WELLBEING OF WOMEN
1964 – 2024

60 Years saving and changing the lives of women, girls and babies

The impact of our research

NOVEMBER 2024

Dr Varsha Jain, Awarded WoW Research Training Fellowship.

Foreword

Prof Dame Lesley Regan, Chair

Earlier this year, we embarked on an in-depth review of our records and made some remarkable discoveries. Over the course of the past sixty years, we have funded more than 600 research projects that are improving care in a very wide variety of women's reproductive and gynaecological health issues; fertility, contraception, miscarriage, period problems, menopause, gynaecological cancers, urinary problems, obstetric and neonatal complications, premature babies, ultrasound scans – the list goes on. It's extraordinary to think that the work we funded decades ago into Human Papilloma Virus (HPV) has paved the way for cervical cancer to be eradicated around the world by 2040, provided we increase our efforts to get women vaccinated.

But it's not just about the research that's been funded, it is also about the researchers who conduct the work and the doors that have been opened for them. When I was at an early stage in my career, I was funded by Wellbeing of Women, as were many of my influential peers. We probably wouldn't have got off the ground if it hadn't been for the support of the charity to help us with seed funds at the very beginning of our research careers.

Wellbeing of Women's research grants develop the academic careers of healthcare professionals, scientists and other researchers, nurturing them into future leaders in women's health, building much needed capacity in the field. This next cadre of researchers are vital to tackling the ongoing and emerging health challenges women face throughout the life course.

There is still plenty of work to do. Access to contraception (the most cost-effective introduction in healthcare) has taken a backwards step - a problem that was accelerated by the Covid-19 global pandemic - leading to an increase in unplanned pregnancies and an increase in pregnancy complications due to shorter intervals between pregnancies. Around 7,500 women are diagnosed with ovarian cancer in the UK and less than 45% of these will survive beyond five years. And a third of women over 60 experience urinary incontinence.

It's imperative that we also address health inequalities; Black women are still four times more likely to die in pregnancy and childbirth than their White counterparts, disabled women struggle to access life-saving screenings and women from ethnic minority backgrounds often find themselves dismissed, resulting in dangerous delays to receiving appropriate treatment. This is simply not acceptable – healthcare must deliver the best for all women in society, regardless of their situation or background.

Wellbeing of Women's work over the past six decades has laid a strong foundation for tackling these challenges. Over the course of the next 60 years, we want to ensure that no woman is held back by her reproductive or gynaecological health. Importantly, we know that this will lead to improvements for all society, for the simple reason that when we get things right for women, everyone benefits.

Janet Lindsay, CEO

Wellbeing of Women was originally founded as the Childbirth Research Centre in 1964. It was established by Professor Will Nixon and a dedicated team of obstetricians, gynaecologists, and business leaders, who were motivated by the heartbreaking experience of a young man whose wife died during childbirth. This

tragic event highlighted the urgent need for research to prevent such deaths and shaped the charity's original mission to improve maternal health.

Over the past six decades, as well as several name changes, Wellbeing of Women has significantly expanded its focus from primarily addressing maternal health outcomes to encompass a broader range of women's reproductive and gynaecological health issues across the life course. We are proud to have funded research in often overlooked areas. This is enabled by the world-leading experts who sit on our research advisory panel, ensuring our research is of the highest quality and delivers against areas of unmet need.

The charity's research initiatives have led to notable breakthroughs that have saved and improved the lives of countless women, girls, and babies. Highlights of these achievements include advancements in neonatal care, efforts to prevent gynaecological cancers, and improved understanding and treatment options for conditions like heavy and painful periods.

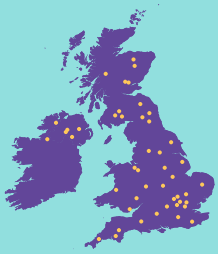
As we mark our sixtieth anniversary, and reflect on the changing women's health landscape, I am immensely proud of our impact while recognising the ongoing challenges that remain. Despite the significant progress made, there is still a critical need for funding in women's gynaecological and reproductive health research, particularly for conditions such as endometriosis, infertility, miscarriage, and menopause. These issues affect millions and carry significant physical and emotional burdens.

Wellbeing of Women is committed to continuing its vital work, advocating for better understanding, innovation, and nurturing the careers of our future leadership in research. The organisation's vision is for a future where all women have access to high-quality healthcare, ensuring that reproductive and gynaecological health does not hinder their lives. Through ongoing dedication to groundbreaking research, Wellbeing of Women aims to eliminate barriers and improve health outcomes for women everywhere.

Dr Marianne Watters, Awarded WoW Research Training Fellowship.

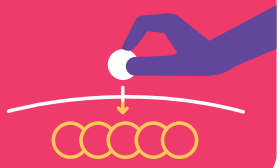
Our impact in numbers

£75M
invested in research and early career researchers



605
projects funded

Per **£1** invested more than **£5** additional funding is generated*

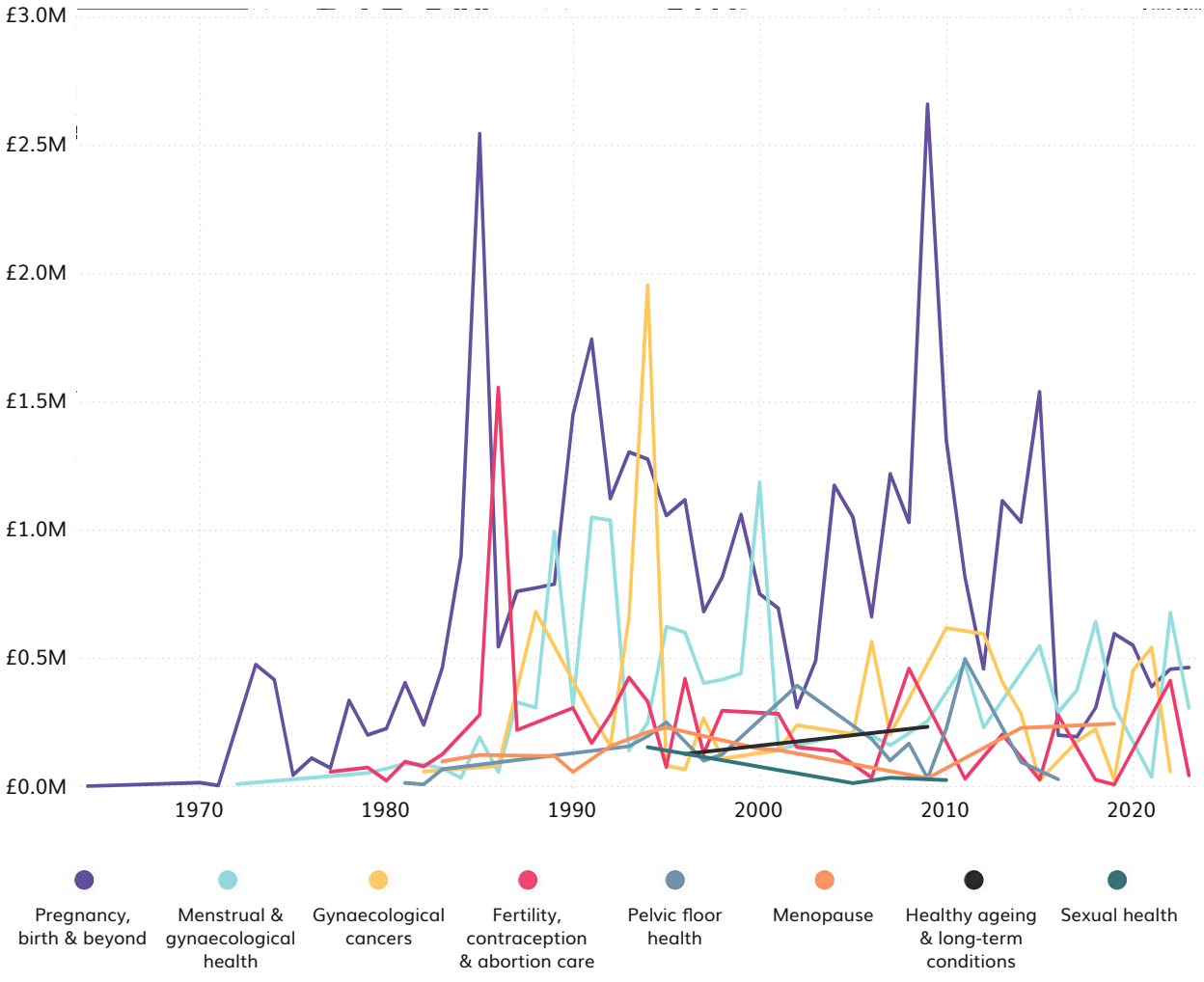


Supported more than **200** early career researchers

*Stats from 2023

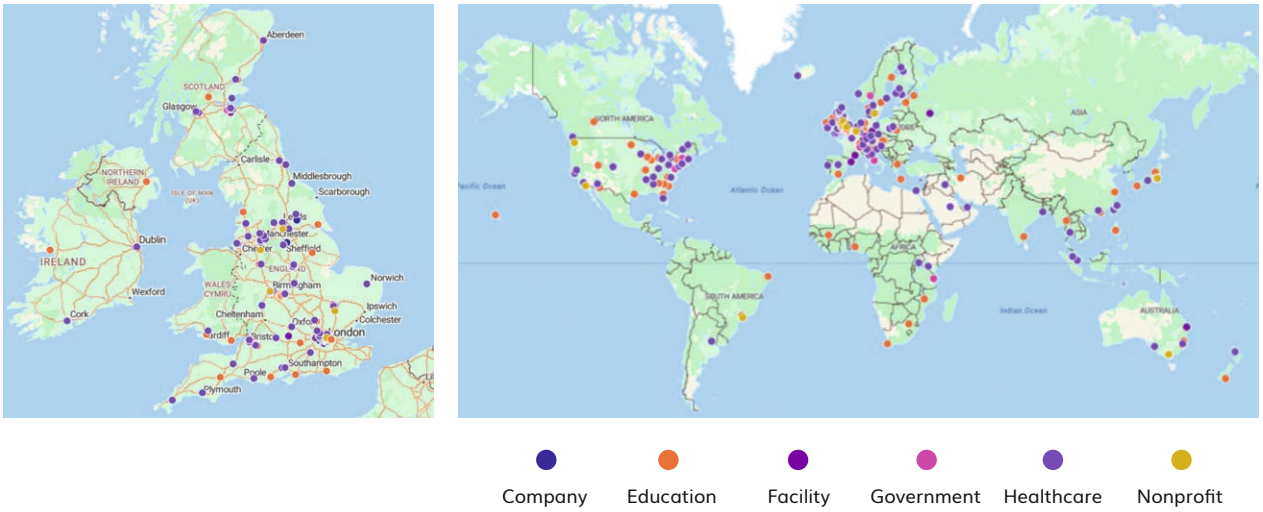
Our investment in research over time

We're the only UK charity that funds research into all of women's reproductive and gynaecological health – from menstruation to menopause and beyond.



Global reach: Investing in UK research that supports women worldwide

Our funding has contributed towards global research efforts, with organisations around the world participating in research funded or co-funded by Wellbeing of Women.



Beyond the lab: Our research is driving real-world change and informing best practice in healthcare

More than 25% of our research publications have been used to shape policy. This extends globally, with our research informing policy across 37 countries, covering every continent, except for Antarctica.

Since 2007, our research has helped inform 30 NICE guidelines, which are used by healthcare professionals as guidance in clinical care

NICE guidelines citing our research

2007
- Fecal incontinence

2011
- Antenatal care in multiple pregnancies
- Diagnosis and management of epilepsy in adults

2012
- Caesarean section

2015
- Postnatal care up to 8 weeks after birth
- Preterm labour and birth
- Urinary incontinence
- Menopause: diagnosis and management

2016
- Intrapartum care for healthy women and babies
- Antenatal care for uncomplicated pregnancies
- Developmental follow up of children born preterm
- Surgical site infections: prevention and treatment
- Endometriosis: diagnosis and management

2017
- Fertility problems: assessment and treatment

2018
- Antenatal and postnatal mental health
- Heavy menstrual bleeding

2019
- Intrapartum care for women with medical complications, and their babies
- Twin and triplet pregnancy
- Urinary incontinence and pelvic organ prolapse

2020
- Joint replacement: hip, knee and shoulder
- Perioperative care in adults

2021
- Caesarean birth
- Postnatal care
- Inducing labour
- Chronic pain in over 16s
- Pelvic floor dysfunction

2023
- Removal, preservation and reimplantation of ovarian tissue for restoring fertility

The impact of our research on women's health

Our breakthroughs are helping women throughout their lives, from menstruation to menopause and beyond

Periods, menstrual health & gynaecological conditions

Found a new way to treat endometriosis pain with "keyhole" surgery

Provided evidence that Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), such as ibuprofen and mefenamic acid, can treat heavy, painful periods

Helping women to manage PCOS through diet and lifestyle
Our work advanced understanding of how nutrition, weight and insulin sensitivity can impact women with PCOS. This has shaped clinical guidelines to focus on lifestyle changes and medications like metformin to help millions of women with PCOS manage their condition and prevent long-term health conditions.

Sexual health

Revealed the link between chlamydia and infertility
We helped prove that chlamydia infection can contribute to infertility and a higher risk of ectopic pregnancy. Chlamydia is common, but often occurs without symptoms. This research showed the importance of regular testing and early treatment for the disease. It has helped with public health education campaigns to empower more women to get tested sooner.

Our research shed light on the difficulties female sex workers in Bristol face when trying to access healthcare services, which was used to improve policies and support for these women.

Fertility, contraception & abortion care

Developed new approaches to IVF
Our researchers developed a more efficient method of collecting immature eggs from ovaries and maturing them in the lab for use in IVF. Using this new method, 71% of the immature eggs they collected were able to mature in the lab, compared to 44% using existing methods. This technique is now used alongside traditional methods and could be developed to preserve fertility in those undergoing cancer treatments.

Improving access to contraception after birth, which helps prevent unwanted pregnancy and promotes longer gaps between birth

Pregnancy, birth & beyond

Established the use of ultrasound to monitor the health of the baby during pregnancy

Developed safer, earlier ways to identify genetic conditions before birth
We supported research to improve screening methods for trisomies 21, 18 and 13 – genetic conditions where there are three copies of a chromosome instead of two. Early, safe, identification of trisomies can give parents more information to make decisions about their pregnancy much sooner, and to help prepare for a child born with complex health needs.

Showed the importance of the COVID-19 vaccine in pregnancy and informed guidance on best practice care

Pioneered artificial surfactant - a treatment to help premature babies breathe

Pelvic floor health

Showing the benefits of pelvic floor exercises for treating incontinence
We demonstrated how pelvic floor exercises could be used to strengthen the bladder, and help prevent and treat bladder and bowel leaks, as well as preventing prolapse. This has fed into clinical guidelines and is helping to improve quality of life for 60% of women in the UK who have at least one symptom of poor pelvic floor health.

Proved that Botox injections can treat an overactive bladder – a condition that affects at least 7% of women in the UK

Menopause

Developed better ways to support women with menopause symptoms at work
1 in 10 women leave their positions during menopause – a massive loss of skills and experience in the workforce. Through our research, we have provided evidence-backed methods to support women experiencing menopause symptoms at work.

Gynaecological cancers

Established the role of HPV in cervical cancer
We helped establish the role of HPV in cervical cancer, paving the way for the national screening program and vaccine, which could lead to the eradication of cervical cancer by 2040.

Provided early funding for a world-leading Ovarian Cancer Research Centre, which has led to better understanding the causes of ovarian cancer and developed new ways to prevent, detect and treat it.

Healthy ageing

Pioneered oestrogen to prevent osteoporosis in postmenopausal women
Our work highlighted the impact of hormone loss in postmenopausal bodies, demonstrating how beneficial hormone replacement therapy (HRT) can be. Follow on work showed that oestrogen therapy could reverse bone loss after menopause. Today, oestrogen is a common treatment used to prevent osteoporosis, helping women in menopause maintain good bone health for longer.

We helped prove that HRT can support normal bladder function post-menopause

Our research is helping millions of babies survive and thrive worldwide

The pregnancy journey can be one of the most exciting times for women, but also one of the most vulnerable. 60 years ago, this journey looked vastly different: no ultrasound scans, no screening, and when babies were born too soon, the odds of survival were bleak. Thanks to our research, women now have better, safer pregnancies, and millions more babies survive and thrive.

Providing vital information during pregnancy

Routine ultrasounds have transformed pregnancy care. Over the last forty years, the ability to observe the most critical stages of fetal development has allowed us to improve outcomes and save lives. It has also empowered families to make decisions about their care at a much earlier stage.

It took years of research and collaborative working to get to this point. Throughout the 1980s, we invested in multiple research projects by Professors Kypros Nicolaides and Stuart Campbell, who showed that ultrasound could identify neural tube defects in the first and second trimester. This kind of abnormality occurs very early in pregnancy and can mean the spine and spinal cord don't develop properly.

They went on to show how ultrasounds could be used to help identify babies at risk of having a chromosomal abnormality, like trisomy 21. Early and safe identification of these trisomies – where there are three copies of a chromosome instead of two - can give parents more information to make decisions about their pregnancy much sooner, and to help prepare for a child born with complex health needs.

In this same decade, our researchers were studying fetal blood flow using pulsed Doppler ultrasound, a key technology still used today. This work helped develop tests to identify early on babies affected by intrauterine growth restriction as a result of reduced blood flow through the placenta.

This work was just the start. Fetal growth restriction, pre-eclampsia, and preterm birth affect up to 60,000 families in the UK every year, and 1 in 100 women will experience recurrent miscarriage. This is why we funded the Baby Bio Bank. Set up in 2013 as a collaboration between University College London and Imperial College London, the bank collects samples and data used by top researchers to better understand and treat the causes and effects of these conditions, and most importantly, how to treat those who experience them.

Our pioneering research has helped ensure the half a million women who receive maternal care each year in the UK receive accurate, early information to help them make decisions about their care, and to plan for the health needs of their future children.

Rewriting the standard of care for babies born too soon

The 60,000 babies born too soon in the UK face a myriad of challenges, from surviving their first few hours and days through to facing developmental delays and health complications later in life. That is why we have long supported work to improve outcomes for premature babies.

In 1976 our groundbreaking findings proved beyond doubt that intensive care could transform survival for premature babies, increasing their chances from 32% to 70%. Prior to this research, care for premature babies lacked attention, as it was believed these babies were unlikely to live. These findings set new, higher standards of care for premature babies around the world and inspired a much-needed revolution in neonatal intensive care.

The introduction of surfactant therapy is a fundamental part of such treatment. Surfactant coats the lungs and helps to keep them inflated, but this vital chemical is missing in premature babies, meaning they can't breathe effectively. In 1978, we invested in research to develop one of the first artificial surfactants to become a treatment for premature babies who struggle to breathe. Today, surfactant therapy is a standard intervention and can increase chances of survival to 85%.

"Surfactant truly saved her life" - Megan and Flora's Story

Flora was born eight weeks early, and when she cried after I gave birth, I felt a huge sense of relief and thought she would be ok. So, I was shocked when I visited her in intensive care and saw that she couldn't breathe.

She was rushed to another hospital in an ambulance for treatment and an operation. It was all fast-paced and confusing, and when I saw her after I thought 'This can't be my baby, she's all swollen and blue.' She was too fragile to be picked up or cuddled, so I couldn't even comfort her in the way I wanted to.

Flora was put on a breathing machine and received surfactant for 6 days. Once she could breathe on her own, it felt like she was finally alive. I stopped thinking she was going to die and looked forward to bringing her home. Surfactant truly saved her life.

Flora is now the loudest baby in the room. At play group she's there babbling away, chatting and laughing. She's already started dancing. If she hadn't had surfactant, she wouldn't have that loud babbling voice; she wouldn't be screeching; she wouldn't be the loudest baby in the room. She wouldn't be here. She really is a miracle.

Tackling health inequalities

Today, we face urgent challenges to ensure no one gets left behind. We know that Black women remain four times more likely, and Asian women twice as likely, to die from pregnancy complications compared to White women. Our research has also revealed the startling statistic that babies born to Black women are twice as likely to be stillborn or to die in the first 28 days than babies born to White women.

We are working to change this. We support researchers like Dr Shuby Puthussery, who has looked at why women from ethnic minority backgrounds, and from deprived areas, are more likely to start antenatal care later than advised. This work informed a new way of offering support using community-focused activities, such as local champions to deliver care information to pregnant women.

We have also recognised the need for greater support for pregnant women with disabilities. In 1996, we funded research that directly influenced current guidelines on offering pre-conception counselling for women with epilepsy, who rely on medications which could be harmful to a fetus. More recently, our research at the University of Birmingham has identified and informed programmes to break down barriers to accessing care for pregnant women living with disabilities and domestic abuse.

Together, this work highlights the value of community-led work to build an evidence base for the healthcare barriers facing marginalised groups in society, and innovative solutions to overcome those barriers. We've laid the groundwork but there's much more to do, so we will continue investing in research to ensure *all* women have access to the vital care they need and deserve.

Dr Charlea Williams, Awarded WoW Entry Level Scholarship

Dr Garth Funston, Awarded WoW Entry Level Scholarship.

We have been at the forefront of gynaecological cancer prevention and treatment

More than 19,000 new cases of gynaecological cancers are diagnosed every year in the UK, but thanks to the work of our researchers, we have seen huge improvements in prevention, diagnosis, and treatment.

We now know that HPV is the cause of almost all cases of cervical cancer, but in the 1980s, it was our researchers who helped provide the vital evidence of this link, paving the way for vaccine development.

The impact of the HPV vaccine rollout has been nothing short of astonishing: cervical cancer rates are 87% lower in young women eligible for the vaccine.

But, for those women who are at still at risk of developing cervical cancer, early detection and removal of pre-cancerous cells is essential. This is where cervical screening - or "smear tests" - come in, and in the 1980s and 90s, our research helped establish the now routine use of spatula and brush to collect samples to identify at-risk women who can benefit from further treatment.

And that treatment is now more effective, and less invasive than ever. Ours was one of the first studies to assess the use of laser therapy to remove cervical precancers. This minimally invasive procedure turned removal into an outpatient procedure and is still used today.

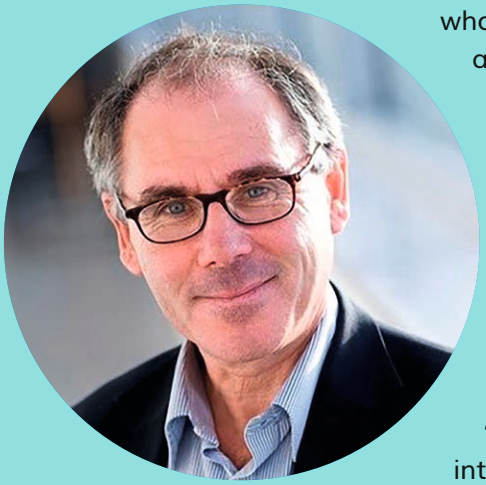
The cervical cancer story sends a powerful message about investing in research. The HPV vaccine has been so successful alongside screening and early intervention, that the NHS has pledged to eliminate cervical cancer by 2040.

Sadly, not all cancers have the same success story and research into the other gynaecological cancers is more urgent than ever. 21 new cases of ovarian cancer are diagnosed every day and less than half of these women will survive. That is why centres of excellence, like the Ovarian Cancer Research Centre at Cambridge University, co-funded by us in 1995, are so vital.

The Centre created a hub of expertise to uncover new findings, such as understanding the basic biology of how ovarian cancer starts and the genetics involved in ovarian cancer development. We also learned the impact of inherited mutations in key genes called BRCA1 and BRCA2, which are known to significantly increase the risk of ovarian cancer.

Researchers from the Centre have gone on to receive grants from other big funders to extend their research and turn Cambridge into a major international site for ovarian cancer research.

Building gynaecological cancer leadership: Professor Henry Kitchener

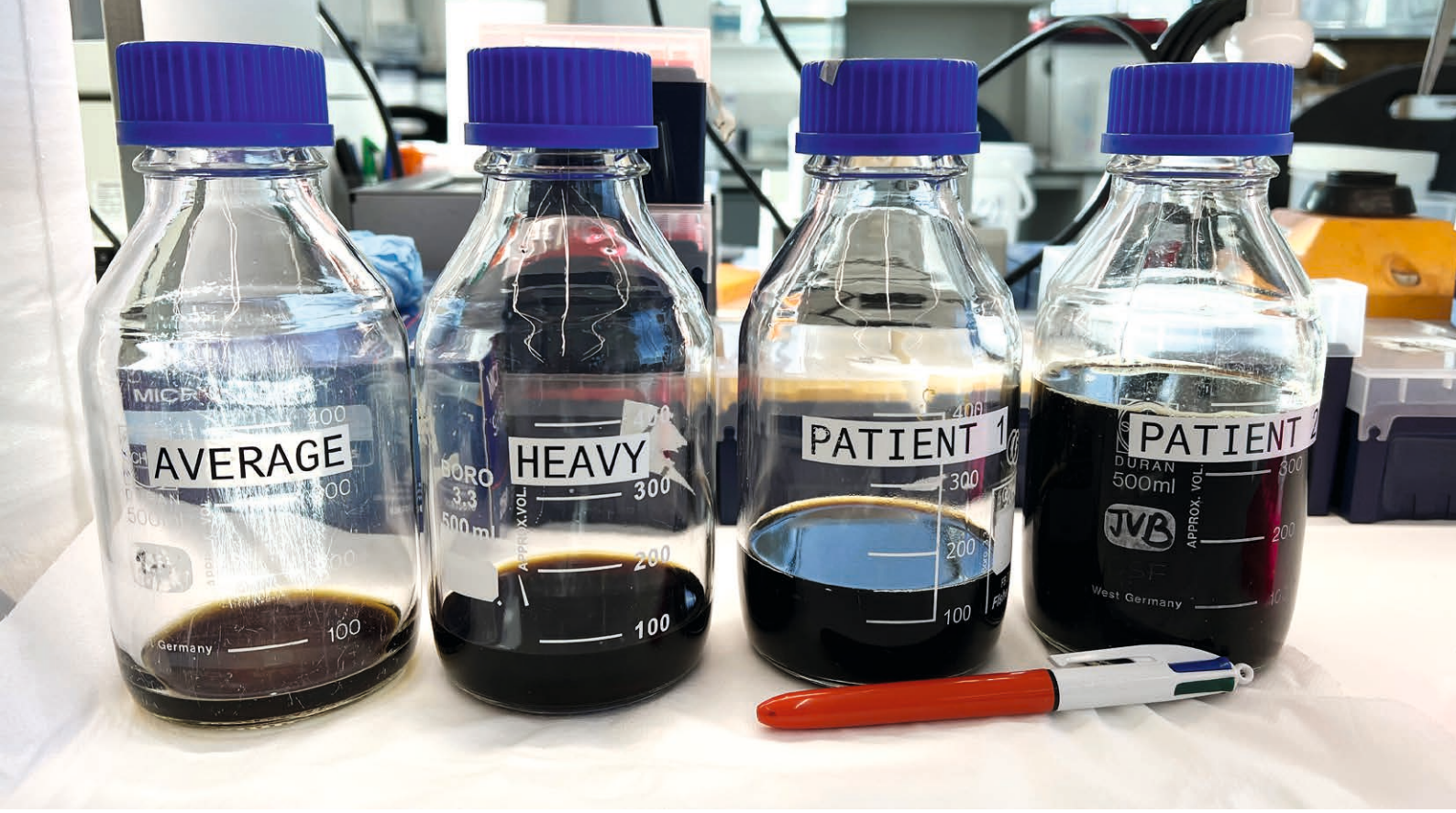


In 1980, we awarded a research fellowship to Professor Henry Kitchener, who was then a senior registrar - this was his first research grant. The award funded a study into human papillomavirus (or HPV). This was in the very early days when HPV was just beginning to be seriously linked to cervical cancer.

This grant started a career-long interest in HPV, which Professor Kitchener has taken into vaccination studies, screening and diagnostics. Today, he is an advocate of HPV testing and cervical screening for women and has led various trials for HPV vaccines, including a cervical screening trial involving 25,000 women.

"I received a grant from Wellbeing of Women which funded a study into the natural history of human papillomavirus...it was the defining event in setting me on course for an academic career" - Prof Kitchener

The cervical cancer story sends a powerful message about investing in research. The HPV vaccine has been so successful alongside screening and early intervention, that the NHS has pledged to eliminate cervical cancer by 2040.



Transforming understanding and treatment options for heavy and painful periods

Uterine health has been underfunded and under-researched for too long: only 2.1% of UK publicly funded research goes towards pregnancy, childbirth, and female reproductive health. From this already small pot, period research can too often be forgotten.

We have defied this trend. We have supported research into period health for decades, such as our pioneering work showing how non-steroidal anti-inflammatory drugs, like ibuprofen and mefenamic acid, modulate the hormone-like molecules involved in excessive menstrual bleeding. These inexpensive and accessible drugs are now widely used as a first step in managing heavy, painful periods.

Our work is also shedding light on some of the underlying conditions that can cause heavy bleeding and pain. More than 7 in 10 White women, and 8 in 10 Black women will develop fibroids, and these growths can cause a multitude of complications for women, from fertility issues to severe pain, and flooding.

We showed the effectiveness of using ultrasound to diagnose fibroids in the 1980s, and it is now a main diagnostic tool. But treatment options for fibroids are limited - hormones can be effective for some women but not for everyone. More recently, we've looked at ways to better identify women who won't respond to progesterone as a treatment for fibroids. By studying this, it may be possible to personalise treatment in the future, preventing women from wasting precious time with treatments that don't work. We are proud to have helped shape the way we diagnose and manage fibroids.

Personalising healthcare for women with heavy periods

Dr Varsha Jain is an Obstetrics and Gynaecology Trainee and Clinical Lecturer based at the Centre for Reproductive Health at the University of Edinburgh.

Wellbeing of Women's focus on women's health throughout their lives means that problems such as heavy periods, which are generally quite taboo, can be highlighted and they can be researched.

I was awarded a Wellbeing of Women Clinical Research Fellowship to undertake a PhD on heavy menstrual bleeding, which affects one in three women and girls. Roughly a third of these will end up having a hysterectomy because existing medications - such as hormones - simply don't work.

For my research, I studied samples of the lining of the womb from women with gynaecological conditions which can cause heavy menstrual bleeding. I was able to shed light on the biological processes that prevent hormone-based treatments working to treat heavy menstrual bleeding in certain women. I hope my research can be used to develop new drugs that work better and prevent hysterectomy.

My long-term goal is to personalise healthcare for women who have heavy periods. Ultimately, knowing which treatment will be most effective means that women won't be suffering with debilitating symptoms for years or decades.

Dr Varsha Jain, Awarded WoW Research Training Fellowship.

Hope on the horizon for endometriosis

At least 1.5 million women in the UK live with endometriosis, a debilitating condition in which tissue similar to the lining of the uterus grows outside the uterus. These are referred to as endometrial lesions and can spread throughout the abdomen and beyond, including the ovaries, bladder, bowel, and even diaphragm, causing many symptoms including severe pain and fatigue.

We have been working to improve the quality of life for women living with endometriosis for many years. In 1990, we funded a vital clinical trial to show that laser laparoscopy - using a camera and laser to remove endometrial lesions - vastly reduced pelvic pain in women living with endometriosis, and this work has gone on to inform NHS guidance on treating the condition.

But there is a long way to go. Despite how common it is, there have been no new treatments for endometriosis in 40 years. That is why we are so excited about our clinical trial of Dichloroacetate (DCA), a drug which is taken orally and has been shown to shrink endometrial lesions. This could completely change the lives of women living with endometriosis by providing a non-surgical, non-hormonal way to reduce the often-intolerable pain that comes with the condition.

"We desperately need new treatments and innovations for endometriosis" - Tanya's Story

My periods leave me on the floor. I'm vomiting and can't move. I'm crying (a lot of crying), holding my belly, with shooting pains down my back, down my leg. I get pains in my rectum, so I can't sit down. I try to be positive. But there was a stage in my life where the pain was daily – it gets hard to keep going.

I have adenomyosis and endometriosis. But there aren't many treatment plans out there – only operations, like hysterectomies – and my options are different to many women.

I had a stroke when I was 21 and also have a blood clotting condition, so I'm not allowed to take hormones (no coil or pill for me) and can't risk open surgery or laparoscopy. So, my only options are natural: diet and lifestyle.

We desperately need new treatments and innovations for endometriosis. Dichloroacetate could be transformational for me and for many women like me, which is why I also consult on the trial as a patient expert so that I can help make the study as effective as possible.

Continuing to drive progress

Wellbeing of Women has already proven we can make a lasting impact on women's health. As this report highlights, our research has discovered breakthroughs that have led to better health outcomes for all women throughout their lives.

But we can't stop here.

Despite progress, research into women's health is still chronically underfunded, leading to delays in accurate diagnoses, poorer care, and deaths. Women are living longer than men but spending significantly more time in ill-health and disability. There are also stark inequalities in women's health, with women from ethnic minority and disadvantaged groups experiencing significantly worse health outcomes.

We need your help to continue to fund vital, groundbreaking research that will lead to improved treatment, care and support for millions of women regardless of their situation or background.

Let's continue to transform the future of women's health together, and save and change the lives of women, girls and babies.

Contact our fundraising team on:
hello@wellbeingofwomen.org.uk to discover how your support can make an impact. Or learn about all the ways you can get involved via our website: **www.wellbeingofwomen.org.uk**

Dr Ashley Boyle, Awarded
WoW Research Project Grant.

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