

Women's health: A diagnostic approach to a lifetime of wellness

A report by The Economist Intelligence Unit



Key points:

- The global burden of disease has changed significantly over the past few decades, and women's health can no longer be focused only on their reproductive capacity. Women's health encompasses emerging priorities in chronic and noncommunicable disease control.
- Innovative and targeted diagnostic testing is key to improving health outcomes for women.
- Although many diseases are known to affect primarily women, researchers need to include more women in clinical trials for diseases that affect both men and women, rather than the present focus on women's reproductive health.
- Promoting health literacy will teach women about issues affecting their health, increase the use of services like testing and allow them to improve outcomes in all aspects of their health.



Background

Discussions of women's health have often been limited to reproductive health. Yet major diseases are common to both genders. Further, women have a disproportionately higher risk of developing some diseases such as arthritic and connective tissue conditions, thyroid issues, and osteoporosis or have differing presentations such as with cardiovascular disease, which may impact disease recognition in acute settings.



Women's health encompasses all aspects of wellbeing. It is not just the absence of a disease; [for women] to reach their full potential, we must also consider the social and environmental determinants of their wellbeing.

*Flavia Bustreo,
Former assistant director-general for family,
women's and children's health at the World
Health Organization, Switzerland*

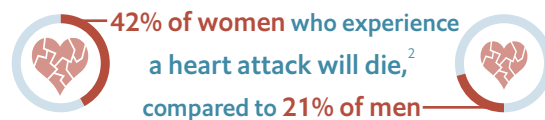
Looking beyond reproductive considerations, this article provides a holistic view of women's health, focusing on how early diagnosis and prevention can help women achieve a lifetime of wellness. Success depends in part on the use of innovative diagnostic tools such as testing for biomarkers to identify diseases in women before they advance to a more critical stage. Through a review of academic literature and a series of expert interviews, we examined the current state of women's healthcare and the new tools and ideas that can better secure their wellness.

Disproportionate disease prevalence among women

Historically, women's health has been synonymous with reproductive health, concentrating attention on and investment in maternal health, reproductive concerns and human immunodeficiency virus (HIV) infection, especially in low- and middle-income countries (LMICs). However, as the global burden of disease has changed in recent decades, the focus on women's health has expanded to include diseases that disproportionately affect women throughout their lifetimes.¹ These health issues represent an emerging—and often ignored—challenge. In the following, we describe a set of conditions and how they can be anticipated and proactively managed through prevention and early diagnostics.

Heart disease

It is a common misconception that men are more likely to die from cardiovascular disease (CVD) than women. In fact, 42 percent of women who experience a heart attack will die, compared to 21 percent of men.² Although heart disease is the leading cause of death among women, only 8 percent of physicians are aware that more women than men die of CVD each year.³ This discrepancy suggests that clinicians may not know how heart disease can present differently in women, thereby missing opportunities for diagnosis and treatment and exacerbating the mortality rate.³





According to the American Heart Association, approximately 70 percent of women between the ages of 60 and 79 suffer from heart disease, increasing to 87 percent of women over age 80.⁴ Up to 80 percent of CVD cases may be prevented through lifestyle changes.⁵ The cost of ignoring the risk of heart disease is considerable: the US spends a greater total amount on CVD than any other country, representing 17 percent of the nation's overall health expenditure.⁵

To reduce both the cost to the healthcare system and the risk to women, early and consistent assessment of CVD risk factors is key. The 2019 American College of Cardiology and the American Heart Association recommend assessing cardiovascular risk factors in all individuals ages 20-39 years every 4-6 years, and they recommend calculating 10-year risk "routinely".⁶ Diagnostic tests include blood tests, electrocardiograms (ECGs/EKGs), echocardiograms, exercise stress tests and coronary computed tomography angiograms (CTA).⁷ Combined, these tools can provide a more holistic understanding of a woman's heart health.⁸



Even in heart disease, a lot of our textbook definitions were defined around men. A lot of our training, and even clinical trials, are based on male bodies.

*Asha George,
Professor, University of the Western Cape,
South Africa*

Bone health



Globally, it is estimated that approximately 1 in 3 women over age 50 will experience an osteoporotic fracture.⁹

Women are particularly susceptible to osteoporosis. Globally, it is estimated that 200 million women experience symptoms, and approximately one in three women over age 50 will experience an osteoporotic fracture.⁹ Osteoporosis has varied causes but is more likely for women who experienced poor nutrition during their youth or who have been pregnant, as pregnancy is known to reduce bone mineral density (BMD).⁹

The risk of osteoporosis increases with age, and it affects many postmenopausal women. There are approximately 10 million people in the United States with osteoporosis, and more than 75 percent of them are women.⁴ It is estimated that from one to two years before menopause to two to five years after menopause, women lose about half of the bone density that they lose over their entire lifetime, making these years a crucial time for intervention.¹⁰

Osteoporosis can be diagnosed in a variety of ways. Individuals with osteoporosis have a BMD at least 2.5 standard deviations below the levels found in healthy adults (when BMD is measured at the hip or spine).¹¹ Another option is a blood test to analyse vitamin D levels and thyroid function, accompanied by an ultrasound scan of the shin bone.¹² Biomarkers of bone turnover can also be used to diagnose osteoporosis. These biomarkers are produced during the bone remodelling process and include bone formation biomarkers, bone resorption biomarkers, and regulators of bone turnover.¹¹



Thyroid disorders



1 in 8 women will develop thyroid problems during her lifetime¹³

Women are more likely than men to have thyroid disease; one in eight women will develop thyroid problems during her lifetime. Thyroid disease can cause specific problems for women's health by affecting the menstrual cycle and their ability to get pregnant, and it can negatively impact both the mother's and child's health during pregnancy. In extreme cases, thyroid disease can lead to early menopause.¹³ The symptoms of thyroid disease can sometimes be mistaken for menopause symptoms, further adding to the challenge of diagnosis. Hypothyroidism in particular is more likely to develop in postmenopausal women.¹³

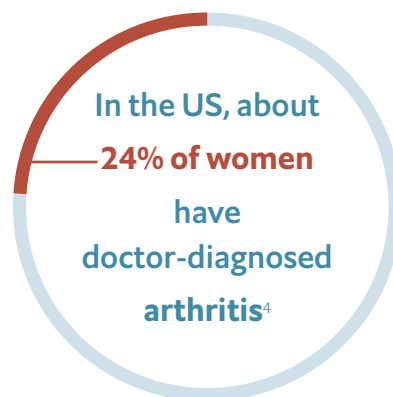
Thyroid disease can also affect adolescents, in whom the symptoms can be more challenging to identify. Girls are more commonly affected than boys by diseases such as Hashimoto's autoimmune thyroiditis, which affects approximately 1-2 percent of teenagers, and Graves disease (autoimmune hyperthyroidism), which primarily affects girls ages 10-15 years old. Thyroid disease often appears with other autoimmune diseases, such as type 1 diabetes, Addison disease, pernicious anaemia, coeliac disease and systemic lupus erythematosus (SLE), and in syndromes such as Down and Turner.¹⁴

Thyroid disease can be difficult to diagnose. In addition to testing, physicians may conduct a physical exam and determine whether there is a family history of the disease. Blood tests

to measure the level of thyroid-stimulating hormone (TSH) in the blood can help establish whether a patient has an overactive or underactive thyroid. A TSH test is the first-line screening, followed by other blood tests such as thyroxine (T4) and triiodothyronine (T3) as well as antithyroid antibodies to support confirming and disease management.¹⁵ Radioactive iodine uptake tests are another diagnostic tool; after a patient ingests a small dose of radioactive iodine (radioiodine), the radioiodine that collects in the thyroid is measured to determine how much of the thyroid hormone is being produced.¹³

Rheumatoid arthritis

Rheumatoid arthritis (RA) disproportionately affects women. It has been shown to be two to three times more common among women than men.^{16,17} The impact of this disease varies among populations. For example, a lower proportion of the population in southern Europe is affected compared with the population in northern Europe and North America.^{16,17} There is compelling evidence that autoimmunity is under genetic control, and that the genes present in sex chromosomes play a role in the increased prevalence of RA among women.^{16,17}





In addition to imaging studies and clinical examinations, blood tests can be used to diagnose or rule out RA. These include testing for the presence of rheumatoid factor antibodies, the erythrocyte sedimentation rate and C-reactive protein—which can indicate inflammation of the joints—and a full blood count including haemoglobin and haematocrit tests to help diagnose anaemia, which is commonly associated with RA.¹⁸ Anti-cyclic citrullinated peptide works against the body's normal antibodies, and can also be used to help diagnose the disease.¹⁹

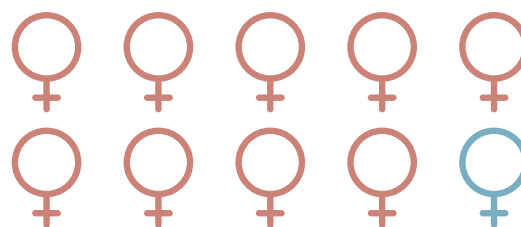
More broadly, arthritis affects more than 54 million Americans and affects more women than men. Overall, 24 percent of all women suffer from arthritis compared to 18 percent of all men.⁴ Postmenopausal women are particularly vulnerable to osteoarthritis. One study concluded that two-thirds of women in this age group had osteoarthritis, which is the leading cause of pain and disability among adults in the United States.¹⁰

Cancer

Cancer is a leading cause of death among women. Globally each year, around half a million women die from cervical cancer and another half-million die from breast cancer.²⁰ The prevalence of these forms of cancer is affected by women's socioeconomic and educational status. For example, cervical cancer affects women in low-income countries at a much higher rate than those in high-income countries.⁹ Of the women diagnosed with cervical cancer, 8 in 10 live in an LMIC, and as do 9 in 10 women who die from cervical cancer.²¹

Worldwide, about 70 percent of cervical cancer cases are caused by human papillomavirus (HPV),

with the majority of those cases occurring in LMICs.⁹ Women in high-income countries have better access to the HPV vaccine, in addition to advantages such as early detection through screening.



9 in 10 women who die from cervical cancer live in low- and middle-income countries²¹

For preventive care, the American Cancer Society recommends that cervical cancer screening begin at the age of 25. Between the ages of 25 and 65, it is recommended that all women be tested for HPV every five years. The Pap test is another type of screening, which collects and examines cervical cells for changes caused by HPV that may turn into cervical cancer.²² A mammogram is the recommended test for breast cancer as it may find tumours that are too small to feel.²³



Some of the issues that affect women most are preventable or can be identified early and therefore be prevented.

*Ana Langer,
Professor of the practice of public health and
coordinator of the Dean's Special Initiative in
Women and Health, Harvard University, US*






Closing the gap

Testing as a tool to anticipate women’s health needs throughout their life span

Routine preventive health screenings are essential to detect health concerns in their earliest stages, even before symptoms manifest, when treatment can be the most effective.²⁴ However, success in many areas of women’s health will require further research to better diagnose and treat the diseases that disproportionately affect women.

To address the unique health needs of women, it is helpful to think in terms of life stages, each of which comes with its own specific conditions and needs. By approaching women’s health with this long-term view of care, it is possible not only to improve the quality of a woman’s health over the course of her entire lifetime, but to pass on that increased quality of life to future generations, as there is evidence showing that both good and bad health behaviour habits can be passed on to next generations.²⁵

Table 1. Women’s health concerns across their life span

Adolescence and young adulthood 	Middle age and reproductive years 	Senior years 
Alcohol, tobacco and drug use	Cancers: breast, lung, cervical	Arthritis
Cardiovascular disease	Cardiovascular disease	Cancer
Diabetes (type 1/type 2)	Diabetes (gestational)	Dementia
Early pregnancy and childbirth	Endocrinology	Depression
Eating disorders, undernutrition, obesity	Heart disease	Diabetes (type 2)
HIV/AIDS, diarrheal diseases, lower respiratory infections	Menopause	Heart disease
Mental health	Osteoporosis	Osteoporosis
Thyroid	Pelvic medicine	
	Pregnancy and childbirth	
	Thyroid	

Source: Economist Intelligence Unit



Investment in women's health research

Medical research has been conducted primarily in men, with the assumption that the findings are equally applicable to women. Women have therefore been underrepresented in clinical trials, and there has been inadequate investment in all areas of clinical research on women's health.²⁶ Due to low research, sex differences and gender disparities have largely been unknown, resulting in medicines and diagnostic tools that may not work as effectively for women as they do for men. Women are also more likely to be under- or misdiagnosed due to lack of information.²⁶ For instance, CVD is a leading cause of premature death and disability among women, yet many clinicians consider CVD a "male disease". Women are not actively targeted for screening and diagnosis, resulting in poor prognosis.²⁶ Women have also not been adequately included in clinical trials on CVD, which reduces clinicians' ability to measure the safety and efficacy of various treatments specifically for women.²⁷



We need women's leadership at the top because that is how we are going to prioritize the needs of women.

*Flavia Bustreo,
Former assistant director-general for family,
women's and children's health at the World
Health Organization, Switzerland*

All political leaders can be powerful advocates for investing in women's health research, promoting the inclusion of testing in health budgets, helping to improve access to healthcare and prioritising

diagnostic services. This investment will not only bring high returns but will make health systems and communities more resilient.²⁸

Promotion of health literacy

Health literacy is a challenge across the globe, especially in LMICs. Despite the availability of diagnosis screening and testing, women often lack information about these tests, their benefits and how to access them.²⁸ Cultural practices such as early marriage and pregnancy often hinder access to education, making it difficult for women to comprehend health information throughout their lives.²⁸

Diagnosis and prevention may not be priorities for women who lack understanding and have other demands on their lives. For example, 90 percent of Palestinian women surveyed were willing to have a mammogram only if they had a specific concern.²⁹ Gender-related stigma can also prevent women from seeking medical services. For example, in India tuberculosis (TB) stigma falls more heavily on women than men, with a study reporting that 40 percent of women in Maharashtra feared that their husband would not support them if they were diagnosed with TB.³⁰

Improving women's health literacy will allow them to become their own advocates and educate themselves about their healthcare needs, thereby improving outcomes.²⁸ More research is needed to understand how to encourage women—particularly in the low-income context—to participate in screening and prevention programs.



Outlook

Diagnostic testing is crucial for women as it not only enables the diagnosis and monitoring of diseases, but also promotes prevention and overall health. The covid-19 pandemic is a stark reminder of the societal and economic costs of failing to invest in effective testing. Despite this, countries on average spend only 3-5 percent of healthcare budgets on tests.³¹

Encourage women to drive testing.

Women comprise 70 percent of the global health workforce, and they play a key role in promoting early diagnosis and building trust at the community level. It is possible to scale up diagnosis and testing by training women and providing them with the required resources. Evidence suggests that training female community workers has improved early testing and diagnosis among both women and children.²⁸ Similarly, self-testing can be used to enable women to take control of their health, even in contexts that impose cultural limitations on women's agency.²⁸ To persuade women to come for screening even without symptoms, delivery of diagnostic testing must be customised to reach a broader population, especially the most marginalised women.²⁸

Invest in women's health research and diagnostics. Globally, there has been underinvestment in research and development on women's health.²⁸ This includes lack of representation with only male subjects and lack of investment in research and development of medicines and diagnostic tests, resulting in diagnostics or medicines that are not as effective for women.²⁸ It is important to invest in research that meets

the needs of women, beyond reproductive health, to ensure effective diagnoses, testing and treatment. Female political leaders can drive investment in women's health research, influence the inclusion of testing in health budgets, help improve access and prioritise diagnostic services. These actions will make health systems and communities healthier and more resilient.²⁸

Promote health literacy to enable women to take control of their health. Only by informing women and girls about health, beyond the reproductive concerns, can they take control of their own health and wellness.²⁸ Women community leaders and women-led community-based organisations need to promote testing and incentivise women to participate in such engagements. Interventions to increase health literacy can include written materials, clear communication and education to increase health knowledge, self-efficacy and self-advocacy skills.³² Through these efforts, women can learn about their health issues, increase use of health services like testing and become their own best advocates.

Conclusion

Women have a disproportionately higher risk of developing some diseases such as autoimmune disorders and bone-related disorders associated with life stages such as pregnancy and menopause. Women's health is more than just the absence of a disease. We must take a holistic view of women, understanding the environment in which they live and the social factors affecting them, then educate and enable them to fulfil their full potential. Some women are unaware



of the risks to their health, the power of early detection and the importance of screening. Underinvestment in research and development on women's health contributes to a lack of understanding of disease presentation and subsequent management. Yet there exists a path to a lifetime of wellness for women.

Women's health is not just limited to their reproductive capacity

Historically, the view of women's health focused on improving maternal and reproductive health, but the global burden of disease has changed over the decades and women are now more likely to be affected by non-communicable diseases such as CVD. This shift has been detrimental to women's health, with the presentation of some illnesses not immediately realised by clinicians. Efforts to rectify this inequity should focus on how early diagnosis and prevention can help women achieve a lifetime of wellness.

Inclusion of women in clinical trials for diseases affecting both genders is crucial

The historical exclusion of women from clinical trials has led to a dearth of knowledge about how diseases develop and present distinctly in women. Indeed, women are more likely to be under- or misdiagnosed due to lack of research. The safety and efficacy of treatments are not always evaluated specifically for women, and thus in some instances have not been as effective as they have been for men. There are clinically significant differences between men and women across all areas of health and disease, differences that must be evaluated in clinical studies to reduce the global burden of disease in women.

Innovative and targeted diagnostic testing is key to improving outcomes in women's health

Some of the health issues affecting women are preventable or can be prevented or cured if detected early. Mammograms can detect breast cancer, and HPV vaccination and screening prevent or detect the risk of cervical cancer. Screening is essential to diagnose health concerns in their earliest stages when treatment can be the most effective and outcomes are improved, as routine screening can detect abnormalities even during asymptomatic stages of disease. Evidence shows that women in healthcare can play a key role through building trust at the community level, promoting early testing and encouraging engagement in screening programmes, improving outcomes for women and their children.

Health literacy has transformative power for women's health

While screening and other preventive measures are available to women, some lack an understanding of the importance of these measures and the implications of ignoring their health and wellbeing. Social and cultural barriers also need to be overcome. For women to become advocates for their own health, health literacy needs to be promoted through clear communication and education to increase health knowledge, self-efficacy and self-advocacy skills. Only then can women increase their use of health services like testing and become their best advocates.



The EIU would like to thank the following experts for sharing their insights and experiences:

- **Flavia Bustreo,**
Former assistant director-general for family, women's and children's health at the World Health Organization, Switzerland
- **Isabel Cristina Espósito,**
Professor of primary health care, discipline of gynaecology, Department of Obstetrics and Gynaecology, faculty of medicine, University of São Paulo, Brazil
- **Asha George,**
Professor, University of the Western Cape, South Africa
- **Joyce Harper,**
Professor of reproductive science, reproductive health, University College London, UK
- **Ana Langer,**
Professor of the practice of public health and coordinator of the Dean's Special Initiative in Women and Health, Harvard University, for the Harvard T. H. Chan School of Public Health, US



This report was written by Biz Pedersen and Adam Green, with research input from Giulia Garcia, and was edited by Melissa Lux.



References

1. Bustreo F, Knaul FM, Bhadelia A, et al. Women's health beyond reproduction: meeting the challenges. *Bulletin of the World Health Organization*. 2012;90(7):478-A.
2. Alexander LL, LaRosa JH, Bader H, et al. *New dimensions in women's health*: Jones & Bartlett Learning; 2020.
3. Mosca L, Linfante AH, Benjamin EJ, et al. National study of physician awareness and adherence to cardiovascular disease prevention guidelines. *Circulation*. 2005;111(4):499-510.
4. Aging in Place. Top Health Conditions Affecting Elderly Women. Aging in Place. Available from: <https://aginginplace.org/top-health-conditions-affecting-elderly-women/>.
5. Tomasello BG, S. Heart Screenings for Women Should Be as Routine as Pap Tests. National Women's Health Network. Available from: <https://nwhn.org/heart-screenings-for-women-should-be-as-routine-as-pap-tests/>.
6. Arnett DK, Blumenthal RS, Albert MA, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;140(11):e596-e646.
7. Staff C. When & Why Women Need Heart Health Screenings. Cardiovascular Institute of the South. Available from: <https://www.cardio.com/blog/when-why-women-need-heart-health-screenings#:~:text=Generally%20speaking%2C%20women%20under%20the,risk%20factors%20or%20family%20history.>
8. 2019. Women & Cardiovascular Disease. Cleveland Clinic. Available from: <https://my.clevelandclinic.org/health/diseases/17645-women--cardiovascular-disease#:~:text=Diagnostic%20tests%2C%20including%20blood%20tests,provide%20a%20more%20complete%20and.>
9. Mariani G, Kasznia-Brown J, Paez D, et al. Improving women's health in low-income and middle-income countries. Part I: challenges and priorities. *Nuclear medicine communications*. 2017;38(12):1019-23.
10. Harlow SD, Derby CA. Women's Midlife Health: Why the Midlife Matters. *Women's midlife health*. 2015;1:5-.
11. Kuo T-R, Chen C-H. Bone biomarker for the clinical assessment of osteoporosis: recent developments and future perspectives. *Biomarker Research*. 2017;5(1):18.



12. Bone Health - Men and Women. Life Line Screening. Available from: <https://www.lifelinescreening.com/screening-services/bone-health-men-and-women?sourcecd=WNAT002>.
13. OASH. Thyroid disease. Office on Women's Health. Available from: <https://www.womenshealth.gov/a-z-topics/thyroid-disease>.
14. Vanderpump M. Worried that your teenager has a thyroid problem? - a guide to thyroid disorders in adolescents. TOPDOCTORS. Available from: <https://www.topdoctors.co.uk/medical-articles/worried-that-your-teenager-has-a-thyroid-problem-a-guide-to-thyroid-disorders-in-adolescents#>.
15. Carvalho GAd, Perez CLS, Ward LS. The clinical use of thyroid function tests. Arquivos Brasileiros de Endocrinologia & Metabologia. 2013;57:193-204.
16. Gerosa M, De Angelis V, Riboldi P, et al. Rheumatoid Arthritis: A Female Challenge. Women's Health. 2008;4(2):195-201.
17. Smolen JS, Aletaha D, Barton A, et al. Rheumatoid arthritis. Nature Reviews Disease Primers. 2018;4(1):18001.
18. Healthline. Blood Tests for Rheumatoid Arthritis. healthline. Available from: <https://www.healthline.com/health/blood-tests-rheumatoid-arthritis>.
19. MedlinePlus. CCP Antibody Test. National Library of Medicine. Available from: <https://medlineplus.gov/lab-tests/ccp-antibody-test/#:~:text=A%20CCP%20antibody%20test%20is,to%20help%20diagnose%20rheumatoid%20arthritis>.
20. Bustreo F. Ten top issues for women's health. WHO. Available from: <https://www.who.int/news-room/commentaries/detail/ten-top-issues-for-women's-health>.
21. Ginsburg O, Bray F, Coleman MP, et al. The global burden of women's cancers: a grand challenge in global health. Lancet (London, England). 2017;389(10071):847-60.
22. NIH. Next Steps after an Abnormal Cervical Cancer Screening Test: Understanding HPV and Pap Test Results. National Cancer Institute at the National Institutes of Health. Available from: <https://www.cancer.gov/types/cervical/understanding-abnormal-hpv-and-pap-test-results>.
23. Society AC. The American Cancer Society Guidelines for the Prevention and Early Detection of Cervical Cancer. American Cancer Society. Available from: [https://www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/cervical-cancer-screening-guidelines.html#:~:text=Cervical%20cancer%20testing%20\(screening\)%20should,test%20alone%20every%203%20years](https://www.cancer.org/cancer/cervical-cancer/detection-diagnosis-staging/cervical-cancer-screening-guidelines.html#:~:text=Cervical%20cancer%20testing%20(screening)%20should,test%20alone%20every%203%20years).



24. Stoppler M. Health Screening Tests Every Woman Needs. On Health. Available from: https://www.onhealth.com/content/1/disease_prevention#:~:text=Health%20screening%20tests%20are%20important,abnormalities%20before%20symptoms%20are%20apparent.
25. RCOG. Better for women: Improving the health and wellbeing of girls and women. Royal College of Obstetricians & Gynaecologists 2019. Available from: <https://www.rcog.org.uk/media/h3smwohw/better-for-women-full-report.pdf>.
26. Winchester N. Women's health outcomes: is there a gender gap? : UK Parliament. Available from: <https://lordslibrary.parliament.uk/womens-health-outcomes-is-there-a-gender-gap/>.
27. Vogel B, Acevedo M, Appelman Y, et al. The Lancet women and cardiovascular disease Commission: reducing the global burden by 2030. The Lancet. 2021;397(10292):2385-438.
28. WGH. Testing & Women's Empowerment Means Better Health For All. Women in Global Health 2020.
29. Shaheen R, Slanetz P, Raza S, et al. Barriers and opportunities for early detection of breast cancer in Gaza women. The breast. 2011;20:S30-S4.
30. Atre S, Kudale A, Morankar S, et al. Gender and community views of stigma and tuberculosis in rural Maharashtra, India. Global Public Health. 2011;6(1):56-71.
31. Pai M, Kohli M. Essential diagnostics: a key element of universal health coverage. Dr Sulaiman Al Habib Medical Journal. 2019;1(1):3-7.
32. Shieh C, Halstead JA. Understanding the impact of health literacy on women's health. J Obstet Gynecol Neonatal Nurs. 2009;38(5):601-10; quiz 10-2.

Copyright

© 2021 The Economist Intelligence Unit Limited. All rights reserved. Neither this publication nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of The Economist Intelligence Unit Limited.

While every effort has been taken to verify the accuracy of this information, The Economist Intelligence Unit Ltd. cannot accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out in this report.

LONDON

The Economist Intelligence Unit
20 Cabot Square
London E14 4QW
United Kingdom
Tel: + 44 (0) 20 7576 8181
Email: london@eiu.com

GURGAON

The Economist Intelligence Unit
Skootr Spaces, Unit No. 1,
12th Floor, Tower B, Building No. 9
DLF Cyber City,
Phase – III
Gurgaon – 122002
Haryana
India
Tel: + 91 124 6409486
Email: asia@eiu.com

NEW YORK

The Economist Intelligence Unit
The Economist Group
750 Third Avenue 5th Floor
New York, NY 10017,
United States
Tel: + 1 212 698 9717
Email: americas@eiu.com

HONG KONG

The Economist Intelligence Unit
1301 Cityplaza Four
12 Taikoo Wan Road
Taikoo Shing
Hong Kong
Tel: + 852 2802 7288
Email: asia@eiu.com

DUBAI

The Economist Intelligence Unit
PO Box No - 450056
Office No - 1301A
Aurora Tower
Dubai Media City
Dubai
United Arab Emirates
Tel +971 4 4463 147
email: mea@eiu.com