ECONOMIST IMPACT

From margins to mandate

Elevating thyroid care in Africa

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Contents

About this report

From margins to mandate: Elevating thyroid care in Africa is produced by Economist Impact, supported by Merck. The report addresses the gaps surrounding thyroid disease by focusing on how improvements made in awareness, prevention, screening, data, surveillance and engagement with patients and healthcare providers could lead to better health outcomes for people living with these conditions in Africa. The research highlights opportunities for change, with a particular focus on better screening in high-risk groups, particularly newborns. It makes a regional call to close the care gap and embed thyroid into national and regional non-communicable disease health priorities.

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- **Samira Akdader-Oudahmane**, senior lecturer, Université Mouloud Mammeri Tizi Ouzou, Université des Sciences et de la Technologie Houari Boumedienne, Tizi Ouzou, Algeria
- **Hinde Iraqi**, professor of endocrinology and metabolic diseases, Ibn Sina University Hospital, Rabat, Morocco, Faculty of Medicine and Pharmacy, Department of Endocrinology, Mohamed V University in Rabat, Morocco
- **Menbere Kahssay**, paediatric endocrinologist and consultant paediatrician, Aga Khan University Hospital, Nairobi, Kenya
- **Iruoma Ofortube**, founder and executive director, Thyroid Awareness and Support Initiative (TASI), Nigeria
- **Alisha Wade**, Director of Research in Metabolism and Endocrinology (RIME) and Reader and Clinician Scientist, School of Clinical Medicine in the Faculty of Health Sciences at the University of the Witwatersrand, Johannesburg, South Africa

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Executive summary

Africa carries a substantial burden of iodine deficiency and related thyroid disorders, including goitre, congenital hypothyroidism, pregnancy-related thyroid dysfunction, autoimmune thyroiditis and thyroid cancer. Globally, thyroid dysfunction is the second most common endocrine disorder after diabetes and affects around 200m people. In Africa, although data is scarce, millions of people live with thyroid conditions, many of which are likely undiagnosed or untreated. In Egypt, some 20% of the population are estimated to live with thyroid conditions. Goitres—which are associated with stigma, especially for women—affect around 28.3% of the continent's population, rising as high as 70% in some school-aged populations. Africa also has the highest reported global prevalence of Hashimoto's thyroiditis (14.2%) and is projected to have the largest increase in incidence and mortality of thyroid cancer worldwide between 2020 and 2040.

These conditions are a major public health concern as they can affect quality of life, both physically and mentally, at every life stage, from neonates to older people, and commonly present alongside other chronic diseases. Pregnant women face a higher risk of thyroid disease because they need more iodine. Furthermore, data suggest that thyroid disorders carry significant societal and economic implications due to elevated healthcare expenditure and productivity losses linked to life-long disability. Even so, awareness of thyroid disorders among healthcare providers and the public remains limited, and these conditions continue to sit on the margins of health surveillance, policy prioritisation and service delivery, underscoring the need for greater attention from policymakers and governments in Africa.

This briefing paper, based on desk research and qualitative insights, introduces Economist Impact's snapshot analysis of key thyroid and health indicators in 54 African countries to demonstrate where global standards are being met, as well as the shortfalls.

Challenges and opportunities identified from our research include:

More effort is required to prevent thyroid disease in Africa. Our research found much progress on universal salt iodisation (USI), where nearly all countries in Africa (except Equatorial Guinea, Sierra Leone and Sudan) have mandatory legislation. However, iodine deficiency remains the dominant driver of thyroid disease across Africa. Only ten out of 54 countries achieve the World Health Organisation (WHO) target of more than 90% of households consuming adequately iodised salt (>15 ppm), according to our **snapshot analysis**. Many countries still do not meet sufficient iodine nutrition thresholds (median urinary iodine concentration), both among the general population (only 25 out of 54 countries) and pregnant women (just nine nations out of 54), especially within low-income groups and rural communities. This means that large parts of the population are still not getting enough iodine in their diets. Governments must therefore act to improve iodine salt fortification and nutritional health strategies.

There is an urgent need for newborn screening (NBS) to prevent life-impairing congenital hypothyroidism (CH). Based on our **snapshot analysis**, only two countries in Africa (Egypt and the Seychelles) have a national newborn screening programme that includes congenital hypothyroidism, even though it is seen as one of the most cost-effective public health programmes globally. Many countries in Africa run small-scale pilots or depend on parental out-of-pocket private screening. There have been increasing calls in recent years for African countries to establish national newborn screening programmes. Without renewed focus on iodine salt fortification, nutritional health strategies and newborn screening programmes, preventable thyroid-related disability and mortality in Africa will persist. Postnatal contact of newborns with health services, as well as pre-existing newborn screening for other conditions, should also be leveraged to incorporate newborn screening for congenital hypothyroidism.

Current access to thyroid care is limited, unaffordable and highly unequal across much of Africa. Chronic under-investment in health systems, combined with limited laboratory and imaging capacity, inconsistent medicine supply and weak referral and follow-up systems, all undermine thyroid disease diagnosis and management. Geographical barriers to access also exist, with facilities that provide thyroid health services often concentrated in urban referral centres and private facilities, leaving rural populations facing high travel costs and long delays. Out-of-pocket payments for diagnostics, lifelong hormone replacement therapy and surgery remain prohibitive for many households, resulting in delayed presentation, advanced goitre, uncontrolled disease and preventable complications. Shortages of specialists needed for holistic care, including endocrinologists, surgeons, cardiologists and other healthcare providers, further constrain access. Advocates have called for an increased focus on tackling thyroid health at primary care to address access barriers, as well as more consideration on how to meet the needs of at-risk groups such as newborns, pregnant women and older adults. Experts also want to see thyroid disease added to official health ministries' chronic disease lists to ensure delivery of care.

More research and data are needed on iodine sufficiency and thyroid conditions to support policy development. Many countries lack up-to-date urinary iodine data with only 15 nations collecting data for the general population in the last decade. This data is even more scarce for pregnant women, despite this group, and subsequently newborns, being at high risk of iodine deficiency-related harm. Beyond iodine, epidemiological research on thyroid disease prevalence, risk factors

and co-morbidities is sparse across African settings, and there are almost no economic studies assessing financial burden. Locally generated clinical trials and other studies needed to inform contextually relevant guidelines and clinical practice (eg optimal thyroid-stimulating hormone cut-offs for use in newborn screening) or resource-appropriate treatment protocols are largely absent. This lack of surveillance, epidemiology, clinical and economic data makes it difficult to design targeted interventions, allocate resources efficiently and advocate for thyroid health within broader health agendas.

Education, awareness and advocacy efforts among healthcare professionals are limited as patient groups drive public awareness. Based on expert insights and studies, many clinicians lack awareness of thyroid diseases and adequate knowledge of their diagnosis and management, while community understanding of thyroid symptoms, iodine needs and prevention remains limited and stigmatised. However, where targeted education has been implemented, improvements in knowledge and behaviour have been documented among healthcare providers, patients and the public. Much of the work on thyroid health education, awareness and advocacy is being driven, not by governments, but by patient groups and civil society. They have capitalised on a range of media channels to engage a wider audience and deliver public health education. According to our **snapshot analysis,** there are only ten national thyroid patient groups in Africa, and they operate across just seven countries. These groups are well placed to strengthen thyroid health systems; closer collaboration between them, governments and others will be essential to build on their contributions and ensure future policy and programme development is community centred.

Regional thyroid professional networks and national stewardship is lacking. Professional associations and thyroid societies have a vital role to play in strengthening governance, standardising clinical practice and driving co-ordinated action on thyroid health. A handful of thyroid-related professional societies do exist, and some have already made important steps towards advancing thyroid care in the region. The Paediatric Endocrinology Training Centre for Africa (PETCA) has expanded continuing medical education for paediatric endocrinologists across 12 countries. The African Head and Neck Society has produced one of the few context-appropriate guidelines for thyroid nodules and cancer in low-resource settings. These examples show the benefits of regional leadership and confirm growing professional connectivity on thyroid health. However, Africa remains the only continent without a dedicated regional thyroid association focused on thyroid health. Experts support the idea of forming an Africa Thyroid Association that links to existing professional bodies. This would provide a unified platform to co-ordinate research, support guideline development, strengthen workforce training, facilitate disease registry formation and engage in policymaking and advocacy with national governments, as well as the Africa region of the WHO, the Africa Centres for Disease Control and Prevention (Africa CDC) and the African Union.

Integrated health services and collaborative partnerships offer key opportunities for expanding thyroid care. Global and regional non-communicable disease (NCD) and newborn-screening initiatives (eg WHO PEN-Plus, Africa CDC NCD surveillance and the Consortium on Newborn Screening in Africa) offer concrete entry points to integrate thyroid health into existing and emerging health programmes. Areas where this could be initially focused include embedding thyroid assessment into programmes for other chronic diseases associated with thyroid disorder (eg diabetes, HIV and cardiovascular disease). Public-private partnerships and multi-country collaborations—particularly for shared laboratory networks, databases, clinical protocols and pooled procurement models—have already shown feasibility in newborn screening and could be expanded to all thyroid diagnostics and medicines. Using these approaches is essential to maximise scarce resources while closing critical gaps in thyroid prevention, diagnosis and management across Africa.

Wide recognition for thyroid disease is needed. Across Africa, both provider and public awareness of thyroid health and iodine nutrition remain low. Thyroid disease is not consistently recognised within global, regional or national NCD agendas, limiting visibility, political prioritisation, funding and

programmatic support. Multiple calls to do so have been made, most recently by the president of the Thyroid Federation International (TFI) at the 2025 World Health Summit, to ensure thyroid health in Africa gains the attention and investment it needs. Experts, including the advisory board of the World Thyroid Federation, are also calling on the WHO to add thyroid diseases to its priority NCD list. Although the most recent WHO declaration in December 2025 moved its NCD agenda towards a more integrated approach and included a broader range of NCDs, thyroid diseases were not explicitly recognised, leaving them at continued risk of exclusion.

A focus on thyroid disease comes at a critical juncture, as Africa undergoes transition in both its health financing systems and broader political landscape. In 2025, global health aid was projected to drop by up to 40% compared with 2023. Africa, historically dependent on aid to maintain health, is expected to be the most affected by these cuts. These countries face the risk of reversing decades of hard-won gains in both broader health outcomes and emerging areas such as thyroid care. This has prompted calls from global leaders, including WHO director-general Tedros Adhanom Ghebreyesus, for African countries to "move beyond aid dependency and embrace a new era of sovereignty, autonomy, and solidarity" to strengthen domestic health systems. Our snapshot analysis finds only two countries in Africa (Lesotho and South Africa) meet the target of allocating at least 5% of GDP to health, with most falling below what is considered necessary to sustain universal health coverage, and which will be important in delivering optimal thyroid care.

Africa is at a crossroads and must seize this moment to expand national health investment. This will not only protect existing infrastructure upon which all health service delivery depends but will also ensure the groundwork being laid for thyroid disease prevention, diagnosis and management continues to progress.

Introduction: Why thyroid disease matters in Africa

Thyroid disorders are a significant global public health issue, yet they remain a largely unrecognised health burden across Africa despite being mostly highly preventable and easily treatable. "Millions of people are affected with thyroid disorders in Africa, yet no significant attention has been channelled to it as a major primary health concern," says Iruoma Ofortube, a thyroid disease survivor who founded a patient group in Nigeria called Thyroid Awareness and Support Initiative (TASI).

Disorders can be functional or structural in nature. Each can cause serious complications if not treated promptly, contributing to increased morbidity, affecting a person's mental, cardiovascular, respiratory, gastrointestinal, reproductive and cognitive health, and mortality.[1,2,3] In functional disorders, this includes hypothyroidism, an underactive thyroid producing too low levels of thyroid hormone, and hyperthyroidism, an overactive thyroid producing too high levels of thyroid hormone **(see Figure 1)**.[4] "Functional thyroid disorders can have significant health impacts, as thyroid receptors are virtually everywhere in the body and functional thyroid diseases can affect people's cardiovascular system, gastrointestinal system, reproductive system and cognition," says Alisha Wade, Director of Research in Metabolism and Endocrinology (RIME) at the University of the Witwatersrand, South Africa. Structural disorders include thyroid nodules, goitre and thyroid cancer.[5] These dysfunctions often stem from iodine deficiency or autoimmune conditions such as Hashimoto's and Graves' disease.[6]

While data in Africa is scarce, the indirect social and economic impacts of thyroid disease are high, particularly if left untreated. This is due to the productivity losses and increased healthcare costs resulting from chronic disability.[7,8] One study in Korea found thyroid diseases cost around W762.2bn (US$518m), of which 70% related to direct healthcare costs, the remainder mainly from productivity losses due to work absence and premature death.[9] In Iran, the lifetime cost of care for children who develop intellectual disability due to untreated congenital hypothyroidism each year has been estimated at around 16 times the annual cost of national newborn screening.[10] When treated appropriately, individuals have seen benefits such as wage increases and reduced unemployment.[11]

Globally, thyroid dysfunction is the second most common endocrine disorder after diabetes and affects around 200m people.[12,13] While no continent-wide prevalence figure for Africa has been formally established, national and sub-regional studies suggest a substantial hidden burden, with many individuals likely remaining undiagnosed or untreated.[14, 15] The very little country-level prevalence data that is available is rarely reflective of the general population. However, what it does show is a consistently high burden. In Egypt, thyroid disease is estimated to affect around 20% of the population.[16] Nigerian hospital data show a 2.4% prevalence of thyroid disease among outpatients.[17] A review of thyroid patient medical records at a hospital in Ghana saw that most cases of dysfunction were due to primary hyperthyroidism (57.7%), followed by primary hypothyroidism (22.3%).[18]

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Experts are demanding action on the lack of data. "There is a significant lack of national and regional data on thyroid disease across Africa, and this gap requires urgent attention," says Ms Ofortube. "Stronger systems are needed to monitor, evaluate, track awareness and improve data collection on thyroid disorders."

She adds: "Empirical research shows that thyroid diseases are widely under-reported due to limited knowledge, low public awareness, frequent misdiagnosis and inadequate funding. Addressing these gaps will require the active involvement of researchers, governments at all levels, medical professionals and policymakers to generate reliable data and drive meaningful progress."

Professor Wade says: "While there are some data, they are primarily from selected clinic-based populations and do not give us a good idea of what's happening in the background population or unselected communities." Her team is researching the prevalence of thyroid dysfunction in some community-dwelling populations in South Africa, Burkina Faso, Ghana and Kenya, using data from a longitudinal study.[19] "It will contribute to filling the data void on this topic," she explains.

Hinde Iraqi, a professor of endocrinology and metabolic diseases at the Ibn Sina University Hospital in Rabat says Morocco's ministry of health has some data but it is more than 30 years old, and data on congenital hypothyroidism remains unpublished. "We need a register in Morocco… To ensure we have more data on thyroid conditions, I believe we need two sentinel centres for clinical studies: one in an urban area and one in a rural, mountainous region."

Goitre remains the most visible marker of thyroid dysfunction in Africa.[20] Not only can goitres affect a person's breathing and swallowing, but the visible enlargement of the neck can lead individuals to suffer from unwanted attention, stigma and shame **(see Box 2 on page 46)**.[21, 22] The WHO estimates that 28.3% of the continent's population has goitre.[23] But country studies reveal wide variation. In Ghana, more than half (67%) of all thyroid hospital admissions were due to goitres.[24] In Ethiopia, there was a 42.9% prevalence of goitre among school-aged children, reaching as high as 47% in some regions, potentially affecting more than 15m children.[25, 26] For adults in Ethiopia, prevalence of goitre varies between 11.4% and 50.7% across regions and studies.[27] In South Kordofan, Sudan, the prevalence of goitre among children reached 42.8 %, and surveys in the Sahel-Sudan belt found rates of 64-70%.[28] Zambia recorded that 7.3% of all general surgeries over a ten-year period were for thyroid disease, of which 89% were women and the majority due to goitre.[29]

Autoimmune causes of thyroid dysfunction are also prevalent. In Nigeria, Graves' disease accounted for 58% of all hospital outpatient cases with thyroid disease.[30] In Libya, nearly half (49%) of hospital thyroid disease cases had Hashimoto's thyroiditis.[31] In Uganda, hyperthyroidism accounted for 27% of thyroid presentations—remarkably high for a region with known iodine deficiency—most of which were attributed to Graves' disease and multi-nodular goitre.[32]

Thyroid cancer, though less common than benign thyroid disorders, is also emerging as a concern. In Nigeria, although thyroid cancer accounts for less than 1% of all cancers, it makes up about 14.4% of the country's thyroid disease burden.[33] In the Democratic Republic of Congo, 20% of all thyroid surgeries in one study were due to thyroid cancer.[34] In 2022, there were an estimated 12,000 cases of thyroid cancer in Africa; however, out of all regions globally, Africa is projected to experience the greatest increase in both incidence (+84.3%) and mortality (+100.3%) of thyroid cancer between 2020 and 2040.[35, 36]

At-risk groups that require focused attention

It is important that African policymakers appreciate that certain groups are at high risk of thyroid disease.

Infants and children are among the most vulnerable groups for thyroid disease, with congenital hypothyroidism (CH) representing a leading preventable cause of lifelong intellectual disability.[37] In Morocco, the initial implementation phase of a newborn screening programme for CH across eight public maternity wards and three neonatal units found that one in 1,354 live births had CH.[38] The burden of delayed diagnosis and treatment for CH has already been seen at one hospital in Kenya, where the majority of children with CH were diagnosed between one month and two years of age; 63% of these patients already had developmental delays.[39] Similarly in Algeria, the median age at diagnosis of CH in one study was 1.6 months, with 58% of patients presenting with jaundice and 35% with severe CH.[40]

Pregnant women also face heightened risk of thyroid disease, largely due to their increased iodine requirements.[41] Subclinical thyroid dysfunction is estimated to affect 10% of pregnancies globally, with the potential to lead to adverse outcomes such as miscarriage, pre-term delivery, pre-eclampsia, foetal growth restriction in pregnancy and neuro-developmental disorders in their offspring if left untreated.[42, 43] In Côte d'Ivoire, among all pregnant women attending a hospital gynaecology unit, 12.1% had hypothyroidism and 1.9% had hyperthyroidism.[44] In Somalia, 13.2 % of pregnant women presenting at one hospital had some form of thyroid dysfunction, of which 87% were euthyroid, 8% had hyperthyroidism and 5.2% had hypothyroidism.[45] In Egypt, the prevalence of hypothyroidism among pregnant women attending an outpatient obstetric clinic was 56%.[46] In Senegal, the prevalence of hypothyroidism among pregnant women who gave birth at one hospital was 23.6%.[47]

Globally, older adults, women and those living with autoimmune genetic predisposition also face heightened vulnerability.[48] Although evidence is limited, this is likely the case in many African countries. A handful of studies has seen similar findings, with significantly higher ratios of women presenting with thyroid disease compared to men.[49, 50, 51] The autoimmune burden in the region was highlighted by a recent study which found that, out of all regions globally, Africa had the highest prevalence of Hashimoto's thyroiditis at 14.2 %.[52] Meanwhile, a study in Nigeria found that about a quarter of elderly residents in one village were affected by hypothyroidism.[53]

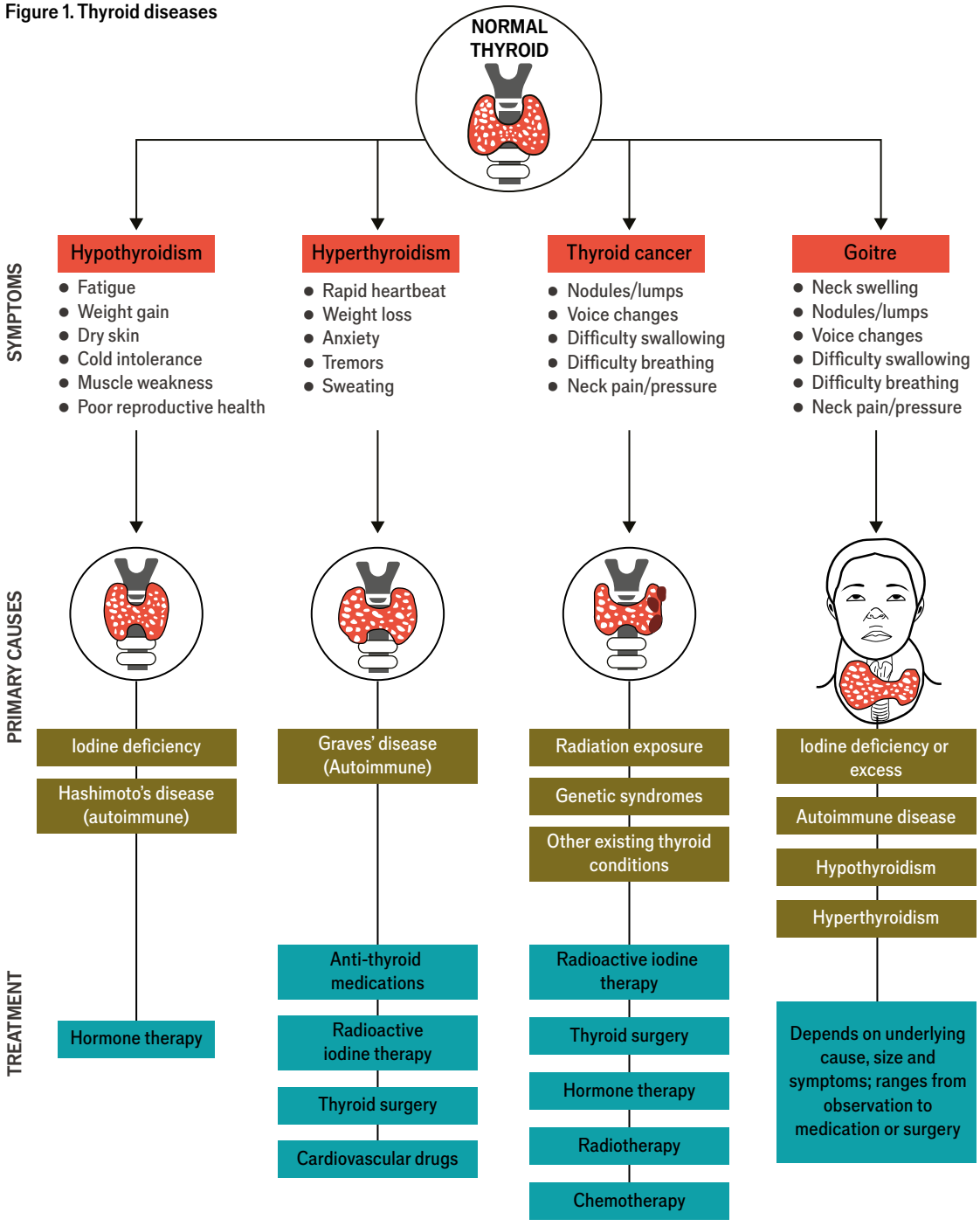
This substantial burden of thyroid disease in Africa has not been reflected in health service provision or policy priorities. Historically, African health systems have largely focused on combatting infectious diseases such as malaria, HIV/AIDS and tuberculosis, given their significant burden in the region.[54, 55, 56] However, the continent is undergoing a rapid epidemiological transition.[57] In Sub-Saharan Africa, NCDs are expected to become the leading cause of mortality by 2050.[58]

Given the increasing impact of thyroid disorders in Africa, this briefing paper seeks to examine the current barriers in awareness, prevention, diagnosis and treatment, and to identify opportunities for co-ordinated regional action.

In doing so, Economist Impact has undertaken a rapid evidence review, gathered qualitative insights from experts and prepared a snapshot analysis of Africa's 54 countries for key thyroid and health indicators to highlight how countries are meeting—or falling short of—global standards or practices.

Table 1 showcases nine African countries that are leading on best practices on some key indicators, such as mandatory salt iodisation, population iodine levels, newborn screening for congenital hypothyroidism, early newborn care and the existence of thyroid patient groups to boost awareness. The full **snapshot analysis** is available in the **Appendix,** which reveals that most countries have major shortfalls that need to be addressed by policymakers to improve thyroid care in Africa.

Figure 1. Thyroid diseases



Source: Economist Impact analysis based on these sources. [59, 60, 61, 62, 63]

Table 1. Snapshot analysis of selected African countries that are leading in best practices on some key thyroid and health system indicators.

Full details for 54 countries available in the **Appendix**.

Source: Economist Impact's snapshot analysis of thyroid and health indicators in Africa (see Appendix).
National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket).
Private = Available at private sector health services, funded through out of pocket payments (including personal private health insurance).
* Egypt and Seychelles are also the only 2 countries with national newborn screening programmes generally, not just for CH. For the Seychelles however, it should be noted that the last publicly posted information was from 2021 and no related government documents were found.
Grey = No data found

	Countries									Continent Summary	
Thyroid indicators	Algeria	Cameroon	Egypt	Côte d'Ivoire	Kenya	Morocco	Nigeria	Senegal	South Africa	Number of African countries doing well by global standards/or practices (out of 54 nations)	Number of African countries showing shortfalls compared with global standards/ practices (out of 54 nations)
Is there mandatory salt iodisation legislation? Yes = Blue No = Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes 44 countries	No legislation or no data 10 countries
% of households consuming adequately iodized salt > 15 ppm. Above 90% WHO target? Yes = Blue No = Red	89.1	90.7	96.5	79.7	94.6	43.3	93.3	65.1	91.1	≥90% 10 countries	<90% or no data 44 countries
General population Urinary Iodine Concentration (UIC)– General population inside of WHO target range? ≥100µg/L and <300µg/L? Yes = Blue No = Red	253	>300	170	No data	208	117	293	252	130	Inside range 25 countries	Outside range or no data 29 countries

Table 1. Snapshot analysis of selected African countries that are leading in best practices on some key thyroid and health system indicators.

Full details for 54 countries available in the **Appendix**.

	Countries									Continent Summary	
Pregnant women Urinary Iodine Concentration (UIC) – Pregnant women inside WHO target range ≥150µg/L and <500µg/L? Yes = Blue No = Red	No data	No data	135-150	No data	No data	No data	237.5	85.7	No data	Inside range 9 countries	Outside range or no data 45 countries
Newborn screening programme for congenital hypothyroidism (CH) Yes = Blue (pilot or private). Yes= Bright blue (national programme) (See legend for full descriptions)	Yes (Pilot)	Yes (Pilot)	Yes (National)	Yes (Pilot)	Yes (Pilot & Private)	Yes (Pilot)	Yes (Pilot)	No data	Yes (Pilot & Private)	National programmes: 2 countries* Pilot and private programmes: 12 countries	None or no data 40 countries
% of newborns contact with health provider within two days of birth ≥70% = Blue < 70 % = Red	91.5	60.4	76.6	72.2	82.6	No data	62.4	81.4	86.2	≥70% 25 countries	<70% or no data 29 countries
Is there a national thyroid patient group(s)? Yes = Blue No = Red (# of groups)	No data	No data	No data	Yes (1)	Yes (1)	No data	Yes (4)	Yes (1)	Yes (1)	Yes 7 countries	None or no data 47 countries
Government spending on health >5% of GDP (% of GDP)? Yes = Blue No = Red	1.72	0.67	1.78	1.34	2.02	2.32	0.62	0.9	5.41	>5% 2 countries	<5% 52 countries

Challenge 1: The need for data, primary prevention, screening and identifying high-risk populations

1. Why primary prevention still falters

Iodine deficiency remains the dominant driver of thyroid disease across Africa.[64] The region contributes to about a quarter of the global iodine-deficiency burden; it is expected that Central and Eastern Sub-Saharan Africa, alongside South Asia, currently (and in future) will continue to bear the highest burden of iodine deficiency through to 2050.[65, 66, 67] In the general population, inadequate iodine intake impairs thyroid hormone synthesis, leading to goitre, hypothyroidism and thyroid cancer.[68] But the consequences of iodine deficiency are most damaging in pregnancy and early life, when iodine requirements increase to support maternal and foetal thyroid function.[69] Insufficiencies at these life stages are linked to increased rates of spontaneous abortion, reduced birth weight, impaired neuro-cognitive development and increased infant mortality.[70]

Universal salt iodisation has been the cornerstone prevention policy since the WHO/UNICEF recommendation in 1994.[71] WHO Africa estimates a return of roughly US$28 for every US$1 invested in salt iodisation.[72] Currently, 44 of 54 African countries have existing mandatory iodised salt legislation, and just 10 report more than 90% household coverage of adequately iodised salt (>15 ppm), which has improved population iodine status in many countries **(see Table 2)**.[73, 74] Professor Wade insists: "We need to make salt iodisation mandatory as this is one intervention that has reduced the prevalence of large goitres worldwide. Professor Iraqi points out that although Moroccan law mandates that all salt be iodised, the problem persists in mountain areas, resulting in more hypothyroidism and goitre. "A lack of doctors in these areas further exacerbates

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Our snapshot analysis finds national UIC data for the general population are more than a decade old for 17 African countries, while there are no available data for 22 countries, leaving governments to plan without up-to-date figures.

the issue, as people generally only seek medical attention for severe pain or urgent problems," she says. Nigeria has also shown substantial variation in household coverage of adequately iodised salt between states and socioeconomic groups, despite the country being recognised by the WHO as the first in Africa to achieve universal salt iodisation and consistently obtaining national household coverage above 90%.[75, 76, 77]

A number of other factors affect access to iodised salt or iodine uptake. Quality assurance and regulatory enforcement of iodised salt production and distribution is often inconsistent.[78] The informal intra-regional trade of salt, alongside poor border controls, conflict, political instability and food-supply disruptions, continues to constrain access to iodised salt in some African countries.[79, 80, 81, 82] Selenium deficiency, common in countries including Nigeria and Uganda, has been shown to diminish the benefits of iodisation, impair thyroid hormone metabolism and contribute to thyroid disorders.[83, 84] Cassava or manioc, a dietary staple in many parts of Africa, can impair iodine metabolism and has been linked to endemic goitre in the region.[85, 86, 87] Furthermore, salt-reduction strategies to combat hypertension and other diseases, such as those implemented in South Africa, may unintentionally reduce iodine intake if fortification and dietary surveillance are not jointly monitored.[88] Samira Akdader-Oudahmane, senior lecturer at the Université Mouloud Mammeri Tizi Ouzou in Algeria, says: "More surveys are needed on local water and vegetables to check for other sources of iodine and other minerals… and consuming foods containing goitrogens—substances that interfere with iodine absorption—such as soy beans, cassava and cruciferous vegetables."

Currently available national urinary iodine concentration (UIC) data indicates that large parts of the African population are still not getting enough iodine in their diets. Our **snapshot analysis** finds that many countries still do not meet sufficient iodine nutrition thresholds, both among the general population (only 25 out of 54 countries) and pregnant women (only nine nations out of 54).

In addition, the surveillance and data infrastructure needed to monitor progress towards achieving iodine sufficiency are weak. Our **snapshot analysis** finds national UIC data for the general population are more than a decade old for 17 African countries, while there are no available data for 22 countries, leaving governments to plan without up-to-date figures **(see Table 2 and Figures 2-4)**. Even more countries (36), however, have not collected routine data on UIC in pregnant women **(see Table 2)**. Of the 18

Figure 2. % of households consuming adequately iodized salt (>15 ppm) meeting WHO target of >90% coverage

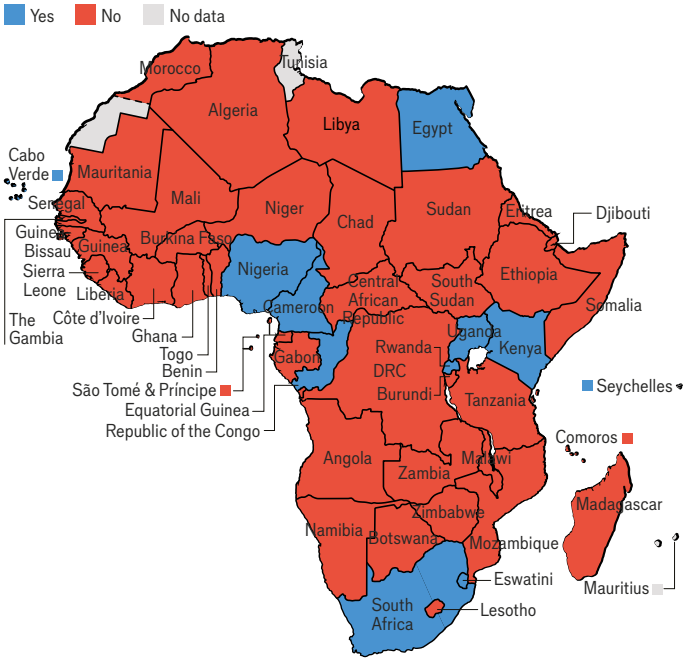


Figure 4. Urinary iodine concentration (UIC) inside WHO target range - Pregnant women ≥150µg/L and <500µg/L

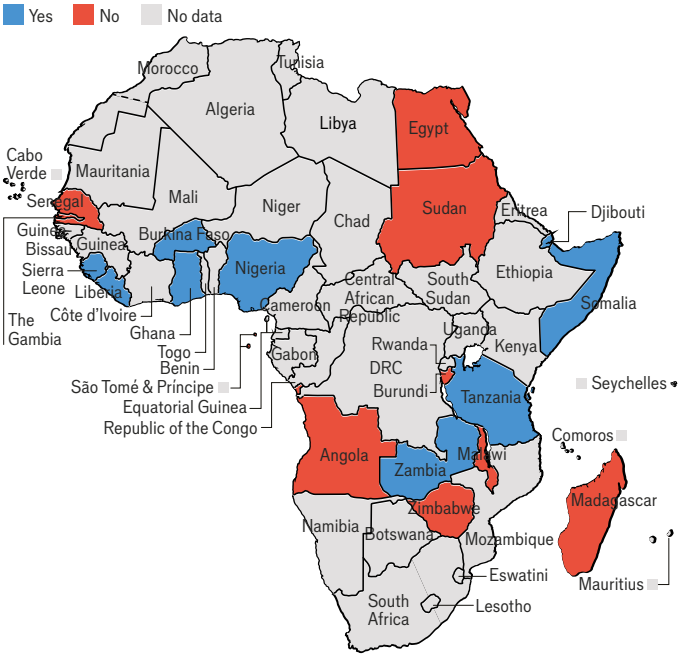
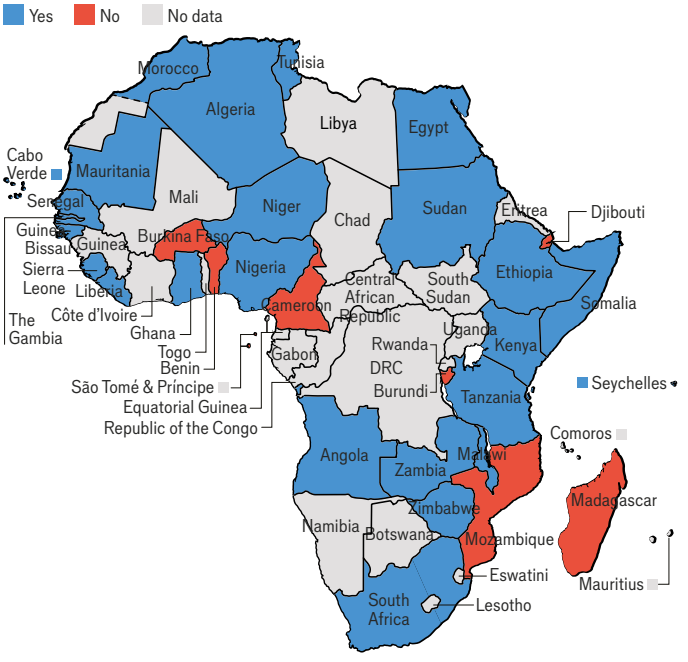


Figure 3. Urinary iodine concentration (UIC) inside WHO target range - General population ≥ 100µg/L and <300µg/L



African countries that have collected data, only eight did so in the last 10 years. Currently, Nigeria, Somalia and Tanzania are the only African countries with data collected in the last 10 years that have reached iodine sufficiency in both their general and pregnant women populations.[89] "There is a lack of national data on urinary iodine concentration in pregnant women in Algeria, with only national data available for school-age children. More data is needed," says Dr Akdader-Oudahmane, who has worked to collect data on iodine status in her country.[90, 91]

Data show that poorer households and rural areas have lower iodine levels, revealing stubborn social and regional gaps.[92] In Sudan, a 2018 national iodine level survey found that, while iodine levels were sufficient overall, five of the 18 states still faced moderate to severe shortfalls.[93]

Despite these challenges, UNICEF renewed its global push for adequate iodine nutrition in 2025.[94] It made recommendations to improve the availability and use of population iodine status data, especially for pregnant women and other vulnerable groups, and for household salt fortification data.[95] It also called on governments to enhance regulatory enforcement of salt iodisation and ensure it is integrated into food systems and nutrition programmes.[96] Without this, Africa may risk reversing decades of progress in preventing iodine deficiency and resulting thyroid diseases.

Table 2. Iodine surveillance in Africa

Y = Yes
N = No
Grey = No data found

Country	% of households consuming adequately iodized salt (>15 ppm) meeting WHO target of >90% coverage?	Urinary iodine concentration (UIC) inside WHO target range - General population? ≥ 100µg/L and <300µg/L	Urinary iodine concentration (UIC) inside WHO target range - Pregnant women? ≥150µg/L and <500µg/L
Algeria	N	Y	
Angola	N	Y	N
Benin	N	N	
Botswana	N		
Burkina Faso	N	N	Y
Burundi	N	N	N
Cameroon	Y	N	
Cape Verde (Cabo Verde)	Y	Y	
Central African Republic	N		
Chad	N		
Comoros	N		
Djibouti	N	N	Y
DR Congo	N		
Egypt	Y	Y	N
Equatorial Guinea	N		
Eritrea	N		
Eswatini	Y		
Ethiopia	N	Y	
Gabon	N		
Gambia	N	Y	N
Ghana	N	Y	Y
Guinea	N		
Guinea-Bissau	N	Y	
Côte d'Ivoire	N		
Kenya	Y	Y	
Lesotho	N		
Liberia	N	Y	Y
Libya	N		
Madagascar	N	N	N
Malawi	N	Y	N
Mali	N		

Table 2. Iodine surveillance in Africa

Y = Yes
N = No
Grey = No data found

Country	% of households consuming adequately iodized salt (>15 ppm) meeting WHO target of >90% coverage?	Urinary iodine concentration (UIC) inside WHO target range - General population? ≥ 100µg/L and <300µg/L	Urinary iodine concentration (UIC) inside WHO target range - Pregnant women? ≥150µg/L and <500µg/L
Mauritania	N	Y	
Mauritius			
Morocco	N	Y	
Mozambique	N	N	
Namibia	N		
Niger	N	Y	
Nigeria	Y	Y	Y
Republic of the Congo	Y		
Rwanda	Y		
São Tomé and Príncipe	N		
Senegal	N	Y	N
Seychelles		Y	
Sierra Leone	N	Y	Y
Somalia	N	Y	Y
South Africa	Y	Y	
South Sudan	N		
Sudan	N	Y	N
Tanzania	N	Y	Y
Togo	N		
Tunisia		Y	
Uganda	Y		
Zambia	N	Y	Y
Zimbabwe	N	Y	N

Source: Economist Impact's snapshot analysis of thyroid and health indicators in Africa (see Appendix).

2. Screening and early identification

Early diagnosis is vital to controlling thyroid disease, particularly for high-risk individuals to prevent irreversible complications, such as neuro-developmental impairment in infants born with congenital hypothyroidism and pregnancy-related complications among women with thyroid dysfunction.[97, 98]

Newborn screening

Universal newborn screening for congenital hypothyroidism ranks among the most established and cost-effective public-health programmes globally.[99, 100, 101] Early detection allows affected infants to be treated promptly with hormonal therapy to ensure normal development and the prevention of irreversible intellectual disability.[102] Since its introduction in the 1970s, newborn screening for congenital hypothyroidism within the first days of life has become routine in almost every high-income and many middle-income countries, with coverage rates at more than 90% in most high-resource settings.[103]

In contrast, most African countries lack general national newborn screening programmes, let alone ones targeted for congenital hypothyroidism.[104, 105]

Our **snapshot analysis** shows that only two countries in Africa, Egypt and the Seychelles, have national newborn screening programmes, both of which include screening for congenital hypothyroidism.

Most experts interviewed for this research want to see newborn screening for congenital hypothyroidism. "Congenital hypothyroidism is the commonest cause of neuro-developmental disability if it is not detected early," says Menbere Kahssay, a paediatric endocrinologist and consultant paediatrician at the Aga Khan University Hospital in Nairobi, Kenya. "I urge governments to bring in a publicly funded neonatal screening programme in Kenya and elsewhere in Africa so that all neonates are screened in the first two weeks of life as this would have a huge impact on a child's intellectual abilities, growth, life chances and their future development."

Most current efforts for newborn screening, including those for congenital hypothyroidism, are typically confined to pilot or research initiatives in tertiary hospitals, often supported by external partners, with few initiatives having been integrated into national health systems **(see Table 3 and Figure 5)**.[106]

"Congenital hypothyroidism is the commonest cause of neuro-developmental disability if it is not detected early."

Menbere Kahssay, a paediatric endocrinologist and consultant paediatrician at the Aga Khan University Hospital in Nairobi, Kenya.

Table 3. Newborn screening programmes for congenital hypothyroidism and sickle cell disease in Africa

Y = Yes
National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket). Usually limited to 1-2 diseases only.
Private = Available at private sector health services, funded through out of pocket payments (including personal private health insurance)
* Last publicly posted information was from 2021. No related government documents were found
Grey = No data found

Country	Congenital hypothyroidism	Sickle cell disease
Algeria	Y (pilot)	
Angola		Y (pilot)
Benin	Y (pilot)	Y (pilot)
Botswana		
Burkina Faso		Y (pilot)
Burundi		Y (pilot)
Cameroon	Y (pilot)	Y (pilot)
Cape Verde (Cabo Verde)		Y (pilot)
Central African Republic		Y (pilot)
Chad		Y (pilot)
Comoros		
Djibouti		
DR Congo		Y (pilot)
Egypt	Y (national)	Y (pilot)
Equatorial Guinea		Y (pilot)
Eritrea		
Eswatini		
Ethiopia	Y (pilot)	
Gabon		Y (pilot)
Gambia		Y (pilot)
Ghana		Y (pilot)
Guinea		
Guinea-Bissau		Y (pilot)
Côte d'Ivoire	Y (pilot)	Y (pilot)
Kenya	Y (pilot & private)	Y (pilot & private)
Lesotho		
Liberia		Y (pilot)
Libya		
Madagascar		
Malawi		Y (pilot)
Mali		Y (pilot)
Mauritania		Y (pilot)

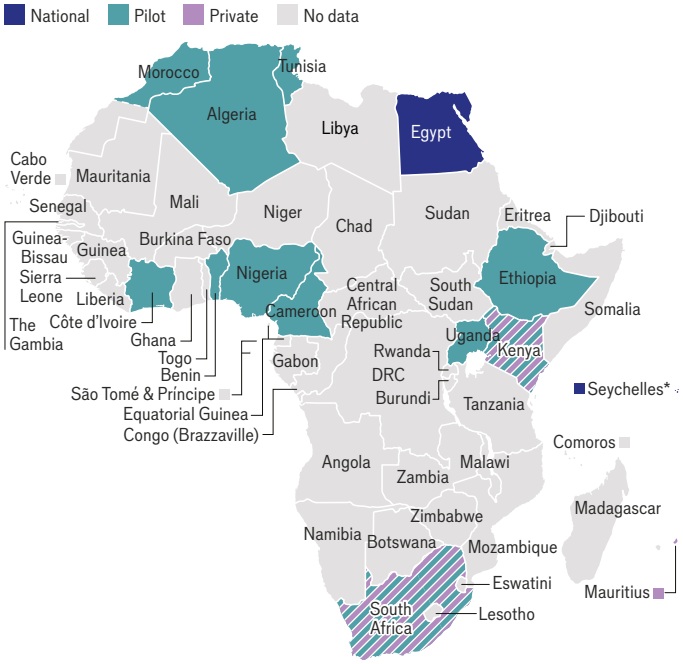
Table 3. Newborn screening programmes for congenital hypothyroidism and sickle cell disease in Africa

Y = Yes
National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket). Usually limited to 1-2 diseases only.
Private = Available at private sector health services, funded through out of pocket payments (including personal private health insurance)
* Last publicly posted information was from 2021. No related government documents were found
Grey = No data found

Country	Congenital hypothyroidism	Sickle cell disease
Mauritius	Y (private)	
Morocco	Y (pilot)	Y (pilot)
Mozambique		
Namibia		Y (pilot)
Niger		Y (pilot)
Nigeria	Y (pilot)	Y (pilot)
Republic of the Congo		Y (pilot)
Rwanda		
São Tomé and Príncipe		
Senegal		Y (pilot)
Seychelles	Y (national)*	Y (national)*
Sierra Leone		Y (pilot)
Somalia		
South Africa	Y (pilot & private)	
South Sudan		
Sudan		
Tanzania		Y (pilot)
Togo		Y (pilot)
Tunisia	Y (pilot)	Y (pilot)
Uganda	Y (pilot)	Y (pilot)
Zambia		Y (pilot)
Zimbabwe		Y (pilot)

Source: Economist Impact's snapshot analysis of thyroid and health indicators in Africa (see Appendix).

Figure 5. Newborn screening programmes for congenital hypothyroidism in Africa



North Africa: models of progress in newborn screening

The most progress toward universal newborn screening in Africa has occurred in the North. In 2000, Egypt initiated its newborn screening programme for congenital hypothyroidism, and in 2021 expanded it to 18 other metabolic diseases—first in public hospitals, followed by private hospitals **(see Box 1)**.[107, 108, 109] In Morocco, the ministry of health drew up a national action plan in 2006 for newborn screening of congenital hypothyroidism, but the programme did not start roll-out until 2012 and was only expanded to the eastern regions in 2024.[110, 111] Promisingly, newborn screening for congenital hypothyroidism has also been placed in Morocco's latest national health framework (*Plan Santé 2025*), with the aim of implementation across the entire country.[112, 113] In 2018, the Tunisian ministry of health, along with the UN Population Fund, recommended the establishment of newborn screening for congenital disorders, including hypothyroidism, as part of its national maternal and neonatal health programme.[114] In 2025, pilot projects for newborn screening for congenital hypothyroidism were set up across five of the 69 provinces in Algeria.[115, 116]

Sub-Saharan Africa: parallel priorities in newborn screening efforts

In sub-Saharan Africa, newborn screening has largely focused on sickle cell disease (SCD), rather than endocrine or metabolic disorders, due to its significant contribution to under-five mortality.[117] Currently, Nigeria, Ghana, Liberia, Tanzania, Uganda, Kenya and Zambia all operate SCD screening pilots under the Consortium on Newborn Screening in Africa (CONSA), which was formed in 2018, with the aim of assessing the effectiveness of newborn screening and early intervention programmes.[118, 119] A number of other countries in the region have also independently established newborn screening pilot programmes for SCD, usually in collaboration with NGOs and private-sector partners **(see Table 3)**. However, congenital hypothyroidism screening remains almost entirely absent from these programmes.

Constraints in implementing and sustaining newborn screening programmes

There are several systemic constraints for implementing newborn screening across Africa. Amid already over-stretched health agendas and resources, many governments continue to prioritise infectious diseases, over congenital or endocrine disorders such as congenital hypothyroidism, within their national maternal and child-health strategies.[120] The absence of political will and binding national frameworks for newborn screening has resulted in dependence on donor funding and fragmented implementation of screening within the wider health system, as well as weak institutional ownership.[121]

Experts are worried that early discharge practices of neonates create a missed screening window. "Many healthy-term babies are discharged in less than 24–48 hours. But newborn screening is ideally done after 72 hours of life. If systems don't actively follow up, many infants miss testing," says Dr Kahssay. "We need simple clinical algorithms and job aids at the point of care (such as maternity wards and

immunisation clinics) so that if a birth discharge is less than 48 hours, then we must collect a dried blood spot now or schedule a clinic visit after 72 hours of life… [We should] use posters and pocket cards for building awareness," she adds.

In addition, logistical challenges such as unreliable dried blood spot transport systems, early postpartum discharge and weak referral pathways, alongside limited laboratory technology, infrastructure and specialised personnel, have been repeatedly cited as major obstacles to establishing, scaling and sustaining newborn screening programmes in African countries.[122, 123, 124]

Dr Kahssay points out: "Some of the main reasons why Africa lacks newborn screening are the perceived costs of screening, lack of central laboratories, competing health priorities and a lack of awareness of health impacts. However, the economic arguments fail as there are higher long-term costs of caring for a child with intellectual and growth disabilities, which also affects the potential productivity of parents in the wider economy."

She notes that dried blood spot programmes require specimen collection, and central labs with validated assays, "but many countries lack sustained lab capacity or funding, which is a challenge". She adds that newborn screening "should be the first priority in neonatal care. The benefits of having the screening programme will also help Africa gain the national datasets it desperately needs".

But other experts see things differently. Among them, Professor Wade says: "The cost-effectiveness of any screening programme needs to be considered before it can be recommended. As yet, we do not have definitive cost-effectiveness data in the context of Africa to justify universal newborn congenital hypothyroidism screening."

Leveraging existing health programmes for newborn screening implementation

To ease these constraints, policymakers should seek ways to integrate newborn screening into existing health programmes. In our **snapshot analysis,** we found that the proportion of newborns who currently have contact with a healthcare provider within two days of birth is high (above 70%) in 25 African countries **(see Table 1)**. One suggestion is to leverage the well-established newborn HIV and immunisation platforms to launch and integrate newborn screening initiatives in African countries.[125, 126] These existing contact points offer practical ways to add newborn screening for congenital hypothyroidism to routine care.

There is also growing regional consensus that supports integrating congenital hypothyroidism screening into existing screening pilot programmes, particularly sickle cell disease, as a cost-effective and pragmatic way to expand coverage, given both conditions can be detected from the same dried blood spot sample.[127, 128] Nigeria has backed this approach, with supporters saying that combining the two conditions would improve child development while using existing infrastructure.[129] Experts at the 5th Global Congress on Sickle Cell Disease in Abuja 2025 have also called on CONSA to add congenital hypothyroidism to sickle cell disease newborn screening programmes.[130]

But some experts believe there is a need for more data before proceeding with such actions. "Some have argued for piggy-backing congenital hypothyroidism newborn screening on the same blood spot being used to screen for sickle cell disease, but there will be a cost associated with it," says Professor Wade. "It is a different assay, with its own cost. We do not do sickle cell disease newborn screening routinely in South Africa because its prevalence is not sufficiently high. Countries will need to have their own data to determine the cost effectiveness of this approach."

Furthermore, multinational collaboration and sharing of health system resources has been shown to be an effective model for newborn screening implementation. The CONSA model has shown how a shared database and protocols along pooled reagent procurement across countries can support newborn screening operations, even in resource-limited settings.[131] Support from existing laboratories and partner countries was seen as vital to building sustainable newborn screening in Qatar, Lebanon and the Philippines.[132]

While universal newborn screening is considered one of the most impactful interventions, the evidence for universal thyroid screening in other at-risk populations, including pregnant women, is evolving.

Working with the private sector can also support newborn screening capacity.[133] In Tanzania, the public Haematology Clinical and Research Laboratory partnered with the private Aga Khan Hospital to process newborn screening samples, and used the private-sector testing revenue to go on to subsidise newborn screening testing in public facilities.[134]

Separately, there have been calls for African countries to set up national newborn screening programmes. On NBS Day 2025, panellists on a webinar (organised by the African Federation of Clinical Chemistry NBS Committee) called on African countries to bring in universal newborn screening (and thereby comply with World Health Assembly resolutions).[135] And back in 2019, the first Pan African Workshop on Newborn Screening stated that: "All countries should endeavour to establish a NBS programme within the context of their national health care system".[136]

Maternal screening

While universal newborn screening is considered one of the most impactful interventions, the evidence for universal thyroid screening in other at-risk populations, including pregnant women, is evolving. Universal maternal thyroid screening in particular remains a subject of ongoing discussion and research, including cost-effectiveness research in Peru, Indonesia and Mexico.[137, 138, 139]

Countries such as Spain, China and Poland have adopted universal testing for all pregnant women; others, however, such as the UK and the US, prefer a targeted, risk-based screening approach.[140, 141, 142] Advocates highlight potential benefits for pregnancy outcomes,[143, 144] and a study from Egypt concluded that thyroid dysfunction screening for pregnant women should be extensively adopted in the country.[145] Independent economic evaluations of universal maternal thyroid screening in high-income contexts, the US and Czechia, have found it to be cost-effective.[146, 147] In countries where there is good attendance of pregnant women at antenatal services **(see Appendix)**, there may be opportunities to integrate maternal screening programmes, but further evidence is required to inform national decision-making.

Not all endocrinologists in Africa are convinced of the merits of maternal screening. Dr Kahssay says Africa's focus should be on implementing newborn screening, given its impact on child development. "For now, however, we can continue with case-by-case maternal screening as needed, depending on individual risk factors or clinical indications, creating more awareness," she says. Similarly, Professor Wade says: "One adult group that could be screened is pregnant women, but this is somewhat controversial. Many professional organisations in high-income countries do not recommend universal screening for thyroid diseases in pregnant women. A preferred approach is to undertake case-finding in

pregnant women at higher risk, such as those with previous thyroid disease, a family history of thyroid dysfunction, autoimmunity or a history of recurrent miscarriages. So, it is rather selective, as opposed to universal screening of all pregnant women." Professor Iraqi concurs that it should be targeted.

However, other experts disagree. Dr Akdader-Oudahmane in Algeria says: "All pregnant women should be monitored for thyroid function before conception and during the first trimester in Algeria. This is to prevent congenital hypothyroidism, miscarriage and disability in newborns." When asked about prioritising maternal screening versus newborn screening in resource-poor countries, Dr Akdader-Oudahmane insists that "both are necessary".

The Nigeria-based patient group TASI thinks more should be done in this area. Founder Ms Ofortube says there should be routine screening of thyroid disease for pregnant women and for couples planning marriage, as well as congenital hypothyroidism newborn screening, as "thyroid disease is so common but often overlooked". She adds: "Thyroid disease screening can be expensive for individuals, so affordability is a challenge. We need centres that can provide screening and ideally it should be free for all or subsidised in partnership with the government to support in the elimination of thyroid disorders, as many people screen for diseases such as HIV and hepatitis before getting married in Africa. I say they should also include thyroid disease."

Dr Akdader-Oudahmane adds that in the public hospital setting in Algeria, the thyroid tests for the pregnant women are free, but they would need to pay for them if undertaken in a private laboratory, but they are "not very expensive at £5".

Targeting other at-risk groups

There are other population groups at risk of thyroid disease, such as older people and those living with autoimmune disorders or other co-morbidities, such as diabetes, cardiovascular disease or HIV; **see "Integration opportunities within care pathways for other chronic diseases"**.

However, guidelines generally do not recommend screening for thyroid dysfunction among asymptomatic adults. Examples include: the US Preventive Services Task Force (which updated its 2015 guide in 2024); the Canadian Task Force on Preventive Health Care (2019); and the UK's National Institute for Health and Care Excellence (2024).[148, 149, 150] Recent guidelines from the European Thyroid

"One of the commonest symptoms of hypothyroidism is fatigue and that can be very non-specific and could be linked to other conditions, especially for older people who may have other co-morbidities."

Alisha Wade, Director of Research in Metabolism and Endocrinology (RIME) at the University of the Witwatersrand, South Africa.

Association and American Thyroid Association are absent on the topic of routine universal thyroid screening of asymptomatic adults.[151, 152] In the UK and Canada, opportunistic case-finding among those with certain additional risk factors (such as those with a history of thyroid disease or treatment) or who have developed clinical symptoms is often recommended instead.[153, 154]

Although older adults are well known to be at increased risk of thyroid disease, they are not considered to be a high-risk group warranting routine screening within most current guidelines if asymptomatic.[155] The most recent exception is the 2012 Clinical Practice Guideline on Hypothyroidism in Adults, resulting from a taskforce co-sponsored by the American Association of Clinical Endocrinologists and the American Thyroid Association, which recommended that screening could be considered in individuals aged over 60.[156] However, this recommendation was subsequently downgraded due to insufficient evidence regarding cost-effectiveness.[157]

In Africa, older adults currently represent a relatively small proportion of their populations. Our **snapshot analysis** shows that, on average, only around 4% of country populations in Africa are aged 65 and above, with Mauritius and Tunisia having the highest proportions at 14% and 10% respectively. However, given the increasing life expectancy in Africa, and that the absolute number of people across the continent aged 60 or over is projected to triple from 46m in 2015 to 147m by 2050, it is likely the incidence of thyroid dysfunction among this age group will increase.[158, 159]

Overlapping symptom profiles between thyroid dysfunction and ageing, however, are contributing to difficulties with diagnosing thyroid disease in older adults. Professor Wade says: "One of the commonest symptoms of hypothyroidism is fatigue and that can be very non-specific and could be linked to other conditions, especially for older people who may have other co-morbidities." This diagnostic challenge is further amplified in menopausal women. Professor Iraqi says: "Healthcare professionals in Africa often fail to consider autoimmune hypothyroidism, such as Hashimoto's disease, especially in women going through menopause. Symptoms and signs such as feeling depressed, [feeling] cold, hair loss, and difficulty losing weight are often mistakenly attributed solely to the menopause. It is important to examine the thyroid gland to correctly diagnose the condition in older women."

The need for better identification practices of thyroid disease among older adults has therefore been highlighted by Professor Wade, who says that, as patients get older, hypothyroidism needs to be kept on the diagnostic differential list, as it is a common condition, and ensure it is not contributing to issues such as cognitive decline.

For these reasons, African countries may want to consider how best to identify and survey thyroid dysfunction in this population within their national health policies, although most have yet to adopt one for ageing.[160]

Professor Wade says there is "considerable controversy" around whether we should screen adults for functional thyroid diseases. "We do not screen as we may for, say diabetes, and essentially, we only evaluate thyroid function in individuals who present with signs and symptoms, which are suggestive of thyroid disorders. We do not screen adults as there are little data to suggest screening improves outcomes."

Overall, given the constrained laboratory capacity and competing public-health priorities in Africa, it is difficult to make any firm policy recommendations for universal screening in these other at-risk groups, including pregnant women and older adults, until more substantial local data and cost-effectiveness evidence become available.[161, 162, 163]

Box 1. The evolution of Egypt's universal newborn screening programme (which went national in 2003)

Egypt operates one of the most comprehensive newborn screening programmes in Africa, with a focus on congenital hypothyroidism at its foundation.[164] It began in the early 2000s, using dried blood spot sampling for thyroid-stimulating hormone testing, where it was piloted by the Ministry of Health and Population in five governorates, before being expanded to all 27 governorates by 2003.[165] By 2009, uptake had reached more than 90%, putting Egypt among the first low- and middle-income countries to bring in national congenital hypothyroidism screening.[166, 167]

Gradually, the newborn screening panel was extended for other diseases: a hospital pilot in 2008 showed how the same dried blood spot cards from the national congenital hypothyroidism newborn screening programme could be used to screen other diseases.[168] Then in 2011, the ministry and PerkinElmer built the world's largest newborn screening laboratory in Cairo, enabling the processing of dried blood spots from more than 4,000 health facilities, with faster testing times and better quality.[169] In 2015, phenylketonuria was added to the panel;[170] after more pilot studies, further conditions, including galactose transferase deficiency and glucose-6-phosphate dehydrogenase deficiency, were added.[171]

In 2021, the programme was further expanded to 19 genetic and metabolic diseases, as part of the broader "100 Million Healthy Lives" Presidential Health Initiative.[172, 173] This started with public hospitals in phase 1 before being rolled out nationally to include university hospitals, private hospitals and healthcare units in phase 2.[174, 175] By 2023, some 297,000 newborns—had been screened as part of this initiative.[176, 177]

Key enablers and lessons:

- **Capitalising on one disease at a few locations first before expanding newborn screening programmes:** In this case, newborn screening for congenital hypothyroidism at a few locations led to its expansion nationally and for screening of other diseases. This illustrates how a focused approach from the start can serve as a gateway for improving country coverage and inclusion of additional congenital disorders in national newborn screening over time.
- **Public-private partnerships to help build capacity:** Partnerships formed between the ministry and private sector were key to the establishment of a central, high-volume laboratory in 2011, enabling capacity for mass dried blood spot processing.
- **Harness existing resources:** Utilising existing newborn screening resources—in this case the dried blood spot cards from national screening for congenital hypothyroidism—can be used to pilot the expansion of newborn screening to other diseases.
- **Political commitment is key:** The alignment of the expanded national newborn screening screening initiative with a national health-campaign "100 Million Healthy Lives" provided high-level visibility and resource mobilisation.

Challenge 2: The need for better management and care, access to testing and therapies, and regional guidelines

1. Gaps in diagnostics, treatment and management

Fragmented and underdeveloped health systems limit thyroid care

The health system infrastructure in Africa remains under-resourced and has historically been largely dependent on donor funding and external aid.[178, 179] This affects the availability of healthcare facilities, such as those needed to provide optimal thyroid care. Our **snapshot analysis** shows that only two countries, Lesotho and South Africa, currently meet the widely accepted domestic government spending target of at least 5% of GDP on health.[180, 181, 182] This means that the remaining 52 African countries are operating below the basic investment level considered necessary to maintain resilient and equitable health systems and achieve universal health coverage. In the lead-up to the 2019 UN General Assembly high-level meeting on universal health coverage, the WHO recommended that countries should start closing this gap by increasing spending on primary healthcare by at least 1%.[183] This is a call that has only grown more urgent given that in 2025, international health aid is projected to drop globally by up to 40% compared with 2023, with the African region expected to be the most affected.[184, 185, 186] This has prompted calls from global leaders, including WHO director-general Tedros Adhanom Ghebreyesus, for African countries to transition away from aid dependency and embrace a new era of self-reliance to strengthen their domestic health systems, or risk reversing hard-won gains in both broader health outcomes and emerging areas such as thyroid care.[187, 188, 189]

Many people still struggle to gain thyroid care, say experts. “Access to thyroid care is very poor in Nigeria,” says Ms Ofortube. “From patients, I have learned that doctors do not have time to address their concerns and there are limited resources available in terms of accessing diagnostics, timely treatment, and monitoring and follow-up. Despite it being a common disorder, it has been left as an orphan disease, which is not right.”

Ms Ofortube adds: “It is crucial to create quality, affordable and equitable access to care while strengthening healthcare infrastructure, including screening and testing sites. Many facilities—particularly surgical departments that perform goitre surgeries—remain poorly equipped, highlighting the urgent need for investment and improvement.”

Professor Iraqi notes that “the cost of an initial diagnosis (TSH, T4, TPO antibodies, thyroid ultrasound) can be significant, ranging from one-third to one-quarter of the minimum monthly salary, posing a major barrier to accessing care.”

> **"It is crucial to create quality, affordable and equitable access to care while strengthening healthcare infrastructure, including screening and testing sites. Many facilities—particularly surgical departments that perform goitre surgeries—remain poorly equipped, highlighting the urgent need for investment and improvement."**
>
> **Iruoma Ofortube**, founder and executive director, Thyroid Awareness and Support Initiative (TASI), Nigeria

Professor Wade says: "Based on anecdotal evidence, there are greater challenges in other parts of sub-Saharan Africa when compared to South Africa regarding how patients access care and get on referral pathways that will allow them to access thyroid therapy."

Specific infrastructure that is lacking includes diagnostic facilities for thyroid disorders, resulting in clinicians often relying on clinical acumen alone to make a diagnosis.[190] Nuclear medicine, for the diagnosis and treatment of thyroid disorders, remains highly underutilised and unavailable in many African settings.[191, 192]

Once diagnosed, many patients in Africa then face barriers to consistent treatment, monitoring and follow-up. In South Africa, only 18% of abnormal TSH results were re-tested or followed up after initial diagnosis, reflecting weak continuity systems. [193] For those living with thyroid cancer, a quality-of-care index study estimated that people residing in Africa received the lowest care compared to other regions in the world.[194]

Inconsistent medication availability is another key barrier to the management of thyroid disease in many African countries. Some experts, such as Professor Wade, believe that publicly funded healthcare systems in Africa should make medications to treat hypothyroidism "free, or minimise their cost as hypothyroidism is a common endocrine disorder and can be easily managed in primary care." In Ethiopia, access to thyroid-dysfunction medicines remains limited, with availability reported in just 28.7% of public pharmacies and 21% of private pharmacies.[195] In Kenya, inconsistent supply of medications in public hospitals has been noted and often results in patients having to purchase thyroid medications out of pocket.[196] Intermittent hormonal medicine shortages have also been observed in some countries, including Morocco.[197] These shortages have been attributed to fragile supply chains and the absence of regional procurement co-ordination.[198, 199] However, some countries' ministries of health have taken steps to address these shortages. For instance, Morocco has made "improving access to medication" one of the key pillars in its Health Plan 2025 strategy.[200] In Ethiopia, thyroid hormones and diagnostic tests have been added to the country's National Essential Medicines List and pooled procurement system since 2020.[201] How effective these have been and will continue to be in addressing the shortages, however, is unclear.

Paying out of pocket to gain care

Costs appear to be a major barrier affecting utilisation and access to **routine diagnostic tests** for the management of thyroid disease. This is a view expressed by experts and from evidence presented in the literature.

"Affordable care is a major issue," says Ms Ofortube. "Most people living with thyroid disorders are poor and have to pay out of pocket in Nigeria to access thyroid care, unless you have private health insurance, as the Nigerian healthcare system does not finance thyroid care, unlike other countries like some parts of Kenya."

Professor Iraqi says: "Pharmacological treatment in Morocco and the Maghreb region is very cheap and affordable for patients. However, affordability is a key challenge in some sub-Saharan African countries."

Professor Wade says: "Patients may live with untreated thyroid conditions in Africa as out-of-pocket healthcare costs can be quite high in parts of the continent. Even a condition like hypothyroidism, which can be relatively easily treated, may not be diagnosed due to limited healthcare access in parts of Africa. Luckily, in a middle-income nation like South Africa, people can access care as we have a publicly funded healthcare system."

She adds: "But even if some elements of care for thyroid conditions are available under a publicly funded system in African nations, there may be high out-of-pocket costs for other elements such as medication, blood tests and other investigations, which can be impediments to accessing optimal care. Even though medication to treat hypothyroidism is not costly, [the term] 'expensive' is relative to what people can afford."

In Kenya, a full thyroid diagnostic panel may exceed KSh 15,000 (US$116)—about a fifth of the average Kenyan's salary, placing it far beyond reach for patients who rely on public health services.[202, 203] In Nigeria, a typical laboratory charges around US$24 for a thyroid function test, which is not feasible for most of the population, given that more than 60% of Nigerians earn less than US$5 per day and live below the poverty line.[204] In Uganda, the uptake of fully government-subsidised tests for thyroid disease is greater than for only partially-subsidised tests, suggesting that cost may affect the utilisation of routine thyroid disease diagnostics.[205] In South Africa, says Professor Wade, patients who access the public healthcare sector can have the necessary investigations and therapy. In the private sector, hypothyroidism is considered a prescribed minimum benefit, and the cost of laboratory investigations and medication is covered by health insurance, she adds.

Costs for thyroid medicines and specialist services are also prohibitively expensive. In Ethiopia, costs for a single course of hormonal treatment were found to be unaffordable, equating to 53 days' worth of wages for the lowest-paid government worker.[206] In Nigeria, about 88% of affected patients could not fully settle their goitre surgical bill until two to seven months after initial hospital attendance.[207] There is also a public-versus-private sector divide in available care. In Kenya, for instance, treatment for Graves' disease has been limited to those able to afford private care.[208] This mirrors broader health-financing patterns across the WHO African Region, where out-of-pocket spending remains one of the main sources of health funding. In 2019, out-of-pocket payments in Africa accounted for more than 25% of health expenditure in 31 countries, 50% in 11 countries and more than 70% in 3 countries.[209] Out-of-pocket expenses restrict comprehensive thyroid care to those able to afford it and deters early diagnosis, resulting in more advanced disease and greater challenges in long-term management.[210]

Geography and patient barriers

Across much of Africa, thyroid diagnostics and specialist services remain concentrated in urban centres. In Morocco, Kenya and The Gambia, distance remains a barrier to thyroid care: rural areas have little access to testing or treatment, and many patients are reluctant to travel to urban centres.[211, 212] In South Africa, public hospitals and

> **"In rural and mountainous areas, there is a pervasive problem where goitres, even large ones, are considered normal by the population because they often cause only aesthetic issues and are covered by scarves."**
>
> **Hinde Iraqi**, professor of endocrinology and metabolic diseases, Ibn Sina University Hospital, Rabat, Morocco, Faculty of Medicine and Pharmacy, Department of Endocrinology, Mohamed V University in Rabat, Morocco

rural areas were found to have limited endocrine services, including specialised physicians, diagnostic resources and management options, compared with private facilities.[213]

Professor Wade points out: "Hypothyroidism is a primary care issue and can be relatively easily managed in primary care. Hyperthyroidism, on the other hand, will often require secondary care and that is when we may see the challenges faced by patients who live in rural areas who need to travel to hospitals in urban areas to access care. If you have a large goitre or thyroid cancer, these need to be managed at secondary or tertiary-level hospitals."

Professor Iraqi says: "In rural and mountainous areas, there is a pervasive problem where goitres, even large ones, are considered normal by the population because they often cause only aesthetic issues and are covered by scarves. Unlike in some sub-Saharan African countries, there is no social stigma associated with goitres in Morocco. Patients in need of surgical removal must travel to regional hospitals, and while public healthcare covers the treatment, patients must still pay for travel costs out of pocket."

Health workforce shortages and a bigger role for primary care

A shortage of skilled professionals remains one of the biggest barriers to thyroid care in Africa. This has led to suggestions that some healthcare professionals, such as those in primary care, could play a larger role in managing conditions such as hypothyroidism.[214] Endocrinology is a scarce sub-specialty across the continent, with ratios far below international norms. Nigeria, for instance, has fewer than 200 endocrinologists—approximately one per 1m people.[215] Kenya reports only around 40 endocrinologists for a population that exceeds 50m—about one per 1.25m people.[216] Similar estimates suggest one per 2.25m people in Ghana and one per 2.9m people in Namibia.[217] This compares with roughly one per 41,000 in the US and one per 45,000 in Australia.[218, 219] There is also a shortage of other specialties that would normally be required for holistic thyroid care, such as surgeons to perform thyroidectomies and cardiologists to

Endocrinology is a scarce sub-specialty across the continent, with ratios far below international norms. Nigeria, for instance, has fewer than 200 endocrinologists—approximately one per 1m people.

manage concurrent cardiovascular disease.[220, 221] Currently there is only one surgeon for every 143,000 people, and one cardiologist for every 600,000 people across the continent.[222, 223] This, coupled with the general shortage of a healthcare workforce across Africa, has implications for advancing thyroid care in the region.[224]

Despite these constraints, promising healthcare professional capacity-building initiatives are emerging. The Paediatric Endocrinology Training Centre for Africa (PETCA) in Kenya, the Paediatric Endocrinology Training Centre for West Africa (PETCWA) and the Paediatric Endocrinology and Diabetology Training in Francophone Africa (PEDAF) all provided formal postgraduate training in paediatric endocrinology.[225] PETCA alone has trained more than 50 fellows from 12 African countries, creating regional centres of excellence and a replicable training model.[226] The Endocrine and Metabolism Society of Nigeria hosts webinars on a range of endocrinology topics to provide continuing education for doctors and healthcare workers.[227] Diabetes Africa has launched a tele-medicine network linking rural primary care physicians in Nigeria to urban endocrinologists.[228] Although currently focused on diabetes, this provides a model for strengthening clinician diagnostic and management capacity in endocrinology.[229] These efforts show potential models for workforce optimisation, training and growth, even amid resource constraints.

Need for locally adapted clinical guidelines

Across Africa, thyroid-disease management is hindered not only by shortages in diagnostics, treatment and personnel, but also by the absence of context-specific clinical guidelines.[230] Without locally adapted disease protocols, physicians often rely on international recommendations or personal judgement, producing inconsistent care and practices that may not be contextually appropriate.[231, 232, 233]

Experts we spoke to advocate for adapting existing international or other regional clinical guidelines. Professor Wade would like to see a "focus on incorporating local data where available and considering cost-effectiveness factors in the respective local contexts." She adds: "Clinical guidelines are important as they build awareness of thyroid diseases among healthcare professionals, and thyroid dysfunction is one of most common endocrine diseases encountered in primary care. We need to consider how well we are training healthcare professionals in Africa—including nurses, who are often at the forefront of the primary healthcare system—to recognise the clinical features of thyroid diseases, which patients are at high risk and need to be screened, and what needs to be done when abnormal test results are identified."

Professor Iraqi says: "There is a need for adaptation of any used international clinical thyroid guidelines, where they are tailored for African healthcare professionals. There is a need to create easy-to-read, one-page documents with charts, emphasising steps for screening and diagnosis, and advising on the minimum necessary tests when cost is a factor."

Several studies have shown varying practices in thyroid care within countries. In Morocco, a 2023 clinician survey found high alignment with international guidelines on initial assessment procedures for thyroid nodules, with 97% ordering an ultrasound and 99% requesting a TSH test.[234] However, follow-up procedures were less consistent with nearly a third of practitioners referring patients with thyroid nodules (identified through ultrasound), for specialist management, despite guidelines recommending malignancy risk assessment first, followed by biopsy if indicated.[235, 236] In Egypt, the use of antibody tests for Graves' disease has been seen to vary from 67.6% to 87%, possibly due to differences in clinical practice within the country.[237]

One barrier to developing contextual clinical practice guidelines is the lack of research, including clinical trials and prevalence studies, on endocrine and metabolic disorders in Africa.[238, 239] Clinicians in Africa therefore rely on findings from trials performed in other regions and international guidelines to inform their decisions, such as the diagnostic reference TSH cut-off value to use in newborn screening tests for congenital hypothyroidism, which has been shown to vary between populations.[240, 241, 242, 243]

Some countries have made attempts to develop their own guidelines. Tunisia has created a locally adapted version of the 2015 American Thyroid Association guideline for differentiated thyroid carcinoma.[244] Newborn screening programmes in Morocco use thresholds based on the national recommendations established by the ministry of health for neonatal congenital hypothyroidism screening protocols.[245]

African professional associations have also taken first steps to develop guidelines. The Society for Endocrinology, Metabolism and Diabetes of South Africa and its sub-group, the Association of Clinical Endocrinologists of South Africa, released the first national guideline for adult hypothyroidism in 2015, which is used for medical education programmes.[246] In 2020, the African Head and Neck Society (with the American Head and Neck Society) published context-appropriate guidelines for thyroid nodules and cancer management in low-resource settings, one of the few thyroid clinical guidelines developed specifically for the region.[247, 248] However, these do not cover all thyroid disorders, and the extent to which they have been adopted in clinical practice remains unclear. Experts from Kenya, Morocco and Nigeria, who participated in an International Round Table on Global Challenges in Thyroid Health held at the 17th International Thyroid Congress, highlighted the need for clinical guideline development to advance thyroid care in African countries.[249]

2. Integration opportunities within care pathways for other chronic diseases

Several chronic diseases have been associated with the increased risk of developing thyroid dysfunction.[250, 251] Among people living with type 2 diabetes in Africa, 17.85% have co-existing thyroid dysfunction, according to one study.[252] HIV infection has also been independently associated with the increased prevalence of thyroid abnormalities in African populations—especially those on highly active antiretroviral therapy, with around 77% of individuals affected.[253] In addition, prevalence of thyroid dysfunction was found to be even higher in individuals living with both HIV and diabetes, compared to those with either diabetes or HIV alone.[254]

Thyroid dysfunction is also a common co-morbidity seen in people living with cardiovascular disease, with a 2022 study reporting a prevalence of 36.8% in those living with heart failure at one Kenyan hospital.[255] Professor Wade says cardiologists "need to be aware of thyroid dysfunction as sometimes they are treating a cardiovascular condition, such as a tachycardia or an abnormal heart rhythm, which may be driven by an underlying thyroid condition." These interactions have consequences as thyroid dysfunction has been associated with worsened outcomes and mortality in those living with co-morbidities.[256]

Despite this burden, thyroid assessment is rarely integrated into existing chronic disease programmes, and opportunities for improved outcomes are often missed for patients already receiving thyroid care.[257, 258]

However, the continent's expanding integrated NCD initiatives offer a timely chance to close this gap. For instance, there were renewed commitments to combat NCDs through prevention and primary healthcare integration at the 4th International Conference on Public Health in Africa in 2025.[259] In the same year, the African Centre for Disease Control launched a programme to strengthen NCD surveillance, workforce development and integration of NCD indicators into health information systems.[260] In addition, the WHO updated its Package of Essential Non-communicable Disease Interventions (PEN-Plus), which was aimed at addressing NCDs through integrated care in the region.[261] Frameworks for implementing integrated care in Africa have also been published.[262] It seems only logical to include thyroid care in these initiatives, so there is comprehensive chronic disease management across the continent.

Challenge 3: The need to improve awareness by healthcare professionals, the public and policymakers

1. Healthcare provider education and public awareness

Provider knowledge of thyroid disorders across settings, health professionals and stages of care in Africa remains sub-optimal.[263] Experts agree there is a need for more healthcare provider education on thyroid disease. Professor Wade in South Africa says: "We need more awareness about thyroid dysfunction as it is one of the most common endocrine diseases. We need to do a better job of teaching medical and nursing students and healthcare professionals in primary and secondary healthcare about the clinical features of thyroid dysfunction, so thyroid tests are performed when indicated."

Paediatric endocrinologist Dr Kahssay in Kenya says: "We need short, modular continuing medical education—online plus in-person—focused on maternity nurses, midwives, paediatricians and general practitioners. Areas that need to be looked at include signs of neonatal congenital hypothyroidism, when to test (within 72 hours), collection technique for dried blood spot and urgent referral pathways."

Professor Iraqi says: "The use of webinars, particularly for primary care, is vital to improve knowledge about thyroid conditions. There is also a need for thyroid specialists to travel to remote, under-served areas to provide face-to-face awareness and guidance for healthcare professionals that may not access webinars."

Poor understanding is seen in many countries. For instance, in Egypt, a survey found that only 52% of family physicians and 30% of general practitioners (GPs) knew the symptoms and signs of hyper and hypothyroidism.[264] In the Democratic Republic of Congo, a survey of physicians (mostly GPs) found that just over half knew how to manage hypothyroidism and hypoparathyroidism after thyroidectomy, and only 5% recognised the role of radiotherapy in thyroid cancer.[265] Similarly in Tanzania, clinicians showed poor understanding of differentiated thyroid cancer and radioactive iodine use.[266] This suggests a need for strengthening continuing medical education for clinicians in endocrinology and nuclear medicine. Among other health professionals, limited awareness of newborn screening for congenital hypothyroidism has been reported in Moroccan midwives,[267] while Namibian nursing students have been shown to lack knowledge and competence in providing post-operative thyroid care.[268]

Public and patient awareness of thyroid health and iodine nutrition remains equally limited. Professor Iraqi points out: "To improve population thyroid health awareness, we need to use social media platforms like Instagram and Facebook to reach patients, as well as ads on TV, radio and in the streets which have been effective for other health campaigns, such as for diabetes and breast cancer."

"We need more awareness about thyroid dysfunction as it is one of the most common endocrine diseases. We need to do a better job of teaching medical and nursing students and healthcare professionals in primary and secondary healthcare about the clinical features of thyroid dysfunction, so thyroid tests are performed when indicated."

Alisha Wade, Director of Research in Metabolism and Endocrinology (RIME) at the University of the Witwatersrand, South Africa.

In Libya and Sudan, knowledge and practices related to an iodine-rich diet and awareness of thyroid function among the general population has been shown to be poor.[269, 270] Similarly in Kenya, the majority of people living with thyroid disease had never heard of the thyroid gland before their diagnosis.[271] In Ethiopia and Madagascar, women (including expectant mothers) were found to lack adequate knowledge or practices regarding iodised salt.[272, 273, 274] Among those living with thyroid disorders, knowledge on the importance of iodine nutrition in relation to their condition has also been shown to be poor. In South Africa, 87% of patients living with hyperthyroidism did not know what iodine was, and 77% were unaware of its dietary sources.[275] Strong cultural spiritual beliefs exist as well, in relation to thyroid disease and its causes.[276] In Nigeria, for instance, 72% of patients living with a goitre attributed their condition to witchcraft **(see Box 2)**.[277]

Programmes to strengthen provider and public health literacy on thyroid health are therefore needed. Improving health provider literacy on thyroid care would align with the WHO's 2025 Political Declaration, which calls on member states to expand the skills and competencies of healthcare workers to deliver integrated NCD prevention, diagnosis and management within primary healthcare.[278] However, there have so far been limited educational programmes in Africa to demonstrate this. In Egypt, a functional thyroid disorders training programme for nurses working with older people significantly increased their competency scores.[279] Also in Egypt, a short educational module on the diagnosis and management of common thyroid disorders almost doubled the mean knowledge score for family physicians, GPs and internists.[280]

Education interventions for groups at high risk of thyroid disease have been shown to be

effective in improving knowledge and practices. A community-based nutrition education intervention in Ethiopia was shown to improve the awareness and use of iodised salt in women of reproductive age.[281] Similarly, in Egypt, interactive educational interventions were found to be effective in improving pregnant women's knowledge, attitudes and dietary practices related to iodine deficiency.[282] Limited studies have looked at the effectiveness of educating patients living with thyroid disease in Africa in improving their knowledge and practices. One study from Egypt found an mHealth application to be effective in improving disease knowledge, self-management and quality of life among people living with hypothyroidism.[283] Together, these examples show how even small, well-structured education initiatives can produce measurable gains in thyroid health literacy and practices.

2. Towards a regional Africa Thyroid Association

Disease-specific professional bodies are essential for research, education, registry formation and surveillance, guideline development, policy co-ordination and health system transformation.[284, 285, 286, 287] Currently, Africa remains the only continent without a unified thyroid association.[288] Across Africa, professional associations related to thyroid disease are limited to a handful of national bodies and regional collectives, often under the broader umbrella of endocrinology and metabolic disorders **(see the Appendix)**.

Experts such as Professor Wade support the creation of a regional Africa Thyroid Association if it has clear, achievable objectives and a pathway to sustainability. "Objectives might be, for example, to share best practices among healthcare practitioners or advocate for free thyroid hormone replacement. The situation in each country is different, however, and this would need to be kept in mind."

Professor Iraqi says: "A first step should be to establish stronger national associations and then, as a second step, proceed with an Africa Thyroid Association involving willing representatives from different countries to account for cultural context and local misinformation."

Patient groups are also supportive. "It is absolutely imperative that we create a regional Africa Thyroid Association as it will help us to make a better push with policymakers and help raise funding for care and management, bringing the attention of medical experts," says Ms Ofortube. "It would also help build more confidence in the medical field to recognise these conditions and it helps set up for the future fight against thyroid disease."

In Egypt, the Egyptian Thyroid Association and the Alexandria Thyroid Association have been among the most active thyroid-specific national bodies on the continent, organising regular conferences and conducting research on thyroid disorders.[289, 290] Other active national thyroid associations in Africa include the Thyroid Care Association of Nigeria, which conducts community outreach and public awareness events on thyroid health in collaboration with patient groups.[291, 292]

At a regional level, the recently formed Arab Thyroid Association (ArTA) and Middle East North Africa Thyroid Oncology Collaborative have created a professional bridge for thyroid health across North African and Middle Eastern countries.[293, 294] ArTA in particular has made significant strides in advancing co-operation and thyroid care in the region.[295] However, its remit only includes a few North African countries and extends to other continents, so does not specifically address thyroid health issues across the whole of Africa.

General endocrine professional associations also exist at the wider continental level with the Pan-African Federation of Endocrine Societies and the African Society of Endocrinology, Metabolism Nutrition; the latter body hosted a biannual congress, which in 2022 included a workshop covering aspects of thyroid health.[296, 297] Both have improved continental networking within endocrinology, but there are very few thyroid-specific programmes and activities.The African Head and Neck Society also exists at the continental level. Its work on thyroid health, however, has mostly been limited to thyroid nodules and cancer, supporting the development of clinical guidelines for the African region.[298] The Association Francophone de Thyroïdologie, which aims to promote French-speaking thyroidology and knowledge-sharing among thyroid care providers, has initiated meetings with local practitioners and institutions in francophone North African countries and has been formally welcomed by the Moroccan Society of Endocrinology and Diabetology.[299] Although these associations all confirm growing professional connectivity on thyroid health across Africa, there remains an absence of a unifying body focused on the full spectrum of thyroid health and disease.

Professor Wade believes: "We need to take more advantage of occasions such as World Thyroid Day to conduct public awareness campaigns. We need to be strategic about our areas of focus: congenital hypothyroidism, for example, may be a good entry point because of Africa's focus on maternal and child health. We also need to lobby for mandatory salt iodisation, which is a straightforward and proven public health intervention. These could also be initiatives spearheaded by an Africa regional thyroid association."

The need for a dedicated thyroid association for Africa was recognised in a study published in September 2024, in which the current absence of a regional African thyroid disorder registry was noted.[300] The creation of an Africa Thyroid Association was also proposed by regional experts at a side event of the 17th International Thyroid Congress in 2025.[301] An Africa Thyroid Association would bring professionals together and lay the groundwork for improving thyroid health across the region.

3. The role of patient advocacy and community groups

Patient and community advocacy groups are increasingly recognised as powerful forces in improving disease awareness, supporting access to care, shaping priorities and bridging the gap between communities, clinicians and policymakers.[302, 303] Although North African countries seem to be making progress on congenital hypothyroidism and newborn screening, they face a number of challenges in forming thyroid patient groups and civil society organisations.[304] Sub-Saharan Africa, on the other hand, has made much greater progress in this area.

"My patient group is committed to improving awareness of thyroid disease, which remains critically low, even though it is rated the second most common endocrine disorder in Nigeria," says Ms Ofortube of TASI. "Our goal is to create a supportive and safe environment that encourages open dialogue, learning, timely diagnosis and advocacy for comprehensive, empathetic care."

TASI wants to break the silence surrounding the disease. "Millions are affected—especially women, who often face stigma and even rejection due to cultural beliefs and myths that associate goitres with curses, witchcraft or spiritual attacks," Ms Ofortube explains. "Many women experience isolation, domestic abuse or loss of employment because of these harmful superstitions, which undermine their economic empowerment."

She adds: "Some women withdraw completely from society, while others hide under hijabs or scarves to be accepted. We must emphasise that thyroid disease is not a death sentence. Women must come forward, get diagnosed and receive care. Together, we can change the narrative and restore dignity, hope and inclusion for all those living with thyroid disorders." **(see Box 2)**.

Professor Wade believes thyroid patient groups and civil society can have transformative power to make change. "I do not think we would have the HIV/AIDS policy we have today in South Africa if it was not for the strong civil society movement which brought awareness to the lack of access to HIV/AIDS care," she says. Thyroid patient groups are more active in some African countries than in others, she notes, and this could reflect disparities in access to care, with more advocacy in countries with less access.

Morocco lacks a properly organised patient group, aside from social media groups such as WhatsApp and Facebook, according to Professor Iraqi. "Patient groups are vital for advocacy to the ministry of health, but also for providing support and sharing experiences among patients, thereby improving quality of life," she says "They also play a crucial role in challenging misinformation, such as the false beliefs that hypothyroidism prevents pregnancy."

According to our snapshot analysis, there are ten patient groups across seven countries in Africa that focus on thyroid diseases (see Table 4). Some are members of the Thyroid Federation International (TFI), a global network of patient bodies, which helps strengthen organisational capacity and exchange ideas on the disease.[305] Some patient groups in Africa operate independently from this body, but share a common mission of awareness, support and advocacy.

A core role of these groups is to expand public awareness and understanding of thyroid disease and preventative measures and to encourage early care and testing.[306] Some groups hold in-person educational events to directly engage with local communities. For example, to reach rural areas in Nigeria, TASI builds awareness by going on road campaigns and visiting markets to explain that "thyroid disease is not witchcraft". Ms Ofortube says: "We educate the community and train community health officials on thyroid health, prevention and management. We host outreaches in collaboration with primary healthcare boards to be able to penetrate the communities."

Another group in Nigeria, the Layi Erogbogbo Foundation, has organised #CheckYourNeck secondary school tours in Lagos, hospital visits with goitre patients and visits with socioeconomically disadvantaged groups to provide educational sessions and create awareness around thyroid health.[307, 308] The Thyroid Ghana Foundation organised a number of awareness and educational activities at the Eastern Regional Hospital in Koforidua for International Thyroid Awareness Week 2024, including float parades and live talks by endocrinologists.[309] Its team also pays regular visits to endocrine and surgical clinics to educate patients on the lifestyle changes needed to manage their conditions.[310]

Alongside in-person events, patient groups provide information and support,[311] many via online social media platforms such as Facebook, WhatsApp and Instagram **(see Table 4)**. The Thyroid Disease Awareness Kenya Foundation, Thyroid Ghana Foundation, Goldheart Thyroid Awareness Foundation and Thyroid Support Network Zimbabwe all operate WhatsApp peer support groups to offer the community real-time access to support.[312, 313, 314, 315] The Thyroid Ghana Foundation also hosts structured patient forums, linking individuals to specialists.[316]

Patient groups have also been able to provide access to care through collaborations with partner organisations. Both the Thyroid Disease

"Patient groups are vital for advocacy to the ministry of health, but also for providing support and sharing experiences among patients, thereby improving quality of life."

Hinde Iraqi, professor of endocrinology and metabolic diseases, Ibn Sina University Hospital, Rabat, Morocco, Faculty of Medicine and Pharmacy, Department of Endocrinology, Mohamed V University in Rabat, Morocco

Box 2. Stigma, goitres and economic empowerment: the story of two women in Nigeria

A 33-year-old Nigerian woman, who had been living with thyroid disease and a large goitre for nine years, struggled for years to secure employment. After every interview, she heard the same dismissive response once the employer had seen her condition: "Go madam, look after yourself." Her situation worsened as her illness triggered domestic abuse from her husband, and discrimination and stigma from the society. Through the support of the patient group, the Thyroid Awareness and Support Initiative (TASI) in Nigeria, she received surgery to remove the goitre.Within two weeks of recovery, she secured a job as an administrator — a transformation that restored her dignity and financial independence.

In another case, a woman in her thirties, who sold vegetables in the market, was heavily stigmatised because of her visible goitre. Customers avoided her stall, and her husband eventually abandoned her and their five children when she became too unwell to continue as the family's breadwinner. The financial burden became overwhelming. When her case reached TASI, it mobilised funding for her surgery. After her recovery, TASI's board of trustees gave her a business grant to restart her life.

"Today, she is financially independent, her children are in school, and she is no longer a burden to anyone — a powerful reminder of what timely care and support can achieve," says TASI founder and executive director Iruoma Ofortube. "We provide moral support, psychosocial care, counselling and economic empowerment to people living with thyroid diseases. For many women, empowerment is not optional — it is a lifeline. Above all, we urge society: Do not stigmatise her."

Source: Interview with TASI

Awareness Kenya Foundation and Thyroid Ghana Foundation have organised subsidised and free screening in association with local healthcare partners.[317, 318, 319] In Nigeria, TASI mobilises funds and support from individual donors, corporate bodies and philanthropists to finance thyroid surgery through its Adopt-a-Patient scheme.[320] Through collaborations with healthcare professionals (including endocrinologists, cardiologists, surgeons, paediatricians and gynaecologists), TASI is able to provide care at discounted rates for patients, says Ms Ofortube. Similarly, the Thyroid Ghana Foundation has joined with the University of Ghana Medical Centre to provide thyroidectomies at reduced cost since 2021.[321, 322] The Thyroid Disease Awareness Kenya Foundation has formed partnerships with endocrinologists, labs and hospitals to link patients to specialist care, including tele-consultation.[323]

Alongside patient support, many bodies have used broadcast media to boost reach. Organisations in Ghana, Kenya and Nigeria all host YouTube channels offering patient stories, educational talks and awareness content **(see Table 4)**. The Thyroid Ghana Foundation and two bodies in Nigeria, the Goldheart Thyroid Awareness Foundation and the Adedokun Rebecca Omolola Foundation, have used local radio and TV stations to broadcast awareness messages to maximise audience coverage, particularly for rural areas.[324, 325] In Nigeria, leaders from Thyroid Awareness and Support Initiative and the Layi Erogbogbo Foundation have undertaken interviews with major media bodies such as the BBC and CNBC to highlight the reach of patient groups in mainstreaming discussions on thyroid health.[326, 327] Media channels function as critical tools for engaging a wide audience and delivering health education to the public.[328]

Patient groups also play a key role in cultivating partnerships with key stakeholders, including ministries of health, universities, hospitals, laboratories, other NGOs and philanthropy partners.[329] Many groups, including Association des Malades de la Thyroïdes de Cote d'Ivoire and the Thyroid Awareness and Support Initiative (Nigeria), participate in endocrine and thyroid congresses, both regionally and globally, as they look to continue expanding their networks.[330] In Senegal, the ministry of health spoke publicly about consolidating their relationship with patient group Association Sénégalaise des Malades de la Thyroïde.[331] This coincided with the ministry's commitment to including thyroid disease on its NCD agenda, therefore leaving the group well placed to drive the political will to formalise this agenda.[332]

Beyond patient groups, faith-based organisations may also play an important role in strengthening thyroid health across the region. Predominantly affiliated with either Islam or Christianity, the two

most widely practiced religions in Africa, these organisations have become major healthcare providers, delivering an estimated 30-70% of health services in many countries, particularly in rural and under-served areas.[333, 334] Faith-based organisations also benefit from high levels of community trust and access, potentially positioning them as effective partners for expanding awareness of thyroid health and improving access to thyroid care across the continent.[335, 336, 337]

Ultimately, patient and community groups, as well as faith-based organisations, are strongly placed to strengthen thyroid health in Africa by cultivating partnerships, driving awareness, fostering peer support, expanding access to care and shaping national and regional health agendas. As policies evolve, engaging these bodies in the design and delivery of thyroid health initiatives will be essential to ensure interventions remain community-centred and responsive to patient needs.

Table 4. Thyroid patient groups in Africa

Y = Yes; N=No

Grey= No data found

					Media platforms utilised				
Country	Patient organisation	Acronym	Founded	Member of Thyroid Federation International?	WhatsApp patient group	Website	Facebook	Instagram	YouTube
Cote d'Ivoire	Association des Malades de la Thyroide de Cote d'Ivoire	AMT-CI	2000	Y					
Ghana	Thyroid Ghana Foundation	TGF	2018	Y	Y	Y	Y	Y	Y
Kenya	Thyroid Disease Awareness Kenya Foundation	TDAK	2017	Y	Y	Y	Y	Y	Y
Nigeria	Adedokun Rebecca Omolola Foundation	ARO	2025	Y			Y	Y	
	Thyroid Awareness and Support Initiative	TASI	2017	Y		Y	Y	Y	Y
	Goldheart Thyroid Awareness Foundation	GTAF	2019	Y	Y		Y	Y	
	Layi Erogbogbo Foundation	LEF	2018	N			Y	Y	Y
Senegal	Association Senegalaise des Malades de la Thyroïde	ASMAT	2014	Y		Y			
South Africa	Thyroid Wellness Organisation of South Africa	TWOSA		N			Y		
Zimbabwe	Thyroid Support Network Zimbabwe	TSNZ		N	Y		Y		

Source: Economist Impact's snapshot analysis of thyroid and health indicators in Africa (see Appendix). Information on media platforms available from their respective patient groups.

4. Recognising thyroid disease as a non-communicable disease

Currently, the WHO defines its NCD priorities around five key diseases and their shared risk factors: cardiovascular disease, cancer, diabetes, chronic respiratory disease and, most recently, mental health.[338] Despite its high prevalence, economic and social impacts, and close links and shared risk factors with these other NCDs, thyroid disease remains completely absent from this agenda.[339] As such, thyroid diseases are left off most global monitoring, research, funding and policy NCD agendas.[340]

Recognising this, patient groups and professional associations globally have called for the formal recognition of thyroid disorders as NCDs.

Ms Ofortube says: "The WHO should add thyroid disease to its NCD list as at the moment the job is only half done. These conditions particularly affect women, including pregnant women, and diagnosis is often delayed and often thyroid is exacerbating other pre-existing NCDs." Its inclusion could nudge the African continent to introduce newborn screening for congenital hypothyroidism, says Dr Kahssay.

Since 2012, the advisory board of the World Thyroid Federation has urged the WHO to classify thyroid diseases within its priority NCD grouping to strengthen prevention and management.[341] This appeal has been echoed in recent years by the European Society of Endocrinology and the European Thyroid Association, who jointly petitioned the European Commission in 2021 to adopt thyroid disease as a priority NCD.[342] The global NCD Alliance's 2021 Leave No One Behind policy brief also highlights the need to address marginalised NCDs, including thyroid disorders.[343] In 2025, for the second consecutive time, the theme for World Thyroid Day also focused on NCDs, calling

"The WHO should add thyroid disease to its NCD list as at the moment the job is only half done. These conditions particularly affect women, including pregnant women, and diagnosis is often delayed and often thyroid is exacerbating other pre-existing NCDs."

Iruoma Ofortube, a thyroid disease survivor who founded a patient group in Nigeria called Thyroid Awareness and Support Initiative (TASI)

for thyroid disease to be included in NCD health policies programmes, as well as for universal newborn screening for congenital hypothyroidism.[344] At the 2025 World Health Summit, Ashok Bhaseen, president of TFI, participated in a side event discussing the need for thyroid conditions to be included as an important group of NCDs.[345]

These global calls are being echoed across Africa. On World Thyroid Day 2025, the East, Central and Southern Africa Health Community urged member states to integrate thyroid health into national NCD prevention, screening and treatment programmes.[346] Thyroid patient groups in Africa are also taking steps to advocate for this, with Thyroid Disease Awareness Kenya (TDAK) putting out a call for the inclusion of thyroid disorders into national NCD strategies.[347]

Despite these ongoing calls, the recent 2025 WHO Political Declaration at the fourth UN General Assembly high-level meeting on NCDs and mental health still did not explicitly acknowledge thyroid conditions.[348] In December 2025, the WHO adopted its most comprehensive approach on NCDs to date, broadening its global NCD agenda beyond the traditional five diseases towards an integrated approach that spans a wider range of NCDs.[349] Despite this expanded framing, however, thyroid diseases were not explicitly recognised, leaving them at continued risk of exclusion.[350] At a country level, some progress has been made towards advancing this agenda. Ethiopia's National Strategic Plan for the Prevention and Control of Major NCDs (2018-2025) explicitly mentions the importance of thyroid diseases.[351] In 2024, Algeria took a landmark step in officially recognising congenital hypothyroidism as a rare disease within its national legislature, thus requiring a national plan to be implemented.[352, 353] Most recently in 2025, Senegal's ministry of health publicly committed to integrating thyroid diseases into its NCD plan.[354]

Furthermore, recognition can trigger improved access to care and its reimbursement. For instance, Professor Iraqi recommends that the Moroccan government officially recognises thyroid disease as a chronic condition (the exception is for thyroid cancer, which is recognised). "If thyroid disease were recognised as chronic, it would trigger programmes in the ministry of health, which would resolve issues around affordability and care," she says. A lack of recognition means reimbursement is limited to 70% rather than the 90-100% offered for listed chronic conditions, she adds.

These demonstrations of political will suggest a growing momentum towards ensuring thyroid health is no longer left behind in the continent's NCD priorities. However, to sustain this momentum and address the gaps, governments, donors and international health agencies must take the next step towards formally integrating thyroid disease into all global and national NCD frameworks. This will ensure it receives the same priority, protection and investment as other chronic diseases.[355]

Conclusion and policy takeaways

Africa carries a substantial burden of iodine deficiency and related thyroid disorders, yet these conditions continue to sit on the margins of health surveillance, policy attention and service delivery. Although many countries have made some progress towards improving thyroid health in the region, significant gaps in prevention, diagnosis and long-term care remain. Our research highlights several priorities to help African countries take ownership and speed up progress on thyroid health.

- **Renewed efforts are needed for primary prevention, neonatal screening and targeted maternal and adult care.** Africa's fight against iodine deficiency needs stronger prevention through better policy, monitoring and awareness. Most countries require salt iodisation, yet only ten of 54 meet the WHO's household iodised salt coverage targets, and only 25 nations meet urinary iodine levels that are deemed sufficient by the WHO for the general population. Renewed efforts are needed to ensure progress on national newborn screening for congenital hypothyroidism, as currently it exists only in Egypt and the Seychelles, while most rely on small pilot schemes or private tests. There is also a need to consider at-risk populations, such as pregnant women, newborn babies and older adults, are assessed for thyroid conditions so that their health is optimised.
- **Fund robust data collection and research on thyroid disease.** Strengthen the evidence base. Countries should conduct up-to-date national urinary iodine surveys, with dedicated data on pregnant women, and prioritise research on thyroid-disease prevalence, risk factors, co-morbidities and economic burden, as well as the cost-effectiveness of interventions. Building capacity for locally led clinical trials is vital to inform policy and guideline development.
- **Invest in improving access to thyroid care and make it affordable and equitable.** Chronic health system under-investment, limited diagnostics, inconsistent medicine supply, weak referral systems and concentration of services in urban and private facilities lead to delayed diagnosis and advanced disease. High out-of-pocket costs for diagnostics, lifelong medication and surgery, alongside severe shortages of specialists, have created major barriers to effective and equitable thyroid care.
- **Strengthen regional governance and national stewardship.** Some national and regional endocrine professional bodies exist and have made steps to advance training and develop local guidelines for thyroid health. However, Africa remains the only continent without a dedicated regional thyroid association. Establishing an Africa Thyroid Association would enable co-ordinated research, guideline development, workforce-strengthening and policymaker engagement across the continent.
- **Boost awareness and advocacy initiatives and partner with community and patient groups.** Thyroid disease is largely absent from NCD agendas, resulting in low visibility and limited investment. Both provider and public awareness of thyroid health remain poor. Patient groups are largely driving thyroid

disease awareness and advocacy initiatives. Faith-based organisations contribute significantly to the health sector in Africa and foster community trust. Governments, clinicians and development partners should formally collaborate with these groups for future thyroid health policy and programme development.

- **Drive integration and initiate partnerships to offer major opportunities.** Existing and emerging primary healthcare services, chronic disease programmes (such as cardiovascular and HIV), newborn screening initiatives and postnatal contact points with health providers can be leveraged to integrate thyroid assessment, CH screening and long-term management. Public-private partnerships and multi-country collaborations for shared laboratory networks, pooled procurement and joint clinical protocols can help to expand access while maximising scarce resources.

Addressing the focus areas identified in this research, alongside increasing government spending on national health systems, will be essential to ensure that progress on thyroid health continues to move forward rather than fall further behind.

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Abbreviations

AIDS	Acquired immunodeficiency syndrome
BBC	British Broadcasting Corporation
CDC	Centres for Disease Control and Prevention
CH	Congenital hypothyroidism
CNBC	Consumer News and Business Channel
CONSA	Consortium on Newborn Screening in Africa
GDP	Gross domestic product
HIV	Human immunodeficiency virus
KSh	Kenyan shilling(s)
NBS	Newborn screening
NCD	Non-communicable disease
NGO	Non-governmental organisations
PETCA	Paediatric Endocrinology Training Centre for Africa
SCD	Sickle cell disease
TFI	Thyroid Federation International
UIC	Urinary iodine concentration
UNICEF	United Nations Children's Fund
USI	Universal salt iodisation
WHO	World Health Organisation

Appendix

Background indicators									
GREY = No data found									
		Note on methodology: For this snapshot analysis, the standardised indicators included are based on validated data from their original single source e.g WHO, UNICEF, World Bank. All other data collected is based on rapid evidence review using targeted keyword searches, and is therefore not exhaustive.							
		Economics & Financing		Maternal & Child Health			Older Adults		
Country		**GDP (US$, millions)**	**Domestic general government health expenditure (2022/23, % of GDP)** **BLUE = >5% of GDP target [Ref: 2,4]**	**% of women (aged 15-49 years) attending antenatal care visits at least 4 times during pregnancy by any provider (%)** **BLUE = >70%**	**% of newborns who had postnatal contact with a health provider within 2 days of delivery** **BLUE = ≥70%**	**Number of newborn births each year (2023)**	**Total population ages 65 and above (2024)**	**% of population aged 65 and above (2024)**	**Life expectancy at birth (2023)**
	Refs:	1	2,3,4	5,6	7,8	9	10	11	12
Algeria		269,322	1.72		91.5	905,981	3,081,417	7	76
Angola		100,998	1.51		20.9	1,381,370	1,080,664	3	65
Benin		21,482	0.52	52.6	77.1	478,062	450,969	3	61
Botswana		19,402	4.30			61,294	101,750	4	69
Burkina Faso		23,124	2.72		78.3	728,612	624,460	3	61
Burundi		3,082	1.59		49.4	460,882	355,663	3	64
Cameroon		53,296	0.67		60.4	957,392	813,950	3	64
Cape Verde		2,725	4.28		91.1	6,440	35,997	7	76
Central African Republic		2,751	1.59		58.6	238,858	114,667	2	57
Chad		19,518	1.01		27.0	819,054	426,391	2	55
Comoros		1,440	0.87	64.3	90.8	24,366	38,757	4	67

Background indicators									
GREY = No data found									
		Note on methodology: For this snapshot analysis, the standardised indicators included are based on validated data from their original single source e.g WHO, UNICEF, World Bank. All other data collected is based on rapid evidence review using targeted keyword searches, and is therefore not exhaustive.							
		Economics & Financing		Maternal & Child Health			Older Adults		
Country		**GDP (US$, millions)**	**Domestic general government health expenditure (2022/23, % of GDP)** **BLUE = >5% of GDP target [Ref: 2,4]**	**% of women (aged 15-49 years) attending antenatal care visits at least 4 times during pregnancy by any provider (%)** **BLUE = >70%**	**% of newborns who had postnatal contact with a health provider within 2 days of delivery** **BLUE = ≥70%**	**Number of newborn births each year (2023)**	**Total population ages 65 and above (2024)**	**% of population aged 65 and above (2024)**	**Life expectancy at birth (2023)**
	Refs:	1	2,3,4	5,6	7,8	9	10	11	12
Djibouti		4,152	1.03			23,946	56,692	5	66
DR Congo		70,962	0.70		56.5	4,369,683	3,360,877	3	62
Egypt		389,059	1.78		76.6	2,405,717	5,962,442	5	72
Equatorial Guinea		12,765	0.76			54,694	69,794	4	64
Eritrea		2,065	0.90			99,058	148,597	4	69
Eswatini		4,858	3.24	73.5	90.3	29,622	52,969	4	64
Ethiopia		149,740	0.72		34.5	4,105,685	4,265,510	3	67
Gabon		20,895	1.83		78.4	68,745	103,654	4	68
Gambia		2,404	1.52		83.4	82,092	84,959	3	66
Ghana		82,308	2.05	87.8	86.9	888,947	1,276,683	4	65
Guinea		25,008	0.73		42.8	487,595	509,795	3	61
Guinea-Bissau		2,218	1.10		57.0	64,679	70,264	3	64

Background indicators									
GREY = No data found									
		Note on methodology: For this snapshot analysis, the standardised indicators included are based on validated data from their original single source e.g WHO, UNICEF, World Bank. All other data collected is based on rapid evidence review using targeted keyword searches, and is therefore not exhaustive.							
		Economics & Financing		Maternal & Child Health			Older Adults		
Country		**GDP (US$, millions)**	**Domestic general government health expenditure (2022/23, % of GDP)** **BLUE = >5% of GDP target [Ref: 2,4]**	**% of women (aged 15-49 years) attending antenatal care visits at least 4 times during pregnancy by any provider (%)** **BLUE = >70%**	**% of newborns who had postnatal contact with a health provider within 2 days of delivery** **BLUE = ≥70%**	**Number of newborn births each year (2023)**	**Total population ages 65 and above (2024)**	**% of population aged 65 and above (2024)**	**Life expectancy at birth (2023)**
	Refs:	1	2,3,4	5,6	7,8	9	10	11	12
Côte d'Ivoire		87,113	1.34		72.2	997,001	833,154	3	62
Kenya		120,339	2.02	66.0	82.6	1,499,998	1,673,896	3	64
Lesotho		2,271	6.41	81.9	82.3	55,728	90,141	4	57
Liberia		4,779	1.29	83.8	75.6	170,065	185,504	3	62
Libya		48,487	3.15			124,371	370,468	5	69
Madagascar		17,420	0.94		44.7	1,001,244	1,088,456	3	64
Malawi		11,316	0.88		88.4	662,289	560,032	3	67
Mali		26,794	1.43	51.3	54.3	951,445	583,574	2	60
Mauritania		10,908	1.76		40.0	172,885	166,889	3	68
Mauritius		14,937	2.75			11,804	166,889	14	73
Morocco		160,610	2.32			629,832	3,099,294	8	75
Mozambique		22,745	2.71	48.6	40.9	1,260,855	953,670	3	64

Background indicators									
GREY = No data found									
		Note on methodology: For this snapshot analysis, the standardised indicators included are based on validated data from their original single source e.g WHO, UNICEF, World Bank. All other data collected is based on rapid evidence review using targeted keyword searches, and is therefore not exhaustive.							
		Economics & Financing		Maternal & Child Health			Older Adults		
Country		**GDP (US$, millions)**	**Domestic general government health expenditure (2022/23, % of GDP)** **BLUE = >5% of GDP target [Ref: 2,4]**	**% of women (aged 15-49 years) attending antenatal care visits at least 4 times during pregnancy by any provider (%)** **BLUE = >70%**	**% of newborns who had postnatal contact with a health provider within 2 days of delivery** **BLUE = ≥70%**	**Number of newborn births each year (2023)**	**Total population ages 65 and above (2024)**	**% of population aged 65 and above (2024)**	**Life expectancy at birth (2023)**
	Refs:	1	2,3,4	5,6	7,8	9	10	11	12
Namibia		13,372	4.24		19.9	76,715	111,295	4	67
Niger		19,876	1.54		33.9	1,095,892	701,324	3	61
Nigeria		252,261	0.62	52.4	62.4	7,509,758	7,093,611	3	54
Republic of the Congo		15,719	0.81		86	189,365	189,077	3	66
Rwanda		14,251	2.81		74.8	395,578	559,723	4	68
São Tomé and Príncipe		822	4.12		92.3	6,507	9,186	4	70
Senegal		32,808	0.90	68.4	81.4	531,890	669,350	4	69
Seychelles		2,167	3.13			1,744	10,362	9	75
Sierra Leone		6,971	1.51		82.7	258,903	280,234	3	62
Somalia		11,967	0.17		9.5	788,763	492,638	3	59
South Africa		401,145	5.41		86.2	1,186,793	4,282,432	7	66
South Sudan		11,997	0.58		7.3	328,308	357,308	3	58

Background indicators									
GREY = No data found									
		Note on methodology: For this snapshot analysis, the standardised indicators included are based on validated data from their original single source e.g WHO, UNICEF, World Bank. All other data collected is based on rapid evidence review using targeted keyword searches, and is therefore not exhaustive.							
		Economics & Financing		Maternal & Child Health			Older Adults		
Country		**GDP (US$, millions)**	**Domestic general government health expenditure (2022/23, % of GDP)** **BLUE = >5% of GDP target [Ref: 2,4]**	**% of women (aged 15-49 years) attending antenatal care visits at least 4 times during pregnancy by any provider (%)** **BLUE = >70%**	**% of newborns who had postnatal contact with a health provider within 2 days of delivery** **BLUE = ≥70%**	**Number of newborn births each year (2023)**	**Total population ages 65 and above (2024)**	**% of population aged 65 and above (2024)**	**Life expectancy at birth (2023)**
	Refs:	1	2,3,4	5,6	7,8	9	10	11	12
Sudan		49,672	1.19		27.7	1,682,049	1,665,680	3	66
Tanzania		78,844	0.98	65.1	53.9	2,346,391	2,087,657	3	67
Togo		10,651	0.67		80.2	289,759	305,767	3	63
Tunisia		51,332	3.94	79	96.8	167,729	1,169,962	10	77
Uganda		53,911	0.98	67.8	55.9	1,712,750	1,094,613	2	68
Zambia		25,303	2.51	82.1	72.0	685,565	414,950	2	66
Zimbabwe		41,539	1.18		90.9	496,917	599,113	4	63
AFRICA						43,744,316	54,953,180		

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Iodine indicators

		SALT IODISATION GREY = No data found						POPULATION IODINE LEVELS GREY = No data found							
Country		Is there existing salt iodisation legislation? Y= Yes N = No (RED)	Mandatory or Voluntary iodisation N/A = if there is no existing legislation		% of households consuming adequately iodized salt ≥ 15 ppm WHO target [Ref:20] RED = <90%	Date of Survey RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (General Population - GP *) - µg/L of Iodine in Urine WHO targets [Ref:22] RED = < 100µg/L (Insufficient) BLUE = ≥ 300µg/L (Excessive) * Based on school-age children (SAC), or closest proxy population with available nationally representative data	Inside of WHO target range? ≥ 100µg/L and <300µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (GP) RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (Pregnant Women - PW) - µg/L of Iodine in Urine WHO Targets [Ref:22] RED = < 150µg/L (Insufficient) BLUE = ≥ 500 µg/L (Excessive)	Inside of WHO target range? ≥150µg/L and <500µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (PW) RED = data is > 10 years old (2015 or earlier)	
				Refs			Refs 19,20				Refs 21,22				Refs
Algeria		Y	Mandatory	1	89.1	2019		253	Y	2017					
Angola		Y	Mandatory	2	82.4	2015		108	Y	2019		102	N	2019	
Benin		Y	Mandatory	3	84.7	2018		318	N	2011					
Botswana		Y	Mandatory	4	82.6	2007									
Burkina Faso		Y	Mandatory	3	89.0	2021		99	N	2014		168-170	Y	2020	
Burundi		Y	Mandatory	5	89.4	2016		86	N	2018		86.7	N	2018	
Cameroon		Y	Mandatory	3	90.7	2018		>300	N	2014, 2017, 2018					
Cape Verde		Y	Mandatory	3	91.9	2010		154	Y	2021					
Central African Republic		Y	Mandatory	3	76.0	2019									
Chad		Y	Mandatory	3	65.0	2019									
Comoros					81.9	2012									

Iodine indicators

		SALT IODISATION GREY = No data found						POPULATION IODINE LEVELS GREY = No data found							
Country		Is there existing salt iodisation legislation? Y= Yes N = No (RED)	Mandatory or Voluntary iodisation N/A = if there is no existing legislation		% of households consuming adequately iodized salt ≥ 15 ppm WHO target [Ref:20] RED = <90%	Date of Survey RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (General Population - GP *) - µg/L of Iodine in Urine WHO targets [Ref:22] RED = < 100µg/L (Insufficient) BLUE = ≥ 300µg/L (Excessive) * Based on school-age children (SAC), or closest proxy population with available nationally representative data	Inside of WHO target range? ≥ 100µg/L and <300µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (GP) RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (Pregnant Women - PW) - µg/L of Iodine in Urine WHO Targets [Ref:22] RED = < 150µg/L (Insufficient) BLUE = ≥ 500 µg/L (Excessive)	Inside of WHO target range? ≥150µg/L and <500µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (PW) RED = data is > 10 years old (2015 or earlier)	
				Refs			Refs 19,20				Refs 21,22				Refs
Djibouti					4.4	2006		335	N	2015		265	Y	2015	
DR Congo		Y	Mandatory	3	84.7	2017									
Egypt		Y	Mandatory	6	96.5	2008		170	Y	2014/15		135-150	N	2015	
Equatorial Guinea		N	N/A	3	57.4	2000									
Eritrea					86.2	2010									
Eswatini		Y	Mandatory	7	90.4	2014									
Ethiopia		Y	Mandatory	8	85.6	2016		104	Y	2015					
Gabon		Y	Mandatory	3	89.5	2012									
Gambia		Y	Mandatory	3	67.1	2020		156	Y	2018		113.5	N	2018	
Ghana		Y	Mandatory	3	68.9	2017		202	Y	2015		183.5	Y	2015	
Guinea		Y	Mandatory	3	52.6	2018									

Iodine indicators

		SALT IODISATION GREY = No data found						POPULATION IODINE LEVELS GREY = No data found							
Country		Is there existing salt iodisation legislation? Y= Yes N = No (RED)	Mandatory or Voluntary iodisation N/A = if there is no existing legislation		% of households consuming adequately iodized salt ≥ 15 ppm WHO target [Ref:20] RED = <90%	Date of Survey RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (General Population - GP *) - µg/L of Iodine in Urine WHO targets [Ref:22] RED = < 100µg/L (Insufficient) BLUE = ≥ 300µg/L (Excessive) * Based on school-age children (SAC), or closest proxy population with available nationally representative data	Inside of WHO target range? ≥ 100µg/L and <300µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (GP) RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (Pregnant Women - PW) - µg/L of Iodine in Urine WHO Targets [Ref:22] RED = < 150µg/L (Insufficient) BLUE = ≥ 500 µg/L (Excessive)	Inside of WHO target range? ≥150µg/L and <500µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (PW) RED = data is > 10 years old (2015 or earlier)	
				Refs			Refs 19,20				Refs 21,22				Refs
Guinea-Bissau		Y	Mandatory	3	32.6	2019		110	Y	2011					
Côte d'Ivoire		Y	Mandatory	3	79.7	2016									
Kenya		Y	Mandatory	9	94.6	2014		208	Y	2011					
Lesotho		Y	Mandatory	10	85.0	2014									
Liberia		Y	Mandatory	3	86.6	2019		244	Y	2011		253.8	Y	2011	
Libya					69.9	2014									
Madagascar		Y	Mandatory	11	68.4	2009		47	N	2015		53.4	N	2015	
Malawi		Y	Mandatory	12	80.0	2020		269	Y	2015/16		137.5	N	2009	
Mali		Y	Mandatory	3	76.1	2020									
Mauritania		Y	Mandatory	3	25.2	2018		179	Y	2012					
Mauritius															

Iodine indicators

		SALT IODISATION GREY = No data found						POPULATION IODINE LEVELS GREY = No data found							
Country		Is there existing salt iodisation legislation? Y= Yes N = No (RED)	Mandatory or Voluntary iodisation N/A = if there is no existing legislation		% of households consuming adequately iodized salt ≥ 15 ppm WHO target [Ref:20] RED = <90%	Date of Survey RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (General Population - GP *) - µg/L of Iodine in Urine WHO targets [Ref:22] RED = < 100µg/L (Insufficient) BLUE = ≥ 300µg/L (Excessive) * Based on school-age children (SAC), or closest proxy population with available nationally representative data	Inside of WHO target range? ≥ 100µg/L and <300µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (GP) RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (Pregnant Women - PW) - µg/L of Iodine in Urine WHO Targets [Ref:22] RED = < 150µg/L (Insufficient) BLUE = ≥ 500 µg/L (Excessive)	Inside of WHO target range? ≥150µg/L and <500µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (PW) RED = data is > 10 years old (2015 or earlier)	
				Refs			Refs 19,20				Refs 21,22				Refs
Morocco		Y	Mandatory	13	43.3	2006		117	Y	2019					
Mozambique		Y	Mandatory	14	42.5	2011		97	N	2011/12					
Namibia		Y	Mandatory	15	73.6	2013									
Niger		Y	Mandatory	3	59.4	2014		101	Y	2015					
Nigeria		Y	Mandatory	3	93.3	2018		293	Y	2021		237.5	Y	2021	
Republic of the Congo		Y	Mandatory	3	91.1	2014									
Rwanda		Y	Mandatory	15	90.5	2015									
São Tomé and Príncipe		Y	Mandatory	3	88.6	2019									
Senegal		Y	Mandatory	3	65.1	2018		252	Y	2023		85.7	N	2014	
Seychelles								147	Y	2020					
Sierra Leone		N	N/A	3	82.2	2019		203	Y	2013		175.8	Y	2013	

Iodine indicators

		SALT IODISATION GREY = No data found						POPULATION IODINE LEVELS GREY = No data found							
Country		Is there existing salt iodisation legislation? Y= Yes N = No (RED)	Mandatory or Voluntary iodisation N/A = if there is no existing legislation		% of households consuming adequately iodized salt ≥ 15 ppm WHO target [Ref:20] RED = <90%	Date of Survey RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (General Population - GP *) - µg/L of Iodine in Urine WHO targets [Ref:22] RED = < 100µg/L (Insufficient) BLUE = ≥ 300µg/L (Excessive) * Based on school-age children (SAC), or closest proxy population with available nationally representative data	Inside of WHO target range? ≥ 100µg/L and <300µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (GP) RED = data is > 10 years old (2015 or earlier)		Median Urinary Iodine Concentration (Pregnant Women - PW) - µg/L of Iodine in Urine WHO Targets [Ref:22] RED = < 150µg/L (Insufficient) BLUE = ≥ 500 µg/L (Excessive)	Inside of WHO target range? ≥150µg/L and <500µg/L [Ref:22] Y= Yes N=No (RED)	Date of Survey (PW) RED = data is > 10 years old (2015 or earlier)	
				Refs			Refs 19,20				Refs 21,22				Refs
Somalia		Y	Mandatory	15	6.9	2009		263	Y	2019		369.4	Y	2019	
South Africa		Y	Mandatory	16	91.1	2016		130	Y	2015					
South Sudan					60.0	2010									
Sudan		N	N/A	17	34.4	2014		108	Y	2018/19		101.2	N	2019	
Tanzania		Y	Mandatory	15	73.1	2013		194	Y	2022		166	Y	2022	
Togo		Y	Mandatory	3	80.5	2017									
Tunisia		Y	Mandatory	18				220	Y	2012					
Uganda		Y	Mandatory	15	91.3	2016									
Zambia		Y	Mandatory	15	88.4	2013		210	Y	2023		264.2	Y	2013	
Zimbabwe		Y	Mandatory	15	83.8	2019		130	Y	2013		120	N	2013	

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Newborn screening indicators

Y = Yes
National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket). Usually limited to one to two diseases only.
Private = Available at private sector health services, funded through out of pocket payments (including personal private health insurance)
* Last publicly posted information was from 2021. No related government documents were found
GREY = No data found

Country	**Newborn screening overall** (including national, pilot and private programmes). This is a summary of all attempts within nations to set up newborn screening programmes across diseases including congenital hypothyroidism, sickle cell disease and other conditions. BLUE = national NBS programme		Condition/Disease					
			Congenital hypothyroidism (CH) BLUE = national NBS programme		Sickle cell disease (SCD) BLUE = national NBS programme		Other conditions (eg, hearing, sight, HIV, TB, malnutrition, G6PD, Phenylketonuria, Congenital Adrenal Hyperplasia, Cystic Fibrosis, Galactosaemia) BLUE = national NBS programme	
		Refs		Refs		Refs		Refs
Algeria	Y (pilot)	1-3	Y (pilot)	1, 2			Y (pilot)	3
Angola	Y (pilot)	4-6			Y (pilot)	4,5,6		
Benin	Y (pilot)	7-9	Y (pilot)	7	Y (pilot)	8,9		
Botswana								
Burkina Faso	Y (pilot)	10			Y (pilot)	10		
Burundi	Y (pilot)	11			Y (pilot)	11		
Cameroon	Y (pilot)	12-16	Y (pilot)	12	Y (pilot)	13-14	Y (pilot)	15-16
Cape Verde (Cabo Verde)	Y (pilot)	17			Y (pilot)	17		
Central African Republic	Y (pilot)	18			Y (pilot)	18		
Chad	Y (pilot)	19			Y (pilot)	19		

Newborn screening indicators

Y = Yes
National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket). Usually limited to one to two diseases only.
Private = Available at private sector health services, funded through out of pocket payments (including personal private health insurance)
* Last publicly posted information was from 2021. No related government documents were found
GREY = No data found

Country	**Newborn screening overall** (including national, pilot and private programmes). This is a summary of all attempts within nations to set up newborn screening programmes across diseases including congenital hypothyroidism, sickle cell disease and other conditions. BLUE = national NBS programme		Condition/Disease					
			Congenital hypothyroidism (CH) BLUE = national NBS programme		Sickle cell disease (SCD) BLUE = national NBS programme		Other conditions (eg, hearing, sight, HIV, TB, malnutrition, G6PD, Phenylketonuria, Congenital Adrenal Hyperplasia, Cystic Fibrosis, Galactosaemia) BLUE = national NBS programme	
		Refs		Refs		Refs		Refs
Comoros								
Djibouti								
DR Congo	Y (pilot)	20-22			Y (pilot)	20-22		
Egypt	Y (national)	23-24,26	Y (national)	23-24	Y (pilot)	25	Y (national)	26
Equatorial Guinea	Y (pilot)	27			Y (pilot)	27		
Eritrea								
Eswatini	Y (pilot)	28					Y (pilot)	28
Ethiopia	Y (pilot)	29	Y (pilot)	29				
Gabon	Y (pilot)	30-32			Y (pilot)	30-32		
Gambia	Y (pilot)	33-34			Y (pilot)	33-34		
Ghana	Y (pilot)	35-37			Y (pilot)	35-37		

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		Refs		Refs		Refs		Refs
Guinea								
Guinea-Bissau	Y (pilot)	38-40			Y (pilot)	38-39	Y (pilot)	40
Côte d'Ivoire	Y (pilot)	41-43	Y (pilot)	41	Y (pilot)	42	Y (pilot)	43
Kenya	Y (pilot & private)	44-52	Y (pilot & private)	44,49	Y (pilot & private)	45-49	Y (pilot & private)	49-52
Lesotho	Y (pilot)	53-54					Y (pilot)	53-54
Liberia	Y (pilot)	55-58			Y (pilot)	55-58		
Libya								
Madagascar								
Malawi	Y (pilot)	59			Y (pilot)	59		
Mali	Y (pilot)	60-63			Y (pilot)	60-63		
Mauritania	Y (pilot)	64-65			Y (pilot)	64	Y (pilot)	65

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			Congenital hypothyroidism (CH) BLUE = national NBS programme		Sickle cell disease (SCD) BLUE = national NBS programme		Other conditions (eg, hearing, sight, HIV, TB, malnutrition, G6PD, Phenylketonuria, Congenital Adrenal Hyperplasia, Cystic Fibrosis, Galactosaemia) BLUE = national NBS programme	
		Refs		Refs		Refs		Refs
Mauritius	Y (pilot)	66-68	Y (private)	66-68			Y (private)	68
Morocco	Y (pilot)	69-73	Y (pilot)	69-72	Y (pilot)	72-73	Y (pilot)	72
Mozambique	Y (pilot)	74					Y (pilot)	74
Namibia	Y (pilot)	75			Y (pilot)	75		
Niger	Y (pilot)	76			Y (pilot)	76		
Nigeria	Y (pilot)	77-79	Y (pilot)	77	Y (pilot)	78-79		
Republic of the Congo	Y (pilot)	80			Y (pilot)	80		
Rwanda								
São Tomé and Príncipe								
Senegal	Y (pilot)	79, 81			Y (pilot)	79, 81		
Seychelles	Y (national)*	82-83	Y (national)*	82-83	Y (national)*	82-83	Y (national)*	82-83

Newborn screening indicators

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National = Available at all relevant public healthcare providers nationwide. Funded by government or private donation (not out of pocket)
Pilot = Available at various types of healthcare institution (public or private), but across only a few locations only as part of a trial i.e. not available nationally. Funded by government, private donation, NGO, research grant (not out of pocket). Usually limited to one to two diseases only.
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		Refs		Refs		Refs		Refs
Sierra Leone	Y (pilot)	84-85			Y (pilot)	84-85		
Somalia								
South Africa	Y (pilot & private)	86-88	Y (pilot & private)	86-88			Y (pilot)	87
South Sudan								
Sudan	Y (pilot)	89					Y (pilot)	89
Tanzania	Y (pilot)	78-79, 90-91			Y (pilot)	78-79,90-91		
Togo	Y (pilot)	92-93			Y (pilot)	92-93		
Tunisia	Y (pilot)	79,94-96	Y (pilot)	94-95	Y (pilot)	79, 96		
Uganda	Y (pilot)	79,97-99	Y (pilot)	97	Y (pilot)	79, 98-99	Y (pilot)	99
Zambia	Y (pilot)	79, 100-101			Y (pilot)	79, 100-101		
Zimbabwe	Y (pilot)	102-103			Y (pilot)	102	Y (pilot)	103

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Advocacy and awareness indicators						
Y = Yes GREY = No data found						
Country	Existing thyroid/endocrine medical societies/ consortiums?	Name of thyroid/endocrine medical societies/consortiums	Refs	Existing thyroid patient groups?	Name of thyroid patients groups	Refs
Algeria						
Angola						
Benin						
Botswana						
Burkina Faso						
Burundi						
Cameroon						
Cape Verde (Cabo Verde)						
Central African Republic						
Chad						
Comoros						
Djibouti						
DR Congo						
Egypt	Y	Egyptian Thyroid Association Alexandria Thyroid Association	1,2			
Equatorial Guinea						
Eritrea						
Eswatini						

Advocacy and awareness indicators						
Y = Yes GREY = No data found						
Country	Existing thyroid/endocrine medical societies/ consortiums?	Name of thyroid/endocrine medical societies/consortiums	Refs	Existing thyroid patient groups?	Name of thyroid patients groups	Refs
Ethiopia	Y	Society for Endocrinology & Metabolism of Ethiopia (SEME)	3			
Gabon						
Gambia						
Ghana	Y	Diabetes, Endocrine & Metabolic Society of Ghana (DEMSoG)	4	Y	Thyroid Ghana Foundation (TGF)	19
Guinea						
Guinea-Bissau						
Côte d'Ivoire				Y	Association des Malades de la Thyroïdes de Cote d'Ivoire	20
Kenya	Y	Paediatric Endocrine Society of Kenya	5	Y	Thyroid Disease Awareness Kenya Foundation (TDAK)	21
Lesotho						
Liberia						
Libya						
Madagascar						
Malawi						
Mali						
Mauritania						
Mauritius	Y	Endocrinology & Diabetes Association (Mauritius)	6			

Advocacy and awareness indicators						
Y = Yes GREY = No data found						
Country	Existing thyroid/endocrine medical societies/ consortiums?	Name of thyroid/endocrine medical societies/consortiums	Refs	Existing thyroid patient groups?	Name of thyroid patients groups	Refs
Morocco	Y	Société Marocaine d'Endocrinologie Diabétologie Nutrition (SMEDIAN)	7			
Mozambique						
Namibia						
Niger						
Nigeria	Y	Endocrine & Metabolism Society of Nigeria (EMSON) Thyroid Care Association of Nigeria Society for Paediatrics and Adolescent Endocrinology of Nigeria (SPAEN)	8-10	Y	Goldheart Thyroid Awareness Foundation Thyroid Awareness and Support Initiative (TASI) Adedokun Rebecca Omolola Foundation (ARO) Layi Erogbogbo Foundation (LEF)	22-25
Republic of the Congo						
Rwanda						
São Tomé and Príncipe						
Senegal				Y	Association Sénégalaise des Malades de la Thyroïde (ASMAT)	26
Seychelles						
Sierra Leone						
Somalia						
South Africa	Y	"Society for Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA) Endocrine Surgeons of South Africa (ESSA)"	11,12	Y	Thyroid Wellness Organisation of South Africa	27
South Sudan						

Advocacy and awareness indicators						
Y = Yes GREY = No data found						
Country	Existing thyroid/endocrine medical societies/ consortiums?	Name of thyroid/endocrine medical societies/consortiums	Refs	Existing thyroid patient groups?	Name of thyroid patients groups	Refs
Sudan						
Tanzania						
Togo						
Tunisia	Y	Tunisian Society of Endocrinology, Diabetology and Metabolic Diseases (STEDIAM)	13			
Uganda						
Zambia						
Zimbabwe				Y	Thyroid Support Network Zimbabwe (TSNZ)	28
AFRICA	Y	African Head and Neck Society, African Society of Endocrinology Metabolism Nutrition (SAEMN), Arab Thyroid Association (ArTA), Middle East North Africa Thyroid Oncology Collaborative (MENATOC)	14-18			

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A note on methodology

This white paper was developed using a rapid evidence review approach to map the current landscape of thyroid disease care in Africa. Academic literature was gathered through targeted keyword searches of PubMed and Google Scholar. Grey literature was sourced via targeted Google searches, capturing policy documents, programme reports, organisational materials and new articles from WHO, UNICEF, Africa CDC, regional professional societies, patient groups, ministries of health, media organisations and other relevant bodies. Given the limited availability of region-specific data, the review prioritised breadth and policy relevance over exhaustive retrieval and did not apply systematic review procedures or formal quality appraisal. Findings were synthesised narratively to examine thyroid disease trends, service gaps and policy opportunities across African health systems. The research was also complemented by qualitative insights from thyroid experts in Africa.

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