submitted staff, conducting public health and health services research. Research within our unit is generating new open access evidence for cancer care, maternal and child health, mental health service delivery, health economics and medicines management and building a sustainable environment in which income generated is used to support new recruitment at PGR, ECR and senior academic levels.

Our research strategy since 2014 has been an ambitious plan of growth implemented through continuous investment in research facilities and staff.

The current strategy aims to:

- Invest in centres of expertise and develop new centres based on successful research performance.
- Conduct and publish high-quality research that will deliver local, national, and global impact.
- Ensure the retention of home-grown talent and expertise and attract scholars with global reputations.
- Provide a world-class research environment, facilitated by an effective and efficient research support service.
- Support research to increase grant income from the most prestigious sources.
- Contribute to driving economic growth, productivity and prosperity in the region, Wales and the UK.
- Create and enhance global and local research partnerships.

Developments since REF2014

Since REF2014 the UoA has seen several developments and changes in personnel. We have taken the opportunity to be bold in repositioning our work. In line with our strategy to invest in centres of expertise and increase vitality in the research environment we have made appointments and promotions to research chairs that contribute to sustainable investment in people and infrastructure. These include:

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- Senior joint appointments in nursing health boards (**Professors Louise Condon and Deb Fenlon**), which has given us strategic influence in local health services to lead on public health and health services research.
- A commitment to recruiting and developing early career researchers (**Dr Darren Edwards, Dr Sophia Komninou, Dr Bernadette Sewell**).
- An investment in developing and nurturing existing staff. For example, **Professor Amy Brown** has developed from her first academic post to achieve promotion to chair and lead a research centre in maternal and infant nutrition. **Professor Michael Coffey** has achieved promotion to chair and has led numerous successful competitive bids in mental health services research. **Professor Deb Fitzsimmons** is now co-leading the health economics group and expanding her support for research activities to numerous fields of public health.

Our strategy to invest in centres of expertise and to nurture our growing capability in new areas supported our world-leading work and global reputation in maternal and infant nutrition producing a new research centre 'LIFT' (Lactation, Infant Feeding and Translation) led by **Professor Amy Brown**. The research strategy to attract scholars with global reputations led to our recruiting **Professor Tom Potokar** and created the National Institute for Health Research (NIHR) funded Centre for Global Burn Injury Policy and Research to further understanding and treatment of global burns and contributing to growing global research partnerships. Meanwhile, our sustained success in leading health economic evaluations to interdisciplinary projects supports the vibrant work of the Swansea Centre for Health Economics (SCHE) (**Professor Deb Fitzsimmons**). These centres generate the evidence to inform global policy and practice and provide a home to nurture the next generation of researchers through supporting PhD, post-doctoral and research officer positions.

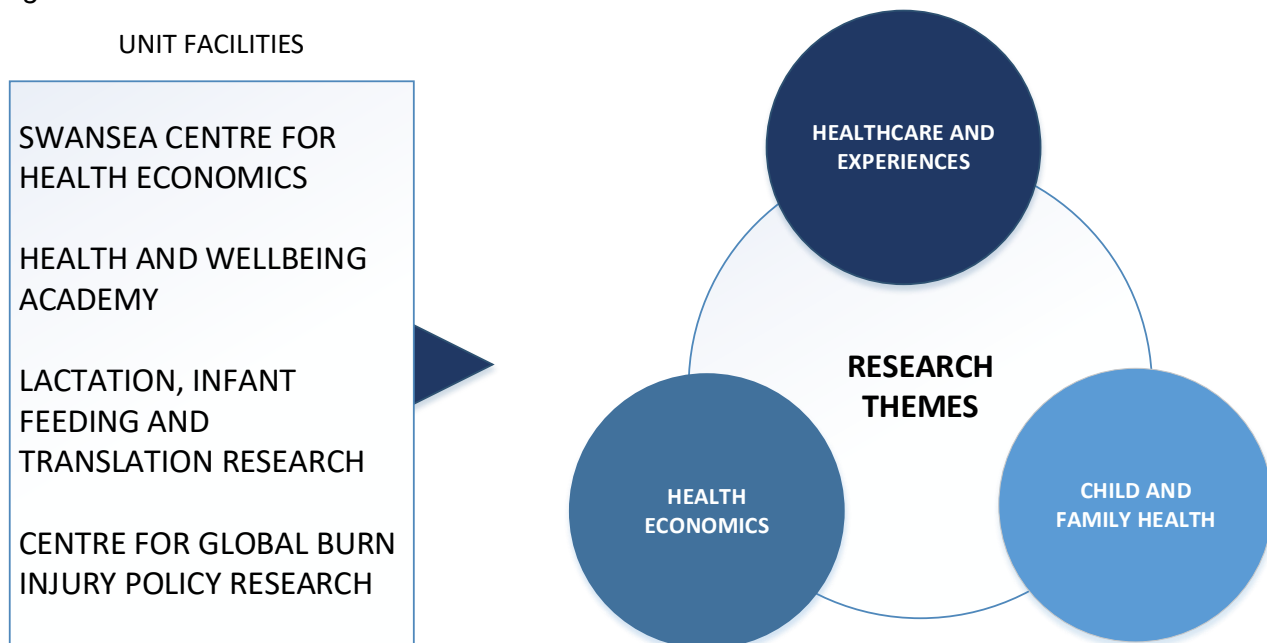
These changes have led to significant growth in our research outputs (up 11.9% over the period), grants awarded (an increase of 77% in this REF census period), PhD awarded (183% increase), and continued impact upon policy and practice.

Our main thematic groupings have evolved since the last REF. In REF2014 these were

- Health Humanities.
- Nursing and Practice Development.
- Medicines Management.
- Health Technology Assessment/Health Economics.

Our research groups now congregate around three themes of work supported by cross-unit facilities and research centres ensuring an interdisciplinary focus with health psychology, nursing, health economics and medicines research in public health and health services research.

Figure 1:- Research Themes



- 1) **Healthcare and Experiences.** Our previously themed Nursing and Practice Development strand continues to develop with a refocused emphasis on evidence for the delivery and experience of healthcare (**Coffey, Fenlon**) and public health initiatives (**Brown, Condon**). Our research on medicines management (**Professor Sue Jordan**) continues to be an important part of this focus, developing evidence to improve patient safety and promote health. **Jordan's** EU-FP7-funded work as part of the *EUROMEDICAT* team on safety of medication use in pregnancy in relation to risk of congenital malformations adds to continuing funded work to generate new knowledge on nurse-led medication monitoring.

Research in this theme is influencing policy and enhancing mental health care delivery with the aim of promoting and improving health. For example, collaborations with colleagues in England and Wales have focused on new evidence on directly involving people in their mental health care in community, third sector settings and inpatient care (**Coffey**, funded by Health and Care Research Wales (HCRW) and NIHR). This work is part of a programme that includes externally funded postgraduate research studentships (5 in total) investigating the experience and delivery of mental health services to promote and improve health.

The addition of the NIHR-funded Centre for Global Burn Injury Policy and Research (**Potokar**) has enlarged this theme with truly international reach and an ongoing research programme of core projects and postgraduate student research to directly benefit vulnerable populations and promote safety.

- 2) **Child and Family Health.** **Brown's** established international reputation as a leader in maternal and infant nutrition has seen the development of the centre for Lactation, Infant Feeding, and Translational research (LIFT). LIFT is a team of interdisciplinary academics, health professionals and students conducting research that makes a real difference to families and those who support them. LIFT works closely with the UNICEF UK Baby Friendly Initiative, infant feeding and parenting charities, and international health organisations to examine public health priorities for families related to feeding their babies and the challenges and barriers they can face in doing so. The ambitious aim of LIFT researchers is to help create a society where every family has the information, confidence, and support to make the decisions that are right for them, by 'lifting' any barriers in their way.

LIFT is conducting research into the 'wicked issues' of medication prescribing for breastfeeding women (funded by the Breastfeeding Network) and inaccurate promotion of

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infant formula milks to families (funded by First Steps Nutrition Trust) providing evidence to the All-Party Parliamentary Group (APPG) for Infant Feeding and Inequalities, the APPG Food and Health Forum, and to the World Health Organisation. This work is further supported by NIHR HTA funding examining the role of peer support for breastfeeding and a Higher Education Funding Council for Wales (HEFCW) infrastructure grant to further develop grant capture and establish a milk bank demonstrating the potential to create real-world impact from this research.

The theme includes HTA funded work on immunisations with traveller communities and developing new evidence on infant feeding with Gypsy and traveller groups (**Condon**) and work from ECR (**Komninou**) on parental feeding styles and child eating behaviours.

- 3) **Health Economics** is now supported by a self-funded research centre SCHE conducting service evaluations and health economics focused input to College-led projects alongside multi-centre clinical trials as well as collaborative research with external partners such as the Welsh Health Economic Support Service. The Centre comprises an energetic and enthusiastic team of multidisciplinary staff focused on developing and applying health economics methods to 'real life' issues in policy and delivery with a mission to bridge the gap between rigorous academic research and delivering useful information to those engaged in providing healthcare.

The theme has contributed new knowledge on the effectiveness of person-centred public health such as self-management in asthma care (**Fitzsimmons**) and family nurse partnership in reducing maltreatment in young people (**Mr Rhys Pockett**, funded by NIHR). Cost-effectiveness is an important criterion for sustainable public health initiatives and **Professor Ceri Phillips** secured funding from HCRW to investigate this in diabetic retinopathy screening and from the Medical Research Council (MRC) for a randomised control trial (RCT) of the Strengthening Families programme to safely reduce the number of children entering care. Improving survival and quality of life for people with suspected cancer is an important public health outcome and this group has provided the first economic evaluation of the Rapid Diagnosis Clinic operated by the local health board. This evidence has been instrumental in decisions to implement these services across Wales. The group provides expertise to wider Welsh public health and health services, e.g., **Fitzsimmons** is the health economist for the Interim Pathways Commissioning Group panel and SCHE provides health economics appraisals for the All-Wales Medicines Strategy Group (chaired by **Phillips**).

Ethics and Research Integrity

Swansea University ensures that everyone engaged in research is trained to the very highest standards of research integrity and conducts themselves and their research in a way that respects the dignity, rights, and welfare of participants, and minimises risks to participants, researchers, third parties, and the University itself. The University is a signatory to the **Concordat to Support Research Integrity**. Our *Research Integrity: A Policy Framework on Research Ethics & Governance* document (2015) was developed in accordance with UK Research Integrity Office (UKRIO) Code of Practice and monitored by our Research Ethics & Governance Sub-Committee.

Research in this UoA is submitted for NHS ethics approval when relevant or otherwise to the College Research Ethics Committee (REC) which provides ethical review for research on human participants and/or data when no other system for formal ethical review is available. The REC has published terms of reference, includes academics from different disciplines, lay members and service users with specialist field knowledge and meets monthly to discuss submitted proposals. The REC is supported by and operates in line with Swansea University research integrity procedures, see REF5a. During the census period the REC has reviewed an average of 118 applications per year (592 research ethics applications for 2014-2019) indicating the vitality of research activities for this UoA.

Progress Towards Open Research Environment

The UoA promotes a culture of open research. We aim to make the methods and results of research as open as possible, as early as possible. This increases the benefits and efficiency of

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research by allowing others to engage with the evidence we generate. Making our research material openly available serves our public mission of sharing knowledge and generates opportunities for collaboration and impact. Research from this UoA is pre-registered e.g., PROSPERO for systematic reviews, or protocols published in open access journals.

Our UoA approach is to require all outputs from staff to be available in green or gold open access formats. Using university negotiated gold open access agreements with established publishers, e.g., Springer, enables UoA staff to publish research in high-quality peer-reviewed journals. Colleagues are encouraged to cost-in open access fees in research bids and our work regularly appears in Health Technology Assessment, Health Services and Research, BMC journals, PlosOne, BMJOpen and other open access journals. The UoA benefits from a College fund for gold open access publication via an application procedure and peer review so that all researchers can expect one supported publication in each round. There is a published policy on open access and terms for applying to the annual fund to ensure fairness and equity in handling of these resources.

Staff are required to register research outputs on our online Research Information System (RIS) for audit purposes, and link to our external-facing, public and open repository, *Cronfa*. Postgraduate students are encouraged to make their theses available publicly via *Cronfa*. All UoA staff have an ORCID identifier (100% compliance has been achieved) and ECRs and PGRs are encouraged to register during induction periods. Swansea University supports the use of open repositories for research data. It is also a signatory to the Declaration on Research Assessment (DORA) and this UoA is clear via our regularly circulated Statement of Intent (Sol) that the scientific merit of published outputs is of chief concern in our assessments.

Interdisciplinary Research

The UoA recognises the contribution that multiple disciplines can make to developing new knowledge for improving health and social well-being. Our UoA consists of multiple disciplines across the wider college and many colleagues engage across disciplines in the University and beyond. Our strategy has been to access development money to enable research groups to come together to work on new ideas and opportunities for evidence generation. For example a multidisciplinary research centre, Challenging Human Environments and Research Impact for a Sustainable and Healthy Digital Economy (Cherish-DE), provided funding for members of this UoA (**Coffey**), in collaboration with academics in Geography (Swansea University) and History (Aberystwyth), external partners at Swansea Bay University Health Board (SBUHB) and a digital media company, that led to *Cefn Coed Remembered: An Exhibition Exploring the Working Life and Patient Care at Cefn Coed Hospital from 1932 to Present Day* at Swansea Museum (January-June 2019).

Members of our UoA have also taken part in the prestigious Welsh Crucible scheme; an interdisciplinary programme that nurtures and prepares early career researchers in Wales to be the research leaders of tomorrow (**Brown, Nigam**). As part of this scheme, we have secured several research grants to conduct interdisciplinary projects tackling global challenges. For example, Brown and Nigam collaborated with a historian to conduct a project exploring the history and nature of disgust, particularly in relation to maggot therapy for wounds. This work is an early candidate for an impact case study for a future REF.

Impact and Public Engagement

Research cannot make a difference behind closed doors and our unit is particularly committed to ensuring that our evidence reaches the people who matter. We encourage and support researchers in engaging with end-users and beneficiaries at research design stage, we foster close relationships by involving the public during data collection, analysis, and to maximise impact in terms of its reach and significance. We engage with government and other organisations via evidence briefings and expert advice to facilitate communication, implementation, and impact. Examples include our work on breastfeeding (engaging with UNICEF and WHO), mental health services research (engaging with Department of Health England and Chief Nurses Office Wales) and health economics and evaluation expertise (SHUHB).

We see impact of research as a critical element in translating the evidence we generate from our studies into real-world changes for individuals, communities, and society. The UoA benefits from a College investment in a dedicated Research Impact Officer to support academic colleagues to enable impact from evidence generated from studies. Colleagues in all research themes deliver public engagement including supporting the Soapbox Science initiative in public spaces in Swansea, contributing to the British Science Festivals and the Pint of Science (led locally by **Komninou**) programme taking research knowledge into public spaces. We contribute evidence to online news outlets such as The Conversation (**Brown, Coffey, Edwards, Jordan and Komninou** and others have contributed 34 articles with over 2 million reads).

The UoA takes public engagement seriously and has been successful in the annual University-wide Impact Awards (won by **Brown** in 2015). Our academics have secured UK awards e.g., **Nigam** won the 2018 Women into Science and Engineering (WISE) innovation award. **Brown** was recognised by ESRC for 'outstanding impact' related to changing breastfeeding policies worldwide. The UoA has generated evidence for two impact case studies, **Improving breastfeeding rates (Brown)** and **Underpinning the national rollout in Wales of a new chronic oedema pathway with economic analysis (Humphries)**, for this REF exercise and has engaged in significant preliminary work for impact case studies for REF+1 with candidates including maggot therapies, assessing medication effects and infant nutrition.

Unit staff benefit from investment in an Impact Fund providing training such as seminars on writing for public audiences (e.g., The Conversation), media training for researchers, sabbatical leave to develop underpinning research publications and funding to advance impact via support for dissemination including travel and conference leave. We are engaged in extensive public engagement for our current impact case studies but also in developing sustainable impact from our research in the longer term.

Ensuring Sustainability

From 2021 as part of the new Faculty of Health and Life Sciences, along with the development of MASI, see REF5a, this will offer the opportunity to build and enhance research groupings. We will have the critical mass to extend public health and health services work, to further enhance the quality and scale of research across all our disciplines and in interdisciplinary research. The Unit is seeking new opportunities for world-class research groups, sustaining, and developing ECR support via mentoring, training, and post-doctoral funding, and providing world class facilities for postgraduate research students to train as researchers.

Our longer-term goal is to grow income from research to produce high-quality evidence for public health and health service improvements. We will do this incrementally by investing in research groups demonstrating excellence, increasing funding of PGRs via studentships and developing ECRs so that Swansea builds its reputation as the place to do public health and services research.

2. People

It has been said that people make places, but we also want our place to make people. The interaction of opportunity and support in our place with the research expertise and commitment of our people creates researchers who produce high-quality research outputs, impact, and environment.

Since 2014 we have created **opportunity** by recruiting senior researchers and promising ECRs to develop and extend the production of high-quality research that makes a difference and achieves our strategy aims. We have generated **support** for new posts with shared appointments and funding from local health boards to develop research collaborations and generate implementation opportunities. All Category A submitted staff are on permanent contracts, reflecting a commitment to building long-term sustainable research trajectories.

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Our continuous focus on personal and academic development illustrates the interaction of opportunity and support with staff in the UoA promoted at all levels, e.g., to senior lecturer (**Edwards, Pockett, Sewell**), associate Professor (**Hewitt, Terry**) and full research Professor (**Brown, Condon, Coffey, Fitzsimmons, Jordan, Nigam, Rance**). Many staff promoted to Chair during this period were ECRs in Swansea at the start of their careers demonstrating our longer-term support and sustainability (**Brown, Coffey, Nigam**).

Developing People

The UoA is committed to developing people at all stages of their research career. To do this we have focused on our strategy to recruit senior researchers and support the development and training of existing researchers.

We created new senior research roles to build research relationships with neighbouring health boards (**Condon, Fenlon**) and to lead new research centres (**Potokar, Price** in the Centre for Global Burns Research). We have grown the SCHE with the acquisition of staff from the Health Economics and Policy Research Unit in 2014 thus increasing capacity to collaborate and generate research income for the purposes of delivering new evidence for public health and service delivery.

To support the development and training of existing staff, alongside University support, see REF5a, we have:

- Invested in them to become independent researchers via staff bursaries to complete PhDs. Since 2014 14 colleagues have been supported with 8 successful completions and 2 others submitting in 2020.
- Recognised that the journey does not end at a successful completion, for example **Brown** has been supported to progress from PhD student to ECR to full research Professor (2018). **Terry** has been supported to secure a 2-year post-doctoral funding from RCBC Wales to advance her work on mental health services for d/Deaf people.
- Supported colleagues via academic mentoring to generate new ideas, access development monies (e.g., Cherish-DE and Florence Mockeridge Fellowships, e.g., **Terry**) and submit external bids to produce new evidence to improve health and well-being.
- Assigned a research mentor to ECRs to support their developing research careers. Mentors benefit from mentoring workshops to ensure they develop the necessary skills to support research careers of ECRs.
- Secured places on the award-winning Welsh Crucible research leadership development programme (**Brown, Nigam**).
- Supported ECRs to access the cross-institutional training unit (Development and Training Services) that coordinates a comprehensive skills development programme aligned to the 12-module Vitae Researcher Development Framework to equip new researchers with key skills for their career.
- Required research supervisors to complete university training for postgraduate research supervision alongside supporting PGRs initially as a second supervisor until they have a successful completion, when they can become a first supervisor.
- Communicated an expectation that UoA staff running studies complete training on leading research projects and leadership preparation.
- Require UoA staff (100% annual participation since 2014) to engage in the university Performance Enabling process based on individual staff key performance indicators (KPIs) relating to specific goals (e.g., PhD supervision, project income, publications, and monitoring impact) to support our research themes and benefit from coaching towards key research goals.

The outcome of our approach is that UoA staff have been supported towards achieving development goals, increasing their external grant capture and research outputs, secured promotion to senior roles here at Swansea and made original contributions to the field of public health and health services.

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Postgraduate Research Students

We want our students to benefit from an outstanding experience from application to graduation with the aim of enhancing skills and opportunities while providing a cutting-edge research environment. Reflecting the importance of building capacity and training the UoA has benefited from additional investment to develop a College based Post Graduate Research (PGR) Academy. This has a Professorial lead (**Rance**) along with senior professional services staff and is designed to be a one-stop-shop for PGR students delivering an outstanding student experience from application to graduation. The UoA has been successful in recruiting new PGRs via University and College funded studentships allocated by open competition, externally funded studentships e.g., ESRC, RCBC, KESS2, HCRW, Wales School for Social Care Research and international students funded by home governments. This research studentship support is enabling us to develop a new generation of researchers producing high-quality outputs aligned with established researchers in each of the themed areas. Prospective students make formal applications with draft research proposals and are interviewed by two supervisors with relevant expertise. Our approach means that we have strong cohort identity contributing to a shared sense of research themes and activity within the UoA.

42 PhD students have completed their studies in the census period, representing an increase of 20% since REF2014 (35 completions).

Figure 2: PhDs Awarded for UoA2

13/14	14/15	15/16	16/17	17/18	18/19	19/20	Total
4.5	5.5	8.5	3.5	3	8	9	42

The PGR Academy is committed to supporting students and provide each with dedicated office space and all necessary equipment. Each student has a minimum of a first and second supervisor and can additionally include external advisors from organisational partners. All students have an individual Learning Agreement (LA). The LA was developed within the College and in consultation with students, and is intended to ensure PGR students have received, understood and accepted their and their supervisor's responsibilities and expectations. The University online research student monitoring system called e:Vision allows tracking of the research student journey, reporting and monitoring of progress with input from students and supervisors alike. PGR students in this unit access University-wide research skills development training programmes which are mapped to the Vitae Researcher Development Framework, see REF5a. As part of the PGR induction process, students are introduced to these opportunities and individual training programmes are agreed with their supervisory teams. The intention is to encourage research students to aspire to excellence through achieving higher levels of development.

PGR students have an elected representative who sits on the College Research Committee to have the student voice heard on PGR matters and to feedback to the cohort. The welfare and monitoring of all PGR students within the UoA is overseen by the College Director for Postgraduate Research and a dedicated college team within the Postgraduate Research Academy and reported regularly at the PGR committee (chaired by **Rance. Condon and Coffey** are committee members).

As well as the traditional PhD, we offer additional routes to doctoral qualification. A PhD by publication is available and the Doctorate in Professional Practice has been offered since 2010 and is open to nurses and allied professionals, including academic staff. The College offers a number of additional research masters programmes e.g., Masters in Child Health and ESRC-accredited Masters in Social Research Methods (also part of the ESRC-funded 1+3 DTP programme).

The UoA runs a longstanding (established by **Coffey** in 2005) monthly student-led research interest group. This continues to provide a supportive environment for PGR students and staff to present their research, invite speakers on issues of relevance to researchers (e.g., analysing qualitative data, surviving your viva, managing your supervisor) and benefit from the collective

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experiences of students at different stages of their PGR journey. This research interest group is led by PGR students in this UoA but engages widely across all College UoAs.

Our PGRs have gone on to senior leadership appointments during this census period (e.g., programme manager for education at Health Education and Improvement Wales, clinical lead for speech and language therapy at Queen Elizabeth Hospital Birmingham), attained academic posts (Cardiff University, Swansea University), and secured research posts in their respective fields (e.g., Psychology Department, Swansea).

Support for Staff

The guiding principle in our UoA is that all colleagues with research as their enhanced career pathway are required to actively participate in the REF and identify their high-quality outputs for assessment. We support staff to engage with assessing of outputs through training on producing high-quality outputs and with a transparent assessment system. The selection of outputs for submission in this UoA has been guided by a dynamic Sol document made available to all UoA researchers indicating processes for identifying outputs for assessment, the assessment process (to include two internal and one external assessor), determining an output rating and, an appeals process. We have made use of College resources to support colleagues, including:

- A dedicated conference leave budget to support UoA staff to attend and speak at more than 200 national and international research conferences, ensuring our new evidence is communicated to wider academic disciplines.
- Sabbatical leave (between 3 and 6 months) accessed by 10 members of staff. Colleagues report back to the sabbatical leave committee on outcomes which include completion of PhD theses, new analysis of existing data, peer-reviewed publications and underpinning papers for impact case studies.
- Vibrant and multiple research seminar series with invited speakers on a range of subjects reflecting the interdisciplinary nature of our work. These include research seminars in the Department of Psychology (weekly), Society, Policy and Practice (twice monthly) in the Department of Public Health, Policy and Social Sciences, and once a term in the Department of Nursing. These seminars are advertised to all University staff and students and extend to colleagues in health and social care organisations.
- The outcomes of the output assessment process are fed into the PDR process to enable colleagues to evidence their work and seek promotion and/or development opportunities.
- Providing support mechanisms for researchers that may be struggling to produce outputs.

The UoA leads contribute to the College Research Committee. We circulate activity reports to all colleagues in the UoA and across departments so that our work is in plain sight and to recognise grant writing as well as grant capture as achievements.

Equality and Diversity

The College has successfully applied for Athena Swan profiles and has moved from a Bronze award to a **Silver award in April 2017**. A senior academic in this UoA at Professorial level (**Merrell**) chairs the University Athena Swan self-assessment committee and reports directly to the University-wide Athena Swan strategy group who administer and monitor the policy for this institution to ensure compliance with national gender legislation and equality at all levels throughout University business.

In addition, all members of the UoA team with responsibility for decisions on the selection of outputs and impact case studies for this submission undertook mandatory equality training, including specialised courses on equality and diversity and unconscious bias. The submission comprises the one best-quality output from each CatA submitted staff member with the balance made up of the best-quality outputs from the available pool of eligible outputs

We strive for equality and diversity in all aspects of our research work, for example approximately 30% of unit PGRs have protected characteristics. The UoA contributes to the College action plan that is centred on the key areas of communications, career progression, organisation and culture and data management. Swansea University takes part in Stonewall's Workplace Equality Index

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(WEI) and in 2020 was ranked 47, and in the top 10 of all universities. Swansea is also a member of the Race Equality Charter.

The UoA works in line with University commitments to equal opportunities and uses family and carer-friendly policies, including shared parental leave and flexible working, to promote flexible employment with the aim of improving the working environment and encouraging diversity in the workplace. UoA members have been supported to work school term dates to enable childcare. Almost 70% of our Category A submitted staff are women (9/13 headcount) and 83% of professorial promotions and appointments were awarded to women during this census period. Staff and PGRs in this UoA benefit from access to University childcare nursery facilities, a childcare voucher scheme, flexible and job share opportunities, research funding opportunities to support equality and professional development opportunities. Diversity and equality were key elements of decisions made in democratically selecting UoA leads with all Category A staff eligible to take on these roles.

3. Income, infrastructure and facilities

Our strategy has been to grow research income to enable us to deliver high-quality new evidence in understanding how health systems work and to improve public health. We have been able to use research income to recruit research officers, fund academic posts, create new research centres, and increase our cohort of PGRs thus ensuring they have the resources to develop into accomplished researchers of tomorrow. The unit has achieved a 77% increase, over the REF2021 census period, in the value of grant capture as shown in Figure 3.

Figure 3: Research Grants awarded for UoA2

2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
738,377. 21	2,316,105. 33	537,771. 37	870,540. 36	2,441,810. 01	585,806. 14	1,307,595. 62	8,798,006. 04

In REF2014 we reported grant capture of £3m for the period and our current total for this period is approximately £8.8m and growing. With the support of Department of Research Engagement and Innovation Services (REIS) and the Life Science Research Hub, see REF5a, our approach has been to grow income from a broader range of sources, build collaborations with world-leading universities and industrial partners, and improve the quality of submissions via internal review. We have done this by:

- Mentoring ECRs and research staff to make better use of internal and external opportunities for funding.
- Using our Award Management System software to accurately cost and price all external funding proposals.
- Accessing internal sources of funding, e.g., SURGE, to support researchers in developing major, complex applications.
- Enhancing research profile and reputation with key funding bodies by generating high-quality bids and outputs, in particular Government Departments and UKRI (RCUK and Innovate UK).

Infrastructure

Our research is supported by the appointments of a dedicated research co-ordinator, an impact officer and bid development and proposal costing supported by the Life Sciences Hub. These key appointments and infrastructure have ensured that outputs are assessed in a timely fashion, supported the dynamic revision of our SoI, and secured expert external peer review in preparation for REF submission. The impact officer role has added new expertise in developing impact case studies and supporting fledgling impact work in preparing for this and future REF exercises. The College also funds an innovation and engagement position, and UoA colleagues have access to a bid writer, procurement, and post-award support via the Life Sciences Hub extending the unit's opportunities to respond flexibly to calls.

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One development is the **Centre for Global Burn Injury Policy and Research**. This research centre secured funding (£1.4 million to Swansea) from the NIHR for a three-year programme (2017-2020) centred on burn trauma in the field of applied burns research, with a focus on resource-poor settings. In 2020 additional funding from NIHR extended the programme by one year to July 2021. The centre has recruited staff and PGR students and while activity is nascent there is ongoing work leading a global network generating research across three pillars of activity. These are:

- Quality improvement and implementation science, e.g., examining impact and effectiveness of quality improvement in burns services and with SCHE conducting economic evaluation quantifying cost-effectiveness.
- Basic burns care and prevention, e.g., with partners in Nepal and Ethiopia this group is researching epidemiology and aetiology of burns to create first aid and prevention initiatives.
- Emergency preparedness, e.g., with the World Health Organisation (WHO) and other agencies involved in humanitarian aid in conflict areas (International Committee of the Red Cross (ICRC), Médecins Sans Frontières (MSF)), developing guidelines and recommendations for clinical management and emergency preparedness.

In 2020 **LIFT** secured infrastructure development funding (£141k) from HEFCW to appoint a senior research officer and set up the first milk bank hub in Wales in partnership with Hywel Dda University Health Board. Working in partnership with the 'Human Milk Foundation' charity this development will bring jobs to the region, alongside allowing more families with sick and premature infants to receive donor human milk, potentially saving lives. This growing research centre is generating new research bids, promoting public health by engaging practitioners and mothers in relation to donating breast milk and recruiting researchers and PGRs to generate new evidence.

Facilities

The UoA benefits from a College investment of £1.1m in Phase 1 of a state-of-the-art Health and Wellbeing Academy (**HWA**) (opened in 2016) situated in a refurbished facility on the Singleton Park Campus and providing a suite of health services (osteopathy, audiology, bereavement care, cardiology and pregnancy-related services) to the public, referrals from the NHS and enhanced opportunities for student training. HWA provides a site for generating new evidence in promoting public health and delivering healthcare by recruiting people into ongoing studies.

The Academy improves the health and well-being of people in south west Wales by bringing together innovation, education, enterprise, and world-class research. Phases 2 and 3 of HWA are already in the planning stage as we look to increase the range of services and opportunities for research. For example, in collaboration with EPP Cymru (Education Programme for Patients) the Health and Well-being Academy is offering nationally accredited structured education programmes and self-management courses to support the active management of health conditions. HWA has been successful in early-stage grant capture (£152k) from charities and ongoing submissions for competitive funding from UoA staff.

Recognising the moral and empirical imperatives to involve people in early stages of research design we have been able to make further investment since 2015 to ensure public and patient perspectives via our **Patient Experience and Evaluating Research (PEER)** group informs the research we develop. The College was a test pilot site for the UK Standards for Public Involvement and these standards inform the design and operation of the PEER group. Evidence indicates that research informed by and involving patients/members of the public leads to better research questions, more successful recruitment to targets and outcomes that are more meaningful to patients and hence likely to be translated in practice. Our PEER members have a range of experiences of various health conditions and bring this expertise along with their new knowledge of research approaches to help inform our researchers in developing their proposals. The PEER group consists of nine lay members plus support from two academics who meet monthly. This group (instigated and led by **Terry, Coffey, and Hewitt**) involves research-trained members of the public and patient groups who are paid for their time, supported by academics in assessing research proposals from the patient perspective to help inform better person-centred

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proposals to improve recruitment and retention in studies. UoA colleagues and PGRs are encouraged to discuss proposals with the group to gain a first-hand patient and public view on their project ideas. The group has contributed their expertise to 29 research proposals since 2017. Some members have taken the opportunity to become co-applicants on research projects and now contribute to generating research themselves. Researchers have engaged with the group and now see it as an important part of developing user-focused research proposals.

4. Collaboration and contribution to the research base, economy and society

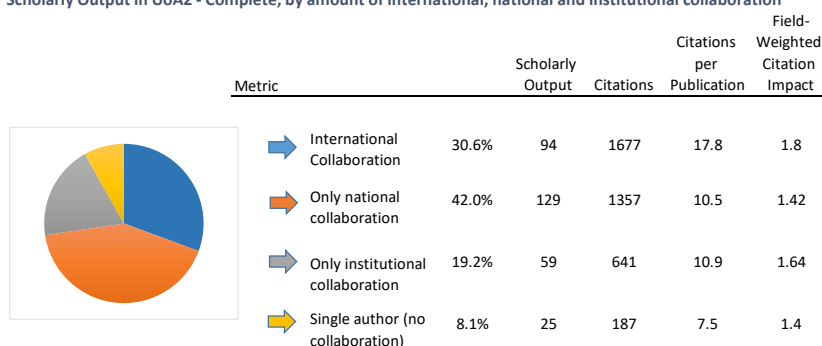
UoA staff collaborate with colleagues at other universities, in healthcare settings, government, with patients, service users, students and others to build capacity and generate new knowledge that directly informs policy contributing to public health and health service initiatives. The vitality of our group is evidenced through its leadership and engagement with international initiatives, and the global reputations of its staff. We show our vitality in finding new ways of collaborating for learning, growing research activity, and generating new ideas that help us understand better the public health challenges of tomorrow. Our unit's sustainability is seen in the contributions we make across disciplines, at all career stages and in our efforts to support and guide new researchers. For example, staff in this unit have externally examined PhDs on more than 40 occasions over the census period contributing their knowledge and expertise to the development of new researchers in the UK and internationally.

Figure 4: Scholarly output collaborations

UoA2 - Complete -Year range 2014 to 2020 (up to 14 Oct 2020)

Scholarly Output in UoA2 - Complete, by amount of international, national and institutional collaboration

Our commitment to collaboration is evidenced by UoA staff partnering with more than 200 UK and international colleagues on publications over the census period including academic, health service, third sector and service user researchers.



The Citation impact of publications from collaborative work and single authorship are above the world average.

Hosting and Collaborating with National Networks

The UoA has invested in providing refurbished facilities on the Singleton Park Campus to support the work of the Lymphoedema network and to build research collaborations. This has seen the relocation of the network and its staff to University offices and use of treatment rooms in the Health and Wellbeing Academy in 2020. We expect to increase opportunities for joint work with our researchers to generate new evidence for practice that has the greatest impact. Our research has provided the Welsh Government with accurate estimates of the burden of Lymphoedema, policymakers with economic evidence on high-risk groups, and clinicians with original evidence on more efficient approaches to assessing and managing Lymphoedema in patients in primary and secondary care. These key insights have supported Lymphoedema Network Wales to secure £1.2m for a nationwide rollout of the Wet Leg Pathway (2019) that is estimated to save up to £11m per annum across Wales. Our hosting of the network is an early-stage development but aligns with existing research in the unit and impact case study work.

SCHE collaborates as part of the Welsh Health Economics Support Service (WHES), commissioned by HCRW. SCHE is funded (£1.1million 2018-2023) to support WHES in providing health economics support at conceptual stages of proposal planning, in funding applications, in research practice and in disseminating and implementing findings to promote public health.

UoA staff are working via ARCH, A Regional Collaboration for Health, to improve the health, wealth, and well-being of the population to create a health system fit for the 21st century, drive

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investment, create jobs and skill-up a new generation of clinicians and researchers. ARCH is a major interdisciplinary engagement with external partners (two local health boards) and cross-university disciplines in health, medicine, engineering, and management. ARCH is a key strand of the £1.3bn City Deal for the Swansea Bay City Region. The aim is to build the strongest culture between researchers, clinicians, innovators, educators, and institutions. This is particularly important in a region with low incomes, high health burden and significant inequality. The strategic contribution of this UoA is to bring the expertise and evidence of public health and health services to the partnership.

The ARCH partnership has 4 streams of work focused on:

- Service Transformation
- Research, Enterprise, and Innovation
- Well-being
- Workforce, Skills and Education

Contributions and Advice to National and International Bodies

UoA staff provide high-level public health advice and expertise of health services to a range of government panels both in the UK and internationally. **Phillips** authored the first Bevan Commission report on Prudent Healthcare that is now a central policy orientation of the Welsh Government. He has advised on a range of Welsh Government Ministerial Review Teams including the establishment of Health Education and Improvement Wales (Williams Review).

Phillips contributed his expertise as a board member on the ABMU Health Board, Health Education and Improvement Wales and the Welsh Wound Innovation Centre. **Fenlon** was Advisor to NHS England Independent Cancer Taskforce (2015); the Cancer Nursing Partnership (2014); Cancer Strategy for Wales; and Advisor to European Commission, European Joint Research Centre: Institute for Health and Consumer Protection. **Fitzsimmons** advised the One Wales Interim Commissioning Panel as the health economics member and recently (2019) completed a six-year term of office on the European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Group Executive Committee. **Condon** is a member of the All-Party Parliamentary Group (APPG) for Conception to Two years and advised the parliamentary Women and Equalities Committee on the inequalities faced by Gypsies and Travellers. **Coffey** advised the UK Department of Health committees examining Positive Behavioural Change interventions (2014) and the Mental Health Act Review (2018) topic group on Addressing Rising Detention Rates. His collaborative work informed the community mental health framework in England and the NIHR Forward Thinking themed review on support for people with severe mental illness. **Jordan** brought her medicines research expertise to advise the Welsh Government via the Health, Social Care and Sport Committee on the use of antipsychotic medication in care homes and NuPhac (Nursing and Pharmaceutical Care) International Board. **Brown's** expertise on maternal and infant nutrition led to invitations to give evidence to the Australian department of health; the New Zealand department of health and the APPG on infant feeding and inequality in Westminster on 3 occasions in addition to advising the Welsh Government and Public Health Wales on infant feeding strategy development. She holds an honorary contract with Public Health England as an expert advisor.

Contributions to Wider Society and Informing Policy

Our researchers make a wider contribution to society by delivering new skills to sometimes voiceless groups so that they can have a say in what gets researched and how this is achieved. For example, we have accomplished this by securing funding to recruit and train patients and service users to take part in design through to dissemination of research findings in mental health services research. Our support for health service colleagues to develop research skills for their own proposals and generate outputs has led to shared publications and building capacity via research training.

Our unit contributes research underpinning and informing national and international policy. For example, **Phillips'** Bevan Commission report on prudent healthcare is the key underpinning framework in Welsh health policy. **Brown's** research informed national and international maternal and infant nutrition policy, e.g., Public Health England commissioning infant feeding services and UNICEF's Baby Friendly initiative. Her work underpins the Australian Department of Health's breastfeeding strategy, WHO infant feeding guidance, and the US Surgeon General's Call to

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Action to support breastfeeding. **Coffey's** work on risk decisions in mental health care led to training initiatives at the University of West of England and contributed to the Independent Review of the Mental Health Act (2018). **Fitzsimmon's** contribution on the cost-effectiveness of seal or varnish oral treatments for child dental health informed the Welsh Health Circular policy on child oral health improvement. Her health economics contribution to the Health Technology Assessment (NIHR) funded RCT on the use of heel casts in diabetes informed the International Working Group on the Diabetic Foot guidelines.

Advising and Supporting Local Research Development

We maintain close links with the SBUHB (research professor joint appointment 2016, **Condon**) and Hywel Dda University Health Board (research professor joint appointment 2017, **Fenlon**). These health boards serve the City and County of Swansea and to the west, Carmarthenshire, Ceredigion, and Pembrokeshire.

These two jointly appointed professors are assisting health boards with developing formal strategies for increasing staff involvement in public health research funded as part of NHS capacity-building projects (£225k each for 2017-2022). They have supported staff to present their research and practice development work at research conferences, to publish their work in professional journals and to bid for and secure competitive funding to support research activity. Our colleagues are actively supporting the development of clinical research careers (new role created in SBUHB), generating journal articles (9 members of staff in 2019) and have assisted a number of staff to register for professional doctorates and PhD study (2 candidates from Swansea Bay in 2019).

Contributions to Journals and Learned Societies

Staff in this UoA contribute to the development of their disciplines by serving on editorial boards of leading peer-review journals, learned societies and award boards of leading funders. UoA staff have been invited to present their research on more than 200 occasions at national and international events. Members of this UoA contribute to or hold leadership positions in the Institute of Health Visiting (**Condon** elected fellow), Mental Health Nurse Academics UK (**Coffey** elected chair 2014-15), Research Committee for the Association of Breast Surgery (**Fenlon** from 2017), and the NICE Panel of Expert Advisors for the NICE Centre for Guidelines (**Jordan**). **Potokar** has contributed to the WHO 5-Year Plan for Burn Care and Prevention and is Lead for Education and Capacity Building of the WHO Global Alliance for Care of the Injured and an active member of the WHO Global Initiative for Emergency and Essential Surgical Care. **Price** is a founding Director of Interburns™, previously Chair of Cardiff Institute of Tissue Engineering and Repair, All Wales Rehabilitation Network, Patient Outcome Group for the European Wound Management Association (EWMA) and Secretary to the organisation. She worked closely with EucoMed to develop new device technologies for this patient group and is the EWMA representative for the European Patient Forum.

Members contribute as peer reviewers to more than 50 research journals and in editorial board positions on Journal of Psychiatric and Mental Health Nursing (**Coffey**), Community Practice and Health Expectations (2017-20), BMC Health Services Research (**Condon**), European Journal of Cancer Care (**Fenlon**), European Journal of Oncology Nursing (**Fitzsimmons**), International Nursing Review, International Breastfeeding Journal, Pharmacy, and Journal of Nursing Management (**Jordan**), Journal of Health Organization and Management (**Phillips**), International Breastfeeding Journal (**Brown**), and **Price** is statistical advisor to International Wound Journal.

Contributions to Funding Organisations

Colleagues contribute their expertise as expert peer reviewers to funding decisions of NIHR HS&DR (**Brown, Condon, Coffey, Jordan, Price**), HTA (**Coffey, Fitzsimmons, Sewell,**) and RfPB (**Condon, Fenlon**), Programme Grants for Applied Research (**Fitzsimmons**); MRC (**Fenlon**), ESRC and CRUK and for international organisations in Australia (**Fenlon**) and Canada (Brain Canada, **Coffey**), UK Academy of Medical Sciences, Wellcome Trust (**Condon**) and as PhD examiners on over 40 occasions in the UK, Ireland, Australia and New Zealand. In addition, colleagues serve on award panels for HCRW (RfPb and Health Awards – **Fitzsimmons, Jordan**;

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Health Studentships – **Coffey**) and provide expertise for international research conference committees and scientific committees (International Society of Nurses in Cancer Care – **Fenlon**; International Network for Psychiatric Nursing Research conference – **Coffey**). **Brown** is a member of the ESRC peer review college.

These highlights demonstrate the UoA has adjusted flexibly and dynamically to rapidly changing circumstances to create a vibrant and innovative research environment. This is an environment in which the staff make significant contributions to their research base and ensures the sustainability and vitality of the UoA as it prepares for the next decade.