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Monitoring progress and acceleration plan for NCDs, including oral health and integrated eye care, in the WHO South-East Asia Region

Noncommunicable diseases (NCDs), which include cardiovascular diseases (CVDs), cancers, chronic respiratory disease and diabetes, account for almost two thirds of all deaths in the WHO South-East Asia Region. Nearly half of these deaths occurred prematurely between the ages of 30 and 69 years in 2021.

The regional NCD Implementation Roadmap 2022–2030 provides strategic directions to sustain the progress made in countries, prioritize interventions based on their impact on achieving the Sustainable Development Goals target for NCDs, and promote accountability through reliable and timely data. The NCD impact assessment tool for the Region will provide a simulation to assess the impact of interventions in the national context.

The Roadmap, once approved, will be made available as a digital application on the web as well as on mobile platforms for rapid and easy access to the tools and resources to support implementation in countries. Accelerated national NCD response through the primary health care and universal health coverage routes is needed to improve access, coverage and quality of NCD prevention and control interventions for the achievement of the 2025 and 2030 NCD targets.

Oral diseases and conditions are highly prevalent and are among the most common NCDs in the South-East Asia Region. In 2019, cases of untreated dental caries, severe periodontal diseases and edentulism in the Region were estimated to number more than 900 million. The South-East Asia Region has the highest oral cancer incidence and mortality rates among all WHO regions, with the estimated age-standardized mortality for males – at 8.1 per 100 000 population – being more than double the global average of 3.7 per 100 000. The incidence rate for males and females at 14.4 per 100 000 and 4.5 per 100 000 population respectively are also more than double the global average (males at 7.8 per 100 000 and females at 2.7 per 100 000 population). The disease burden also shows strong inequalities with higher prevalence and severity in poor and disadvantaged populations.

The Action Plan for Oral Health in South-East Asia 2022–2030 is aligned with the WHO Global Strategy on Oral Health 2022–2030, which was adopted by the Seventy-fifth World Health Assembly in May 2022. The goal of the Action Plan is to provide guidance to Member States to develop appropriate and impactful national actions to improve oral health through aligned approaches that are also in line with UHC goals.

Furthermore, globally at least 2.2 billion people live with vision impairment or blindness, of whom at least 1 billion people have a vision impairment that could have been prevented or has yet to be addressed. The Regional Action Plan for integrated people-centred eye care in South-East Asia 2022–2030 envisions that 'all people in the SE Asia Region have equitable access to high-quality, comprehensive eye health services to achieve universal eye health by 2030' through the implementation of integrated people-centred eye care.

The Action Plan focuses on core strategic areas aligned with the PHC Framework and the WHO Global Report on Vision. Successful implementation of the Action Plan will contribute towards achieving the global targets of refractive error and cataract surgery and two regional targets set for diabetic retinopathy and trachoma elimination. The High-Level Preparatory Meeting discussed the subject at length and provided valuable insights and guidance on strengthening the plans for NCDs, oral health and eye health. The HLP Meeting made the following recommendations on this Agenda item for Member States and WHO that are listed below.

Actions by Member States

(1) Sustain the gains achieved in NCDs, oral health and integrated eye care in the Region.

(2) Adapt the Regional NCD Implementation Roadmap 2022–2030, Action Plan for Oral Health in South-East Asia 2022–2030, and the Regional Action Plan on integrated people-centred eye care to accelerate the national response with a view to achieving the agreed targets and promoting UHC.

(3) Promote accountability through timely and reliable data for NCDs, oral health and integrated people-centred eye care.

Actions by WHO

(1) Support Member States to assess, prioritize and scale up implementation and evaluate the interventions for NCDs, oral health and integrated people-centred eye care.

(2) Regularly update the guidance and tools and support Member States through digital solutions and other innovations.

(3) Foster exchange and knowledge transfer among Member States of the Region, as well as across regions, to enhance learning from failures, successful programmes and best practices.

(4) Report on the progress of implementation of the three plans once in every two years.

This Working Paper and the HLP Meeting recomemndations along with the Draft Regional NCD Implementation Roadmap 2022–2030, Draft Regional Action Plan for oral health 2022–2030, and Draft Regional Action Plan for integrated people-centred eye care 2022–2030 are submitted to the Seventy-fifth Session of the WHO Regional Committee for South-East Asia for its consideration.

Introduction

1. Noncommunicable diseases (NCDs), which include cardiovascular diseases (CVDs), cancers, chronic respiratory disease and diabetes, account for almost two thirds of all deaths in the WHO South-East Asia Region. The COVID-19 pandemic has further exposed the vulnerabilities of people living with NCDs. In addition to the increased risk of severe disease and death, disruptions in essential NCD services threaten to slow progress and even reverse the gains made in controlling NCDs over the past few years.

2. Recognizing the global public health importance of major oral diseases and conditions, and the growing body of evidence on the interrelation between poor oral health and NCDs, the Global Strategy on Oral Health 2022–2030[1] was adopted by the Seventy-fifth World Health Assembly in May 2022 to support Member States in effectively addressing oral diseases and conditions in line with the overarching vision of integrating these with universal health coverage by 2030.

3. Eye health conditions impact all stages of life, with young children and older people being particularly affected. Crucially, women, rural populations and ethnic minority groups are more likely to have vision impairment, and this pervasive inequality needs to be addressed. Globally, at least 2.2 billion people live with vision impairment or blindness, of whom at least 1 billion people have a vision impairment that could have been prevented or has yet to be addressed. Nearly 30% of the world's blind and vision-impaired population live in the WHO South-East Asia region. Data from the Global Burden of Disease 2019, show a high regional burden of eye conditions compared with other WHO regions. Within the Region, Myanmar and Nepal have already announced the elimination of trachoma.

4. The Seventy-fourth session of the Regional Committee in 2021 vide its Decision SEA/RC74(2)[2] requested the Regional Director to develop a:

(1) Regional Implementation Roadmap for the prevention and control of NCDs, taking into account digital innovations and in the context of the COVID-19 pandemic;

(2) Regional Action Plan on oral health with a monitoring framework and measurable targets; and

(3) Regional Action Plan for integrated patient-centred eye care taking into consideration the 2030 global targets for effective cataract coverage and refractive error coverage that were endorsed by the Seventy-fourth World Health Assembly.

[1] Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable disease. Doc no. A75/10. Geneva: World Health Organization, 2022. https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_10Add1-en.pdf - accessed 2 Aug 2022.

[2] Decisions. Doc no. SEA/RC74(1) https://apps.who.int/iris/bitstream/handle/10665/345273/sea-rc74-decisions-eng.pdf?sequence=1&isAllowed=y – accessed 2 Aug 2022.

Current situation, response and challenges

Noncommunicable diseases

5. In the WHO South-East Asia Region, the probability of dying from cardiovascular diseases (CVDs), cancers, diabetes and chronic respiratory diseases between the ages of 30 and 70 years declined from 23.4% in 2010 to 21.6% in 2019, and this decline is slightly higher among males as compared with females. At the current rate of decline, the Region is not on track to achieve the 2025 NCD and the 2030 SDG 3.4 targets. The ongoing COVID-19 pandemic and resultant NCD service delivery disruption have adversely impacted progress, highlighting the urgent need for acceleration of NCD prevention and control. A quarter of the adult population in the Region suffers from hypertension and every twelfth adult has diabetes. Globally, disability-adjusted life years (DALYs) from diabetes increased by more than 80% between 2000 and 2019.[3]

6. Tobacco use, harmful use of alcohol, unhealthy diets, physical inactivity and air pollution are the five risk factors common to many NCDs. While most countries have made some progress in policy development for all the five risk factors included in the Regional Action Plan and targets for the prevention and control of noncommunicable diseases (2013–2020)[4] progress is uneven across risk factors and between countries. Six countries have implemented standardized packaging and/or graphic health warnings on all tobacco packages, while only two countries have enforced comprehensive bans on tobacco advertising, promotion and sponsorship.

7. Reduction in salt consumption at the population level is a cost-effective best buy intervention and 10 countries have set national salt/sodium reduction targets aligned with the WHO *Global Action Plan* for NCDs and identified baseline population mean salt/sodium intake. Best practice policies to eliminate transfatty acids have been legislated in two Member States until 2022, and three other countries are making progress towards elimination of transfatty acids. Industry is expanding their marketing from traditional to digital media, which is much more difficult to regulate than regular media.

8. WHO is working on evidence gathering and initiating policy conversations on actions to address unhealthy commodities marketed within the online environment. About 63% of households in the Region still rely on solid fuels, which leads to unacceptable levels of household air pollution. Health promotion enables people to increase control over their own health and is a critical element for reducing NCD risk factors. Institutionalized health promotion bodies can contribute to government saving through healthy public policies, improving public health interventions, creating supportive environments, and strengthening community actions.

9. Among the four NCDs, diabetes is showing an increasing trend and the premature mortality attributable to diabetes is also on the increase. There are major gaps in the detection, diagnosis and management of diabetes that need urgent attention. Gestational diabetes mellitus (GDM) needs to be considered as it is a marker for future onset of diabetes mellitus among women. CVDs including stroke are still the main contributor to premature NCD mortality.

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[3] The Global health observatory. World Health Organization. https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/global-health-estimates-leading-causes-of-dalys - accessed 2 Aug 2022.

[4] Regional action plan and targets for prevention and control of noncommunicable diseases (2013-2020). Doc no. SEA/RC66/10. World Health Organization. Regional Office for South-East Asia, 2013. https://apps.who.int/iris/handle/10665/128288 - accessed 2 Aug 2022.

10. Hypertension control is a pathfinder and can be used to improve the detection, diagnosis, management and follow-up of NCDs in a primary health care framework. With one fourth of the adult population living with hypertension in the Region, this assumes priority, and there are models that have shown the ways to overcome the hurdles in improving hypertension control. Regional networks have been developed to support the management of stroke. WHO's initatives on childhood cancer have helped to strengthen this segment in the Region and can be further accelerated. Actions for the elimination of cervical cancer as a public health problem have been initiated but the Region needs more work on this to reach the 2030 targets.

11. Information and data on NCDs in the Region are being updated on the regional NCD dashboard and three countries have country-specific data portals on NCDs. Strengthening cancer registries will further help with making available reliable data on cancer. Digital solutions are increasingly used in countries for better data capture and analysis and use for enhanced decision-making across the care continuum for NCDs.

12. The Regional Action Plan for NCD prevention and control in the Region has been extended to 2030 vide Regional Committee resolution SEA/RC74(2), and will continue to guide actions.[5] The Global Implementation Roadmap for the extended Global Action Plan has been endorsed by the Seventy-fifth World Health Assembly and this plan is aligned with the Global Plan.[6]

13. The Secretariat has developed a draft NCD Implementation Roadmap in consultation with national experts. WHO global data were used and supplemented by the national NCD data to assess the progress in NCD targets. The University of Washington developed an NCD impact assessment tool for Member States of the Region to visualize the impact of NCD interventions on the overall SDG target, with different assumptions. Fifty tools and guidance documents on NCDs available from WHO were collated as support for this implementation.

14. National experts and WHO country office staff reviewed the draft version of the Roadmap and provided comments and suggestions. A revised version was discussed with the Member States on 13 June 2022 through a virtual consultation. The draft Implementation Roadmap for accelerating the prevention and control of noncommunicable diseases in South-East Asia 2022–2030 is included as **Annex 1**. The vision, goal, targets and strategic directions of the NCD Roadmap are enumerated below.

- **Vision**

  For all people of the South-East Asia Region to enjoy the highest attainable status of health, well-being and quality of life at every age, free of preventable NCDs, avoidable disability and premature death.

- **Goal**

  To reduce preventable morbidity, avoidable disability and premature mortality due to NCDs in the South-East Asia Region.

[5] Decisions. Doc no. SEA/RC74(1) https://apps.who.int/iris/bitstream/handle/10665/345273/sea-rc74-decisions-eng.pdf?sequence=1&isAllowed=y – accessed 2 Aug 2022.
[6] Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Doc no. WHA75(11). Geneva: World Health Organization, 2022. https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75(11)-en.pdf – accessed 2 Aug 2022.

- **Targets**

  Updated NCD targets, additional global NCD-specific targets for cervical cancer, childhood cancer and diabetes. (2025 targets of the SEA NCD regional action and the 2030 global targets are included).[7]

- **Strategic directions**

  Sustain the progress made in the national response to NCDs.

  - Prioritize and accelerate the implementation of the most impactful and feasible interventions in the national context including through digital health and other innovations.
  - Promote accountability through timely, reliable, and sustained national data on NCD risk factors, diseases and mortality.

15. The NCD implementation Roadmap will support countries to accelerate the national response as it can be adapted to the national context. This will remain as a live digital solution to accommodate updates as and when they become available.

Oral health

16. Oral diseases and conditions are highly prevalent and are among the most common NCDs in South-East Asia. In 2019, the number of cases of untreated dental caries, severe periodontal diseases and edentulism in the Region was estimated to be more than 900 million. Prevalence of untreated caries of deciduous teeth among children aged 1–9 years was estimated as 43.8% with an estimated 135 million cases across the 11 Member States.

17. Estimated prevalence of untreated caries in permanent teeth among the population aged over five years was 28.7%, translating into 526 million cases. Severe periodontal disease was estimated at 307 million cases, with a prevalence of 20.8%, among people older than 15 years, while edentulism was estimated at 52.7 million with a prevalence of 4.1% among people older than 20 years.

18. The South-East Asia Region has the highest oral cancer incidence and mortality rates among all WHO regions, with the estimated age-standardized mortality for males (8.1 per 100 000 population) being more than double the global average (3.7 per 100 000). The incidence rates for males and females at 14.4 per 100 000 and 4.5 per 100 000, respectively, are also more than double the global average (males at 7.8 per 100 000 and females at 2.7 per 100 000 population).

19. Other diseases and conditions, such as orofacial clefts, dental trauma, diseases of the oral mucosa and oral manifestations of systemic diseases, add to the overall burden. The disease burden also presents severe inequalities with higher prevalence and severity among poor and disadvantaged populations who generally have lower access to prevention, care and rehabilitation services for oral health care.

20. All countries of the Region have a shortage of dentistry personnel (dentists, dental assistants and dental laboratory technicians) and, where available, there is significant geographical maldistribution. Oral health care is often associated with high out-of-pocket expenditure leading to catastrophic expenditure for poorer households.

[7] NCD global monitoring framework. https://www.who.int/teams/ncds/surveillance/monitoring-capacity/gmf - accessed 2 Aug 2022.

21. Considering the burden of oral diseases and conditions in the Region and the gaps in the implementation of the Strategy for Oral health in South-East Asia 2013–2020, the Action Plan for oral health in South-East Asia 2022–2030 and its measurable targets were developed through technical consultations among national experts and a virtual consultation of Member States on 14 June 2022. The final draft of the Action Plan for oral health in South-East Asia 2022–2030 incorporates all comments and suggestions from the consultation. The *draft Action Plan for oral health in South-East Asia 2022–2030 is included as Annex 2. The* vision, goal, targets and strategic directions of the Action Plan for oral health in South-East Asia 2022–2030 are as follows.

- **Vision**

  The vision of the Action Plan is to ensure universal health coverage of oral health for all people of the South-East Asia Region by 2030, empowering them to enjoy the highest attainable state of oral health and enabling them to live healthy and productive lives.

- **Goal**

  The goal of the Action Plan is to provide guidance to Member States to develop appropriate and impactful national actions to improve oral health and accelerate the implementation of the WHO Global Strategy for oral health through aligned approaches.

- **Targets**

  The Action Plan adopts the two overall targets proposed by the Strategy for Oral Health in South-East Asia 2013–2020 and extends them to 2030 with 2013 as the baseline:

  - Target 1: A 25% relative reduction of premature mortality from oral cancer by 2030.
  - Target 2: A 25% relative reduction of prevalence of untreated dental caries by 2030.

- **Strategic action areas**

  - Oral health governance, leadership and resources.
  - Oral health promotion, life-course disease priorities and healthy settings.
  - Oral health workforce and primary oral health care.
  - Essential oral health care and UHC.
  - Surveillance, monitoring and evaluation.
  - Oral health research, digital innovations and emerging issues.

Integrated eye care

22. The *World Report on Vision 2019* addresses the population needs amid growing eye care challenges. It proposed integrated people-centred eye care (IPEC) as an approach to health system strengthening that builds the foundation for service delivery to achieve UHC.[8]

23. Currently, there is no Regional Strategy document to guide Member States. Major challenges to the provision of comprehensive eye care in the Region include the lack of integration of eye care within the primary health care systems; lack of polices and eye-care plans; inadequate, unstructured and unregulated human resources for eye health services; lack of comprehensive eye-care services within the community; and lack of proper data collection and monitoring and evaluations systems.

[8] World report on vision. Geneva: World Health Organization, 2019. https://www.who.int/publications/i/item/9789241516570 - accessed 2 Aug 2022.

24. To provide impetus to eye heath, the Seventy-fourth session of the Regional Committee mandated the formulation of a Regional Action Plan for integrated people-centred eye care taking into consideration the 2030 global targets for effective cataract coverage and refractive error coverage that were endorsed by the Seventy-fourth World Health Assembly.

25. This Regional Action Plan for integrated people-centred eye care was developed in consultation with experts, WHO collaborating centres, nominated experts from Member States, WHO country office focal persons, relevant technical officers from the WHO Regional Office and headquarters, and INGOs and partners. The Action Plan is aligned with the recommendations of the *World Vision Report 2019*, and the South-East Asia Regional Strategy for Primary Health Care. The document was developed in line with mandates and resolutions/decisions of the Seventy-fifth Session of the United Nations General Assembly (UNGA) in 2021, the Seventy-fourth World Health Assembly in 2021, and the Seventy-fourth session of the WHO Regional Committee for South-East Asia in 2021.

26. This document also considered the latest WHO guidance documents, toolkits and indicators that were launched during the Seventy-fifth World Health Assembly in May 2022. The draft WHO South-East Asia Regional Action Plan on integrated people-centred eye care is included as Annex 3. The vision, goal, targets and strategic directions of the WHO South-East Asia Regional Action Plan on integrated people-centred eye care are outlined below.

- **Vision**

  All people in the South-East Asia Region have equitable access to high-quality, comprehensive eye health services to achieve universal eye health by 2030.

- **Mission**

  Comprehensive and coordinated continuum of eye health care services for all ages with equal geographical distribution through an integrated people-centred approach rooted in primary health care.

- **Goal**

  To guide and support Member States in developing, adopting and implementing appropriate and impactful national and subnational actions to achieve universal eye health through integrated people-centred eye care.

- **Targets**

  - Achieve a 40-percentage point increase in effective coverage of refractive errors.
  - Achieve a 30-percentage point increase in effective coverage of cataract surgery.
  - Ensure that at least 80% of people with diabetes are screened regularly for retinopathy, and 80% of those identified with sight threatening diabetic retinopathy (STDR) are treated and regularly monitored.
  - Eliminate trachoma in the Region by 2025.

- **Strategic areas**

  - Engaging and empowering people and communities.
  - Reorienting the model of care to prioritize primary and community-based eye-care services with functional referral linkages.
  - Coordinating eye-care services within and across sectors.
  - Strengthening and reorienting the eye health workforce.
  - Creating an enabling environment.

The way forward

27. Given the limited time remaining for the SDG targets to be achieved by 2030, the Member States are requested to prioritize and accelerate the national responses to NCDs using the Regional NCD Implementation Roadmap (2022–2030). Member States may also consider digital and other innovations in the national context and strengthen accountability through timely and reliable data on NCDs.

28. Member States are encouraged to strengthen oral health promotion and services through the six broad strategic action areas of the Action Plan for oral health in South-East Asia 2022–2030 and to develop and modify their strategic action plans to guide and provide focused and sustainable eye care using the WHO South-East Asia Regional Action Plan on integrated people-centred eye care. The regional focus on four key targets would have a significant impact on the global burden of eye diseases and contribute towards achieving the SDG targets.

29. The Roadmap and Action Plans will serve as essential guidance for Member States to sustain the gains achieved in NCDs, oral health and integrated eye care in the Region thus far and empower and enable them to effectively accelerate the implementation of evidence-based interventions with accountability to advance towards UHC and the agreed targets.

30. WHO will support Member States by regularly updating the guidance and tools through digital solutions and other innovations and will assist them to assess, prioritize, scale up implementation, and evaluate the interventions for NCDs, oral health and integrated eye care.

Conclusions

31. At the High-Level Meeting delegates from Member States acknowledged the high burden of NCDs, oral health conditions and eye conditions in the Region and the urgent need to accelerate country responses along with monitoring mechanisms. Member States reiterated that the draft Regional Implementation Roadmap for the prevention and control of NCDs 2022–2030, the draft Action Plan for oral health in South-East Asia 2022–2030 and the draft Regional Action Plan for integrated people-centred eye care in South -East Asia 2022–2030 will provide competent technical guidance to Member States to develop appropriate and impactful national actions to reach the targets.

32. The tangible impact of COVID-19 on NCDs, oral health and eye health services are of concern and the efforts to “build back better” can take into consideration the learnings and innovations applied during the pandemic. Institutionalization of health promotion can address multiple risk factors and help to secure and promote overall health and wellness. Integration of interventions and expansion of coverage through primary health care and community participation can help bolster the strides made to achieve UHC.

Annexures

Annex 1. Draft Implementation Roadmap for accelerating the prevention and control of noncommunicable diseases in South-East Asia 2022–2030.

Annex 2. Draft Action Plan for oral health in South-East Asia 2022–2030.

Annex 3. Draft Action Plan for integrated people-centred eye care in South-East Asia 2022–2030.

Annex 1

Implementation roadmap for accelerating the prevention and control of noncommunicable diseases in South-East Asia 2022–2030

[29 July 2022]

World Health Organization
REGIONAL OFFICE FOR South-East Asia

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Abbreviations

CRD	chronic respiratory disease
CVD	cardiovascular disease
DALY	disability-adjusted life year
GDM	gestational diabetes mellitus
HiAP	health in all policies
HPV	human papillomavirus
NCD	noncommunicable disease
PHC	primary health care
SDG	Sustainable Development Goal
SEAR	South-East Asia Region
SEARO	Regional Office for South-East Asia
SWOT	strengths, weaknesses, opportunities, threats
UHC	universal health coverage
WHO	World Health Organization

1. Introduction

Noncommunicable diseases (NCDs), which include cardiovascular diseases (CVDs), cancers, chronic respiratory disease and diabetes, account for almost two thirds of all deaths in the World Health Organization (WHO) South-East Asia Region (SEAR). In 2021, nearly half of these deaths occurred prematurely, between the ages of 30 and 69 years *(1)*. A quarter of the adult population in the Region suffers from hypertension *(2)*, and one in twelve adults has diabetes *(3)*. Disability-adjusted life years (DALYs) from diabetes increased by more than 80% between 2000 and 2019 *(4)*.

Progress in the implementation of the regional action plan was presented in detail at the Seventy-fourth Regional Committee Meeting *(5)*. The review indicated that while some progress has been made in the SEAR towards prevention and control of NCDs, it is slow and uneven, with substantial gaps in policy implementation and health care scale up. Sustaining the current gains, accelerating policy development to the best recommended levels, and developing innovative implementation strategies for coverage will be key to achieving the Sustainable Development Goal (SDG) 3.4 target: by 2030 reduce by one third premature mortality from noncommunicable diseases through prevention and treatment, and promote mental health and wellbeing.

The COVID-19 pandemic has further exposed the vulnerabilities of people living with NCDs. In addition to the increased risk of severe disease and death, disruption in essential NCD services threatens to slow down

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1 Mortality: Premature NCD deaths (under age 70). Data by WHO Region [website]. Regional Health Observatory, WHO Regional Office of South East Asia; 2021 https://apps.who.int/gho/data/view.searo.NCDUnder70REG?lang=en, accessed 22 June 2022).

2 Blood pressure: Raised blood pressure (SBP ≥ 140 OR DBP ≥ 90), age-standardized (%). Estimates by WHO region [website]. Regional Health Observatory, WHO Regional Office for South East Asia; 2017 (https://apps.who.int/gho/data/view.searo.NCDBPAREGv?lang=en, accessed 22 June 2022).

3 Blood glucose: Raised fasting blood glucose (≥ 7.0 mmol/L or on medication) (age-standardized). Estimates by WHO Region [website]. Regional Health Observatory, WHO Regional Office for South East Asia; 2017 (https://apps.who.int/gho/data/view.searo.NCDRGLUCAREGv?lang=en, accessed 22 June 2022).

4 Global health estimates: Leading causes of DALYS. Disease burden, 2000–2019. Geneva: World Health Organization (https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/global-health-estimates-leading-causes-of-dalys).

5 SEA/RC74/6 Rev. 1. Seventy-fourth regional committee meeting. Provisional agenda item 8.1. Accelerating progress on prevention and control of NCDs including oral health and integrated eye care in the WHO South-East Asia Region. New Delhi: WHO Regional Office for South-East Asia; 2021 (https://apps.who.int/iris/bitstream/handle/10665/343753/sea-rc74-6Rev1-eng.pdf?sequence=1&isAllowed=y).

progress and even reverse the gains in controlling NCDs. Disruption of treatment services for NCDs was reported in all countries of SEAR in the global pulse survey of 2021 *(6)*.

Addressing NCDs and including them as an integral part of pandemic preparedness and response will protect people and communities during future emergencies by establishing mechanisms that will enable uninterrupted access to services for NCDs and other chronic conditions, while reducing the risk of serious health complications.

At the Seventy-second World Health Assembly, the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020* was extended to 2030 *(7)*, and a global NCD implementation roadmap (2023–2030) was adopted at the Seventy-fifth World Health Assembly *(8)*.

The Seventy-fourth session of the WHO Regional Committee for South-East Asia decided to extend the *Regional action plan for the prevention and control of NCDs, 2013–2020 (9)* to 2030, taking into account the targets set in the 2030 Agenda for Sustainable Development. Decision SEA/RC74(2) also requested that the Regional Director develop a regional implementation roadmap for the prevention and control of NCDs, taking into account digital innovations and the context of the COVID-19 pandemic *(10)*.

Scope of roadmap

The implementation roadmap provides strategic direction and tools with a view to prioritizing and accelerating high-impact interventions that are feasible within the national context. It provides guidance for prevention and control of NCDs, including links and tools for easy access. It will be available on the SEAR

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6 Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic: November–December 2021. Interim report, 7 February 2022. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/351527).

7 Decision WHA72(11). Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. In: Seventy-second World Health Assembly. Geneva, 20–28 May 2019. Resolution and decisions annexes. Geneva: World Health Organization; 2019:49–50 (WHAT72/2019/REC/1; https://apps.who.int/iris/handle/10665/331821).

8 Document WHA75(11). Agenda item 14.1. Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Adopted at the Seventy-fifth World Health Assembly. Geneva: World Health Organization; 2022 (WHA75(11); https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75(11)-en.pdf).

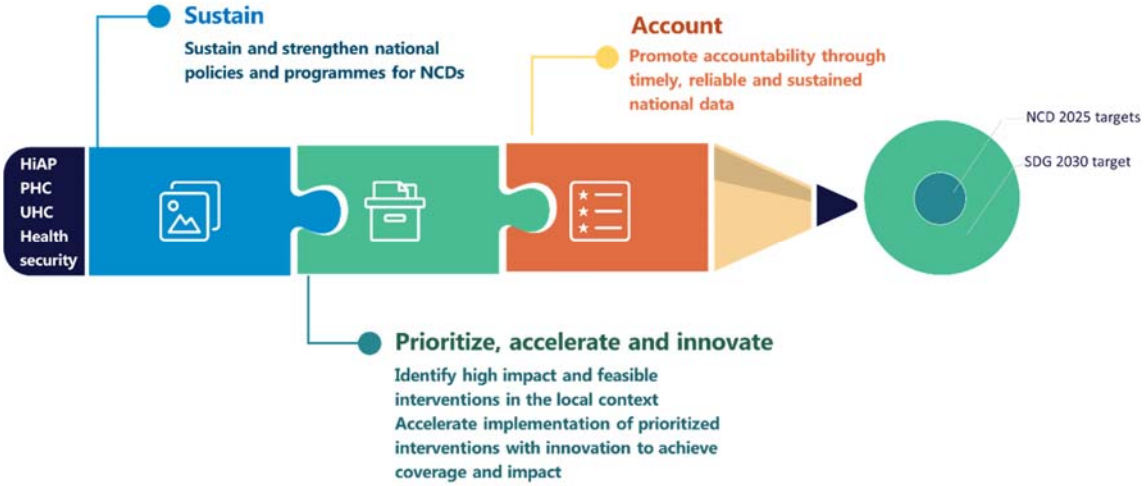
9 Action plan for the prevention and control of noncommunicable diseases in South-East Asia, 2013–2020. New Delhi: WHO Regional Office for South-East Asia; 2013 (https://apps.who.int/iris/handle/10665/333817).

10 SEA/RC74(2). Accelerating progress on prevention and control of NCDs including oral health and integrated eye care in the WHO South-East Asia Region. In: Decisions. New Delhi: WHO Regional Office of South-East Asia; 2021 (https://apps.who.int/iris/bitstream/handle/10665/345273/sea-rc74-decisions-eng.pdf?sequence=1&isAllowed=y).

NCD web portal and as a phone app. The web portal will also feature good practice from countries. Both portal and app will be regularly updated with additional guidance as it is produced. All actions proposed for Member States and WHO in the regional NCD action plan 2013–2020 remain valid until 2030.

The scope of the roadmap is summarized in Fig. 1. The web portal and app will include a simulation tool that will help to identify context-specific impactful interventions and their contribution to attaining the SDG 3.4 target. Implementation of the interventions will be supported by a combination of WHO guidance and tools, which will also be updated with new products and guidelines.

Fig. 1. WHO SEARO NCD roadmap 2022–2030

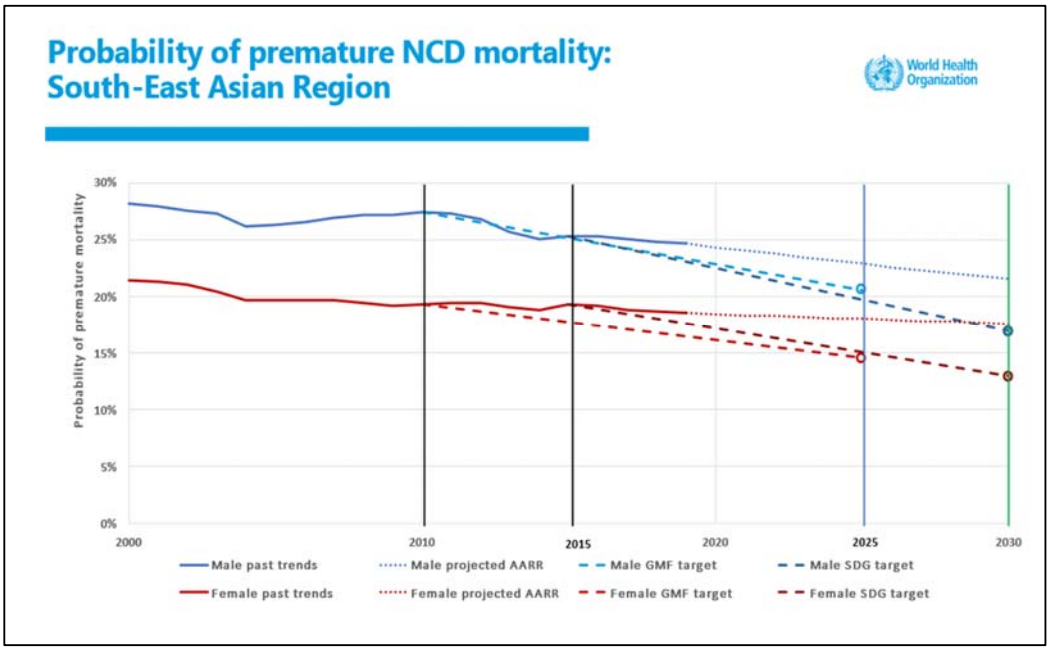


2. Progress and challenges in NCD prevention and control in WHO South-East Asia Region

The *Action plan for the prevention and control of noncommunicable diseases in South-East Asia, 2013–2020* adopted the NCD 2025 targets and the 10 NCD progress monitoring indicators. Updated information is available from the global mortality database to track NCD premature mortality, and the NCD country capacity survey carried out in 2021 provides the status of the national response *(11)*.

In South-East Asia Region, the probability of dying from cardiovascular diseases (CVDs), cancers, diabetes and chronic respiratory diseases between the ages of 30 and 70 years declined from 23.4% in 2010 to 21.6% in 2019, the decline being slightly greater in males than in females (Fig. 2). At the current rate of decline, the region is not on track to achieve the 2025 NCD and the 2030 SDG 3.4 targets. The ongoing COVID-19 pandemic may have impacted trends, and indicates the clear need for an acceleration of NCD prevention and control.

Fig. 2. Trends in probability of premature mortality due to NCDs in the WHO South-East Asia Region (2000–2019) among males and females



11 Noncommunicable diseases: progress monitor 2022. Geneva: World Health Organization 2022 (https://apps.who.int/iris/handle/10665/353048).

Fig. 3 presents the status of NCD progress monitoring for countries in the South-East Asia Region based on data collected in 2021 *(11)*. Progress is monitored within the objectives of the *Action plan for the prevention and control of noncommunicable diseases in South-East Asia, 2013–2020 (9)*.

Fig. 3. Progress on prevention and control of NCDs in the South-East Asia Region, 2021

No	Indicators	BAN	BHU	DPR Korea	IND	INO	MAL	MMR	NEP	SRL	THA	TLS	SE Asia Region status: Fully achieved	Partially achieved	Not achieved
1	National NCD targets	●	●	●	●	○	●	●	●	●	●	●	10	0	1
2	Mortality data	○	○	○	◐	○	◐	○	○	◐	◐	○	0	4	7
3	Risk factor surveys	◐	●	●	◐	◐	◐	◐	●	◐	◐	◐	3	8	0
4	National integrated NCD policy/strategy/action plan	●	●	●	●	○	●	●	●	●	●	●	10	0	1
5	Tobacco demand reduction measures														
5.a	increased excise taxes and prices	◐	○	○	◐	◐	◐	○	○	●	●	○	2	4	5
5.b	smoke-free policies	◐	◐	◐	◐	◐	◐	◐	●	◐	●	◐	2	9	0
5.c	large graphic health warnings/plain packaging	●	○	○	●	◐	◐	◐	●	●	●	●	6	3	2
5.d	bans on advertising, promotion and sponsorship	◐	◐	○	◐	○	●	◐	●	◐	◐	◐	2	7	2
5.e	mass media campaigns	◐	○	◐	◐	●	○	●	○	○	●	●	4	3	4
6	Harmful use of alcohol reduction measures														
6.a	restrictions on physical availability	◐	●	NR	◐	◐	●	◐	◐	●	●	◐	4	6	0
6.b	advertising bans or comprehensive restrictions	●	●	NR	NR	●	●	NR	○	●	●	○	6	0	2
6.c	increased excise taxes	◐	○	NR	NR	●	●	NR	●	◐	◐	◐	3	4	1
7	Unhealthy diet reduction measures														
7.a	salt/sodium policies	○	○	○	◐	◐	○	○	○	●	●	○	2	2	7
7.b	saturated fatty acids and trans-fats policies	○	○	○	○	○	○	○	○	○	◐	○	0	1	10
7.c	marketing to children –restrictions	○	○	○	●	○	●	○	○	○	●	○	3	0	8
7.d	marketing of breast milk substitutes restrictions	●	○	○	●	◐	●	◐	◐	◐	◐	○	3	5	3
8	Public education and awareness campaign on physical activity	○	○	●	●	○	●	○	●	●	●	○	6	0	5
9	Guidelines for management of cancer, CVD, diabetes and CRD	◐	●	◐	●	●	○	●	◐	●	●	●	7	3	1
10	Drug therapy/counselling to prevent heart attacks and strokes	○	○	●	DK	○	●	○	○	○	●	○	3	0	7

Source: Noncommunicable diseases progress monitor 2022.

●-Fully achieved ◐–partially achieved ○ -not achieved **NR-** No response; **DK** -Don't know

Source: Noncommunicable disease: progress monitor 2022 *(11)*

Countries in the Region have prioritized prevention and control of NCDs and, in 2021, 10 of the 11 countries had set time-bound national targets and had an operational multisectoral national strategy or action plan.

Tobacco use, harmful use of alcohol, unhealthy diet, physical inactivity and air pollution are the five risk factors common to NCDs. While most countries have made some progress in policy development for the five risk factors included in the regional action plan, progress is uneven across risk factors and between countries. There is still a substantial policy gap between the current level and the best achievable level; this needs to be closed as soon as possible in order to control the risk factors and achieve the targets by 2030.

In 2021, six countries had implemented standardized packaging and/or graphic health warnings on all tobacco packages, while only two countries had enforced comprehensive bans on tobacco advertising,

promotion and sponsorship. Similarly, according to MPOWER report *(12)*, all countries had initiated tobacco reduction measures, although some were only partially achieved. The information collected, however, does not constitute a thorough and complete legal analysis of each country's legislation, and information may be incomplete about Member States where subnational governments play an active role in tobacco control.

The policy commitment from countries to address obesity is strong; the *Strategic action plan to reduce the double burden of malnutrition in the South-East Asia Region 2016–2025* [13]was endorsed at the 69th session of the WHO Regional Committee for South-East Asia Region *(14)*. The mid-term assessment of the plan showed progress in strengthening policy and legislative frameworks to address the food environment as well as surveillance, but significant resource constraints exist.

Reduction of salt consumption at the population level is a cost-effective "best buy" intervention. Ten countries have set national salt/sodium reduction targets aligned to the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (15)*, and have identified baseline population mean salt/sodium intake. However, progress on reducing salt/sodium consumption is slow. Three countries have implemented front-of-pack labelling to empower consumers to make healthier choices. Four countries have implemented settings-based actions to reduce salt, and two countries have initiated actions to reformulate foods. The major source of salt/sodium in the region is through discretionary salt, and six countries have implemented national public education and awareness campaigns.

In 2021, one country had partially achieved adoption of national policies that limit saturated fatty acids to eliminate industrially produced trans fatty acids (TFA). However, best practice policies to eliminate trans fatty acids had been legislated in two more countries by 2022, and three other countries were making progress towards elimination of trans fatty acids.

As reported in 2019, almost half the countries in the Region had imposed bans on advertisements and restrictions on the physical availability of alcohol, according to SAFER – an action package prioritizing five

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12 WHO report on the global tobacco epidemic, 2021: addressing new and emerging products. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/343287).

13 Strategic action plan to reduce the double burden of malnutrition in the South-East Asia Region 2016–2025. New Delhi: World Health Organization; 2017 (https://apps.who.int/iris/handle/10665/253377).

14 SEA/RC69/R5. Strategic action plan to reduce the double burden of malnutrition in the South-East Asia Region 2016–2025. New Delhi: WHO Regional Office for South-East Asia; 2016 (https://apps.who.int/iris/handle/10665/250287).

15 Global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization; 2013 (https://apps.who.int/iris/handle/10665/94384).

high-impact interventions outlined in the *Global strategy to reduce harmful use of alcohol (16)*. Overall, the SAFER composite score varied from 31.3 to 68.3 for countries in the Region *(17)*. This shows substantial policy space to further strengthen policies to prevent alcohol-related morbidity and mortality in the Region.

The roadmap for implementing the global action plan on physical activity in the WHO South-East Asia Region supports countries on initiatives to address physical inactivity *(18)*. Six countries have taken up national communication campaigns to promote physical activity. Activities in schools and workplaces are also progressing in different parts of the Region, often through the health-promoting schools and the healthy cities platforms, which support comprehensive actions for risk factor reduction.

About 63% of households in the Region still rely on solid fuels, which leads to unacceptable levels of household air pollution. More than 92% of the cities in the Region recorded PM2.5 levels much higher than WHO air-quality guideline levels. As of 2021, 11 cities across four countries had joined the BreatheLife Network, which is promoting and sharing clean air solutions that will have significant impact on people living in these cities, now and in the future *(19)*. Fuel subsidies and other programmes have helped to double the rate of access to clean cooking in two countries.

Progress has been made in most Member States in strengthening health systems for NCDs. Evidence-based national guidelines for the management of major NCDs through a primary care approach were reported from seven countries in the 2022 NCD progress monitor, while three reported a partially implemented approach. Coverage of drug therapy and counselling for eligible persons at high risk was reported by only three countries. Most of the progress was made by improving the availability of needed diagnostics and medicines in primary health care facilities in the public sector *(20)*.

Among the four NCDs, diabetes is showing an increasing trend, and the premature mortality attributable to diabetes mellitus is also on the increase. There are major gaps in the detection, diagnosis and management of the disease which need urgent attention. Gestational diabetes mellitus (GDM) needs more attention, as

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16 Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization; 2010 (https://apps.who.int/iris/handle/10665/44395).

17 Making South-East Asia SAFER from alcohol-related harm: Current status and way forward. New Delhi: WHO Regional Office for South-East Asia; 2019 (https://apps.who.int/iris/handle/10665/326535).

18 Roadmap for implementing the global action plan on physical activity in the WHO South-East Asia Region. New Delhi: WHO Regional Office for South-East Asia; 2021 (https://apps.who.int/iris/handle/10665/350966).

19 The Breathelife Network [website] (https://breathelife2030.org/breathelife-cities/, accessed 22 June 2022).

20 Assessing national capacity for the prevention and control of noncommunicable diseases: Report of the 2019 global survey. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/331452).

GDM has increased risk for future diabetes in women. The offspring of women with GDM are also at higher risk of developing cardiometabolic diseases such as heart attack, stroke, diabetes mellitus, insulin resistance and non-alcoholic fatty liver disease. Hypertension control has been taken up recently in some countries and has demonstrated that it is possible to improve the care cascade *(21)*.

CVD, including stroke, is still the main contributor to premature NCD mortality. In addition to preventing the occurrence of heart attack and stroke, adequate infrastructure, capacity and financial protection models are needed to provide acute care and to prevent mortality.

Cancer as a cause of death is on the increase, and lung, breast, oral, cervix and colorectal cancers are of concern. Tobacco smoking and chewing needs more work to reduce tobacco-related cancers. WHO global initiatives on cervical, breast and childhood cancers are being taken up in the Region. Human papillomavirus (HPV) vaccination can help to reduce the incidence of cervical cancer, along with screening and management.

Palliative care is a critical area and efforts are ongoing in all countries, but more work is needed to expand the coverage of palliative care to everyone who needs it.

Member States have made progress in improving monitoring and surveillance for NCDs, with most countries in the Region having conducted at least one population-based survey in the past five years. Progress in developing systems for reliable cause-specific mortality data is still very slow due to inadequate practices for medical certification of "cause of death" for institutional deaths, and a very high proportion of deaths taking place at home.

A review of multisectoral policies and actions in South-East Asia Region in 2018 observed the different approaches used in the Member States *(22)*. The following challenges were identified for effective NCD governance and multisectoral response – diverse sectoral priorities, lack of subnational coordination, limited human resources, unclear expectations to and from collaborators, financial constraints, political challenges and industry interference. The Region has made progress, and a summary SWOT analysis indicates that

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21 India Hypertension Control Initiative. 2021 progress report. April 2020–December 2021. Indian Council of Medical Research, Ministry of Health and Family Welfare, Government of India, World Health Organization India (https://cdn.who.int/media/docs/default-source/india-news/india-hypertension-control-initiative/ihci-annual-progress-report.pdf?sfvrsn=bc13f528_2).

22 Multisectoral coordination mechanisms and responses to noncommunicable diseases in South-East Asia: Where are we in 2018? New Delhi: WHO Regional Office for South-East Asia; 2019 (https://apps.who.int/iris/handle/10665/326082).

there are some challenges, but there are more opportunities and strengths to advance the work on NCD prevention and control (Fig. 4).

Fig. 4. SWOT analysis of NCD prevention and management in South-East Asia Region

Strengths	Weakness
National multisectoral plans and targets Demonstration of progress in areas such as tobacco control NCD services are scaled up in primary health care (PHC) and universal health coverage (UHC) More investments in health sector Good foundation for action with the implementation of the regional NCD action plan	Limited investments for NCD Limitations in the implementation/enforcement of policies and programmes, legislation, regulation and taxation Lack of policy coherence to reduce risk factors Primary care not fully equipped for NCD prevention and control Essential NCD package is insufficiently covered under UHC benefit packages Mechanisms for engaging private sector Limitations in the availability/access to NCD medicines and diagnostics High out-of-pocket and catastrophic health expenditure, mainly due to NCDs Limitations in timely and reliable data to guide action
Threats	**Opportunities**
Commercial determinants Climate change and air pollution Occupational and other health risks Disparities in access Emergencies and humanitarian situations Changes in government structures and priorities	Realization of weakness in NCD care during the pandemic Increase investments in public health and primary health care Digital solutions and use of technology to help in rapid scale up Potential to harness private sector in prevention and management of NCDs Region has major manufacturers and innovators of health care Meaningful engagement of and people living with NCDS

Source: Multisectoral coordination mechanisms and responses to noncommunicable diseases in South-East Asia: Where are we in 2018? *(22)*

3. Structure and function of the implementation roadmap 2022–2030

The WHO South-East Asia Region has laid the foundations for NCD prevention and control. A rapidly changing Region in terms of epidemiological transition and other sociodemographic changes needs an agile and adjustable implementation roadmap to meet the requirements of the countries. The roadmap has been devised as a set of tools and guidance for countries to identify priorities in their local context.

The *Action plan for the prevention and control of noncommunicable diseases in South-East Asia Region, 2013-2020*, to be extended to 2030, contains good guidance and actions, and will remain the basis of the regional NCD response. The vision and goal of the extended regional action plan remain the same (Box 1), but targets set for the regional action plan for 2025 will be extrapolated, and changes made since 2013 will be reflected in the updated set of targets *(23).*

Box 1. Action plan 2013–2030 vision and goals

Vision

For all people of the South-East Asia Region to enjoy the highest attainable status of health, well-being, and quality of life at every age, free of preventable NCDs, avoidable disability and premature death.

Goal

To reduce preventable morbidity, avoidable disability and premature mortality due to NCDs in the South-East Asia Region.

The roadmap will support and sustain progress in prioritizing and accelerating the most impactful interventions, in scaling up digital and other innovations, including those utilized during the COVID-19 pandemic, and in promoting accountability through data to achieve the NCD targets for 2025 and 2030 (Table 1 and Table 2).

23 NCD accountability framework for NCD implementation roadmap. Available from: Noncommunicable disease surveillance, monitoring and reporting [website]. Geneva: World Health Organization (https://www.who.int/teams/ncds/surveillance/monitoring-capacity/gmf).

Table 1. Targets for South-East Region NCD implementation roadmap 2022–2030

Regional NCD action plan indicator		Global targets 2025 [a]	Global targets (extended and updated) for 2030 and rationale [b]	SEAR targets 2030
(i)	A relative reduction in premature mortality from cardiovascular diseases, cancers, diabetes, or chronic respiratory diseases	25%	SDG target on NCDs with 2015 as the baseline and an extrapolation of the 25% relative reduction to 2030 making it 33.3%.	33.3%
(ii)	A relative reduction in the harmful use of alcohol	10%	Updated in the *Global strategy to reduce the harmful use of alcohol* (WHA) with baseline of 2010	20%
(iii)	A relative reduction in prevalence of current tobacco use in persons aged over 15 years	30%	Unchanged	30%
(iv)	A relative reduction in prevalence of insufficient physical activity	10%	Target extended to a 15% relative reduction in prevalence of insufficient physical activity by 2030 as part of the *Global action plan on physical activity* adopted at WHA May 2018	15%
(v)	A relative reduction in mean population intake of salt/sodium	30%	Unchanged	30%
(vi)	A relative reduction in prevalence of raised blood pressure	25%	Unchanged	25%
(vii)	Halt the rise in obesity and diabetes	Keep the rates of 2010	Unchanged	Keep the rates of 2010
(viii)	A relative reduction in the proportion of households using solid fuels (woods, crop residue, dried dung, coal, and charcoal) as the primary source of cooking	50%	Unchanged	50%
(ix)	Eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attack and strokes	50%	Target unchanged. New indicator is updated to reflect new CVD risk projection charts: Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥20%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	50% reflecting the change in threshold
(x)	Availability of affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities	80%	Unchanged	80%

(a) NCD accountability framework for NCD implementation roadmap *(23)*
(b) Action plan for the prevention and control of noncommunicable diseases in South-East Asia, 2013–2020 *(9)*

Table 2. Disease-specific targets agreed at global level

Disease	Targets
Diabetes	Targets to be achieved by 2030 *(24)* • 80% of people with diabetes are diagnosed; • 80% of people with diagnosed diabetes have good control of glycaemia; • 80% of people with diagnosed diabetes have good control of blood pressure; • 60% of people with diabetes of 40 years or older receive statins; and • 100% of people with type 1 diabetes have access to affordable insulin treatment2 and blood glucose self-monitoring.
Cervical cancer	To eliminate cervical cancer, all countries must reach and maintain an incidence rate of below four per 100 000 women. Achieving that goal rests on three key pillars and their corresponding targets *(25)*: 1. Vaccination: 90% of girls fully vaccinated with the HPV vaccine by the age of 15; 2. Screening: 70% of women screened using a high-performance test by the age of 35, and again by the age of 45; and 3. Treatment: 90% of women with pre-cancer treated and 90% of women with invasive cancer managed. Each country should meet the 90–70–90 targets by 2030 to get on the path to eliminate cervical cancer within the next century.
Childhood cancer	To achieve at least a 60% survival and to reduce suffering for all children with cancer by 2030 *(26)*

24 Document EB150/7. Executive Board 150th session. Provisional agenda item 7. Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Report by the Director-General. Geneva: World Health Organization; 2022:18 (EB150/7; https://apps.who.int/gb/ebwha/pdf_files/EB150/B150_7-en.pdf).

25 Cervical cancer elimination initiative [website]. Geneva: World Health Organization (https://www.who.int/initiatives/cervical-cancer-elimination-initiative#cms , accessed 22/6/2022).

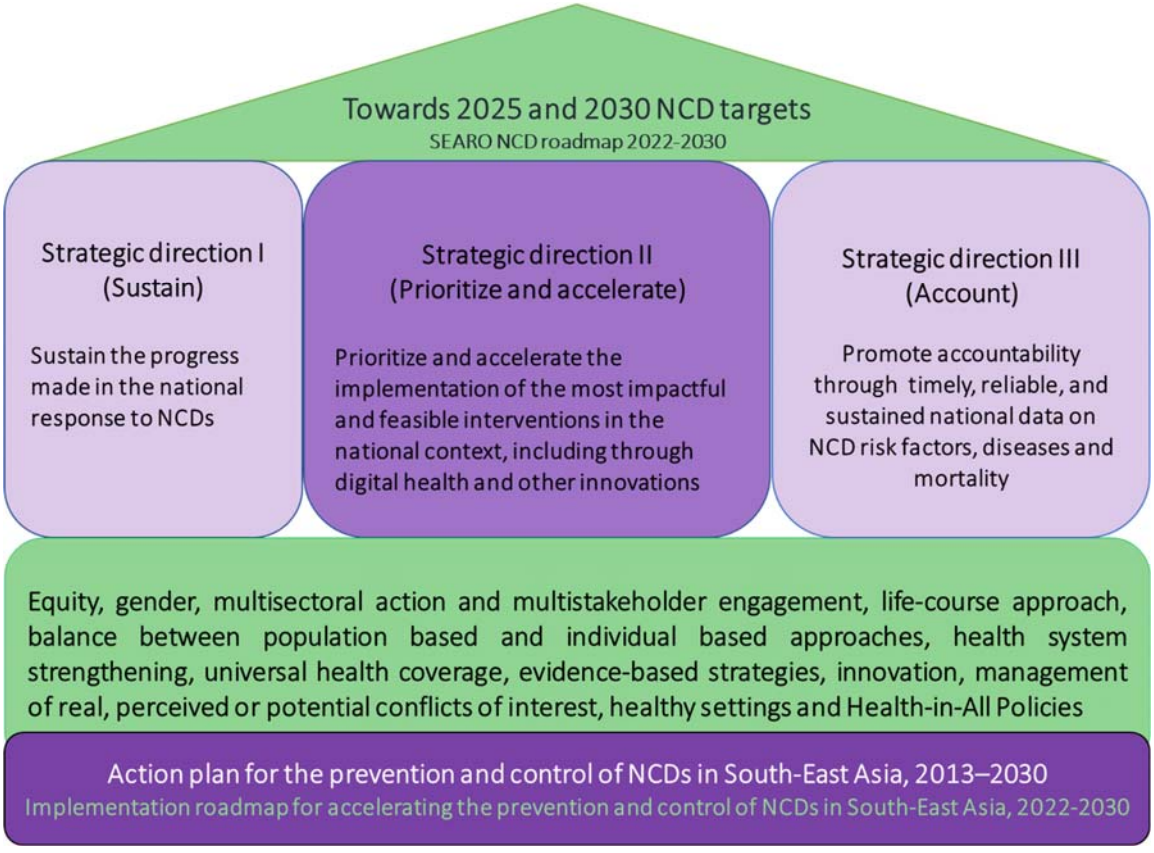
26 CureAll framework: WHO Global Initiative for Childhood Cancer. Increasing access, advancing quality, saving lives. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/347370).

The implementation roadmap has three strategic directions.

1. Sustain the progress made in the national response to NCDs.
2. Prioritize and accelerate the implementation of the most impactful and feasible interventions in the national context, including through digital health and other innovations.
3. Promote accountability through timely, reliable and sustained national data on NCD risk factors, diseases and mortality.

The regional NCD roadmap (Fig. 5) is expected to be a dynamic document, with tools enabling updates as needed. WHO NCD "best buys" and other recommended interventions are being updated and will be included in the roadmap as they become available. In addition to the global NCD roadmap, the South-East Asia Region implementation roadmap for NCDs will be aligned to the regional guidance on NCDs, health systems and related areas.

Fig. 5. SEAR implementation roadmap for NCDs



Strategic direction I: Sustain the progress made in the national response to NCDs

NCD governance, policy, plan, and coordination

Countries in South-East Asia Region have shown their commitment to NCDs through national NCD multisectoral plans. These plans guide a "whole-of-government" approach. They should be updated regularly and should guide focused implementation of policies to prevent NCDs. National mechanisms may be established, as appropriate, to maintain the momentum on multisectoral action.

There should be continued advocacy for a multisectoral approach within countries to address NCDs, including the allocation of adequate finance and human resources. Capacity development initiatives aimed at health and non-health partners and at developing return-on-investment cases for other sectors with a joint analysis of outputs can help in actions from all sectors *(27)*.

There are many noncommunicable diseases and multiple risk factors, requiring the involvement of a wide range of interventions, platforms for action and stakeholders. A strong governance structure is essential to implement, sustain and monitor policies and action plans. A national group can help distil the information and data from many sources and feed it into the national NCD response. A good example is the Country Coordinating Mechanism, a national committee that submits funding applications to the Global Fund and oversees grants on behalf of their country *(28)*. A similar approach could be considered for NCDs. National NCD alliances could support the coordinating mechanism by providing platforms for engaging multiple stakeholders. WHO Global Coordination Mechanism *(29)* is supporting this work and will be producing more guidance *(30)*.

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27 Saving lives, spending less: the case for investing in noncommunicable diseases: methods supplement. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/350971).

28 Country Coordinating Mechanism. The Global Fund [website] (https://www.theglobalfund.org/en/country-coordinating-mechanism/, accessed 22 June 2022).

29 Global Coordination Mechanism on the Prevention and Control of NCDs [website]. Geneva: World Health Organization (https://www.who.int/groups/gcm).

30 Nothing for us, without us: opportunities for meaningful engagement of people living with NCDs: meeting report. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/340737).

NCD risk factor control

Progress in tobacco control in the Region, as indicated by the MPOWER progress report *(31)*, is to be maintained and further strengthened. More focus and targeted actions are needed to address tobacco chewing and electronic nicotine delivery systems.

Interventions to reduce the harmful use of alcohol show a mixed picture, and bans on advertising and reducing the physical availability measures need to be sustained. Illicit alcohol consumption must be addressed in the local context. The *Action plan (2022–2030) to effectively implement the global strategy to reduce the harmful use of alcohol as a public health priority* was approved by the Seventy-fifth World Health Assembly, 2022, and will provide further guidance in this area *(32)*.

Rising rates of obesity is a problem across the Region, and a key risk factor for diabetes and other NCDs. Overweight and obesity are of concern, especially in school-aged children, and overweight is fast replacing underweight as a problem in the adult population, especially in urban areas. Repeated exposure to commercial marketing of unhealthy commodities leads to increased purchase behaviour, especially among children and young adults. Industry is expanding their marketing from traditional to digital media, which is much more difficult to regulate than regular media. WHO is working on evidence gathering and initiating policy conversations on actions to address unhealthy commodities marketed within the online environment. Focus areas include actions to address the diets of infants and young children, and initiatives on diet and physical activity to address all forms of malnutrition. WHO recently developed recommendations for the prevention and management of obesity over the life-course, including additional process targets. The accompanying acceleration plan to control obesity will help countries in prioritizing context-specific actions to address obesity *(33)*.

Health promotion and healthy settings

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31 WHO report on the global tobacco epidemic, 2021: addressing new and emerging products. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/343287).

32 Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Executive Board 150th session. Provisional agenda item 7. Draft action plan (2022–2030) to effectively implement the global strategy to reduce the harmful use of alcohol as a public health priority. Geneva: World Health Organization; 2022 (EB150/7 Add.1, 11 January 2022; https://apps.who.int/gb/ebwha/pdf_files/EB150/B150_7Add1-en.pdf).

33 Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases. Provisional agenda item 14.1. Annex 12. Acceleration plan to support member states in implementing the recommendations for the prevention and management of obesity over the life course. Geneva: World Health Organization; 2022 (A75/10 Add.6, 27 April 2022; https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_10Add6-en.pdf).

Population-level changes will take time to manifest. However, global experience and the scenario in many countries are pointers that strong policy actions are urgently needed. These policies will help to protect the current and next generation. Policies, legislations, regulations and fiscal measures will have to be taken up to overcome the commercial determinants.

Healthy settings, including cities, workplaces and schools are good platforms for mounting multiple interventions to reduce NCD risk factors and promote wellbeing. Setting up of regional platforms (such as exchange programmes and online platforms) for sharing of best practices for implementing the multisectoral action plan would be useful. Interventions for reducing these risk factors need a "whole-of-government" and "whole-of-society" approach, and the updated Appendix 3 of the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (34)*, presenting cost-effective interventions to address NCDs, will provide more guidance. Implementing these interventions at scale and with impact is essential. Health promotion, the encouragement of health literacy and the creation of healthy settings are approaches that help to maximize the implementation of risk-reduction strategies.

WHO South-East Asia Region adopted the regional plan for implementation of the global strategy on health, environment, and climate change at the Regional Committee in 2019 *(35)*. Countries in the Region can address air pollution through a multipronged approach and learn from experience within the region.

Secure funding and institutionalization of health promotion are needed at country level to diminish the health, social and economic costs from NCDs and create well-being for all.

Strengthening health systems to combat NCDs

Primary health care is the foundation of an NCD-ready health system. Most of the NCDs can be prevented, detected early and optimally managed to prevent complications and premature death within a well-performing primary health care. Hypertension and diabetes control and cervical cancer screening have all shown some progress in the countries in the Region and the measures adopted can be scaled up. Tracer indicators, such as hypertension control at different levels of the care cascade, can tell the story and help in taking the right decisions. Vaccination for HPV is a powerful intervention for supporting the elimination of

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34 Draft Updated Appendix 3 of the WHO Global NCD action plan 2013–2030. WHO Discussion Paper (version dated 8 June 2022). Geneva: World Health Organization; 2022 (https://cdn.who.int/media/docs/default-source/ncds/mnd/2022_discussion_paper_final.pdf?sfvrsn=78343686_7).

35 Regional plan of action for the global strategy on health, environment and climate change 2020–2030: healthy environments for healthier population. New Delhi: WHO Regional Office for South-East Asia; 2019 (https://apps.who.int/iris/handle/10665/327924).

cervical cancer as a public health problem. Civil society engagement using a rights-based approach to NCD services can help to strengthen the demand side of health services.

Universal health coverage is the means to ensure equitable and affordable health care. A context-specific NCD intervention package should be part of the universal health coverage benefit package. Countries can identify the interventions relevant to them and strengthen the building blocks of their health systems at primary, secondary and tertiary level to ensure that NCD services can be delivered equitably without financial burden to the people. Timely and appropriate referral, with options to manage complications of NCDs, including diagnostic and therapeutic capacity, is important. Deaths from heart attacks and stroke can be reduced with optimal referral systems. Reducing delay in cancer diagnosis and treatment can lead to improvement in cancer survival and quality of life.

Strategic direction II: Prioritize and accelerate the implementation of the most impactful and feasible interventions in the national context, including through digital health and other innovations

Prioritization

There are many interventions available for the prevention and control of NCDs. Cost-effectiveness analysis is useful, but it has limitations and should not be used as the only basis for decision-making. When selecting interventions for the prevention and control of noncommunicable diseases, consideration should be given to effectiveness, cost-effectiveness, affordability, implementation capacity, feasibility, local context, health equity, and the need for a combination of population-wide policy interventions and individual interventions. Demonstration of impact by high coverage, and the speed and scale of implementation provide learnings that can help in further scale up *(36)*.

Prioritization is important, as coverage of NCD services is generally lower, and out-of-pocket costs higher, than for services for reproductive, maternal, neonatal and child health, and for infectious diseases.

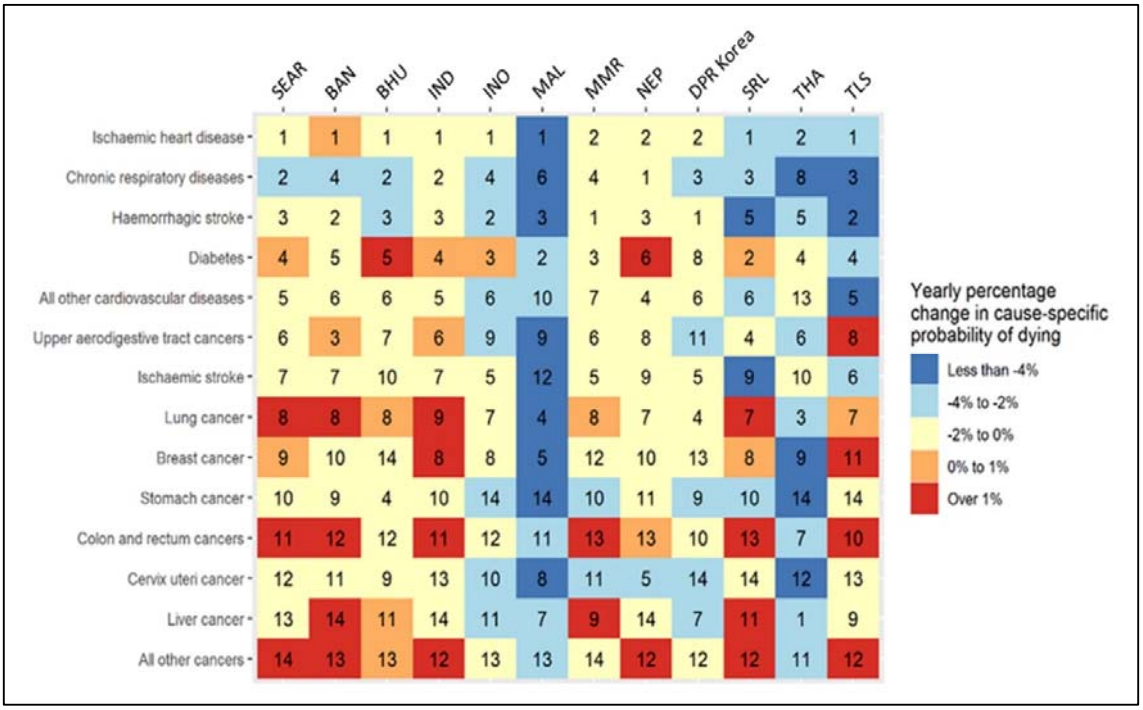
Diseases and conditions contributing to NCD premature mortality

Policy-makers could consider the relative burden of disease in their prioritization exercise. Some conditions will be more important in a particular country than in others. Fig. 6 provides rankings of specific NCD causes in the South-East Asia Region Member States. While cardiovascular diseases are top causes of NCD mortality

36 Making fair choices on the path to universal health coverage: final report of the WHO consultative group on equity and universal health coverage. Geneva: World Health Organization; 2014 (https://apps.who.int/iris/handle/10665/112671).

in some countries, other conditions may warrant special consideration. The numbers in this figure show the rank of each specific cause as a contributor to overall mortality from NCDs in 2019. The colours show the historical annual rates of change (2015–2019) for each cause. Meeting the SDG 3.4 target requires at least a 2.7% annual rate of decline in mortality from each NCD. The light and dark blue colours imply that a country is on track to achieving the target for that cause, and the yellow, orange, and red colours imply that a country is off track. Conditions listed are indicative, and grouping them as the four major NCD categories may change the order. The main purpose is to consider such analysis with detailed national data.

Fig. 6. Yearly percentage change in cause-specific probability of dying



Cost-effectiveness of interventions

WHO is updating the menu of policy options (updated in 2017 as *"Best buys" and other recommended interventions for the prevention and control of noncommunicable diseases (37)*) The 2022 update will revise,

37 Tackling NCDs: "best buys" and other recommended interventions for the prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2017 (https://apps.who.int/iris/handle/10665/259232).

add and reanalyse the interventions. The process of updating and the details are provided on the WHO website *(38)*.

NCD impact simulation tool

The WHO SEARO Impact Simulation Tool *(39)* has been developed to assist member states in the region prioritize different NCD interventions for their national NCD response *(40)*. The tool uses the intervention list, modelling approach, and data inputs from NCD Countdown 2030 *(41)*. Various tabs in the tool guide the user through the process of reviewing data inputs, specifying key parameters (e.g. baseline and target coverage) and visualizing results. The tool is meant to be an input to the policy dialogue process, not a prescription for specific actions. It is not meant to supplant the expertise of various technical working groups or units (e.g. departments of planning) within ministries of health. The tool includes estimates of the unit cost to the health system of each intervention, taken from the literature. These unit cost estimates can be replaced with local data, e.g. from primary micro costing studies or OneHealth Tool [https://www.who.int/tools/onehealth] costing spreadsheets. Care should be taken to align the local cost data with the descriptions of the interventions. The tool uses the population model described previously to provide projections of costs between 2023 and 2030, including "incremental costs" (i.e. additional costs required to scale up the interventions) and "total costs" (i.e. current spending plus incremental costs).

In addition to the current and target coverage levels of each intervention, which impact the incremental and total costs, the tool also includes a parameter specifying the current and target share of out-of-pocket costs for each intervention. Efforts to reduce out-of-pocket costs, especially for interventions in the high-priority category, will be reflected in the incremental and total costs above and beyond the costs of simply scaling up the interventions at their current levels of out-of-pocket spending.

Achieving the SDG 3.4 target will require countries to scale up interventions faster than has been observed historically. The tool includes a parameter for each intervention that specifies the rate of increase in

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38 Updating Appendix 3 of the WHO global action plan for the prevention and control of noncommunicable diseases 2013–2030 [website] (https://www.who.int/teams/noncommunicable-diseases/updating-appendix-3-of-the-who-global-ncd-action-plan-2013-2030/).

39 WHO SEARO NCD Impact Simulation Tool [online tool]. New Delhi: WHO Regional Office for South-East Asia (https://dcp-uw.shinyapps.io/SEARO_NCD/, accessed 22 June 2022).

40 Pickersgill SJ, Watkins DA, Mikkelsen B, Varghese C. A tool to identify NCD interventions to achieve the SDG target. Lancet Glob Health. 2022;10(7):e949–e950. https://doi.org/10.1016/S2214-109X(22)00124-3.

41 Bennett JE, Kontis V, Mathers CD, Guillot, M, Rehm J, Chalkidou K, Kengne AP et al. NCD Countdown 2030: pathways to achieving Sustainable Development Goal target 3.4. Lancet. 2020;396(10255):918–934. https://doi.org/10.1016/S0140-6736(20)31761-X .

population coverage of each intervention. The default coverage increase is set at 2% per year: a 16% increase in coverage between 2023 and 2030. For reference, most low- and middle-income countries have had increases in hypertension treatment coverage of less than 1% per year; the best-performing countries have had increases of just under 2% per year. Coverage of antiretroviral drug therapy has typically increased at between 4% and 5% per year, and represents an upper limit of what is logistically feasible during the SDG period until 2030. The choice of scale-up rate has a direct impact on the likelihood of achieving the SDG 3.4 target: the faster the increase in coverage, the greater the benefits of the intervention on population mortality, but at higher incremental cost.

Acceleration

Primary health care

Comprehensive Primary Health Care is the means to address NCDs. To adequately respond to the needs of people with NCDs and enable proactive population management, primary care in many settings will need to change (Fig. 3). Primary care services should be tailored to a defined catchment population to enable continuity of care and responsiveness to the changing disease burden. The size of the catchment population for primary care can be determined by the disease burden, population density, the health workforce model, and available resources. Transforming the current model of care to make primary health care the main provider of care for NCDs will require more efficient use of existing resources and, in many cases, additional resources for health services, with an increase in infrastructure, medical products, trained/skilled health workers, health information systems, and managerial capacity directed to primary care. Appropriate policy changes are needed for medical/health-worker education and professional regulation to strengthen and expand primary care *(42)*.

While devolving prescriptive powers to mid-level, non-physician care providers, two aspects need to be considered: dispensing rights vs prescriptive rights; and clear definition of training, certification, and the context in which such prescriptive powers can be implemented.

It is important to prioritize resource allocations for prevention of NCDs and for primary health care strengthening to bring in the desired impact. The *South-East Asia regional strategy for primary health care: 2022–2030* provides Member States with guidance on facilitating primary health care-orientation through the identification of seven values and 12 strategic actions that collectively embody the philosophy and

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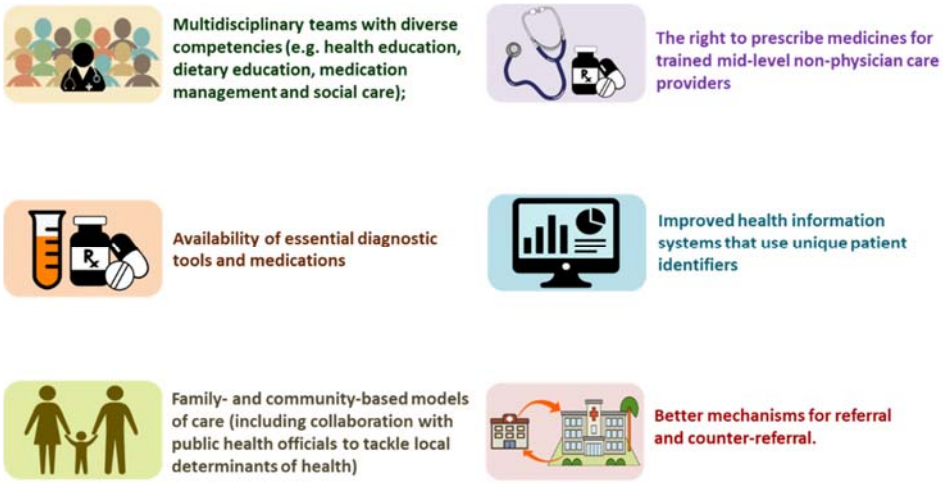
42 Varghese, C, Nongkynrih, B, Onakpoya, I, McCall, M, Barkley, S, Collins, TE. Better health and wellbeing for billion more people: integrating non-communicable diseases in primary care. BMJ. 2019;364:l327. doi: https://doi.org/10.1136/bmj.l327.

practice of primary health care, enunciated in the 1978 Declaration of Alma-Ata and reaffirmed in the 2018 Declaration of Astana *(43)*.

Fig. 7. Elements to be augmented in primary care to prevent and control NCDs



Integration

NCD prevention and control need not be a standalone programme. In fact, there are many health programmes where NCD interventions can fit in well, as illustrated in Fig 4. An integrated approach can also provide an opportunity to learn from other health sectors (e.g. HIV, tuberculosis) through case studies on community engagement mechanisms.

Palliative care is a crucial part of integrated, people-centred health services. National health systems are responsible for including palliative care in the continuum of care for people with chronic and life-threatening conditions, linking it to prevention, early detection, and treatment programmes. Palliative care needs to be provided in accordance with the principles of universal health coverage.

A phased approach is needed for integration and must be relevant to the context. Interventions can also be seen as relevant to the life course, as presented in the *WHO menu of cost-effective interventions for mental*

43 South-East Asia regional strategy for primary health care: 2022–2030. New Delhi: WHO Regional Office for South-East Asia; 2021 (https://apps.who.int/iris/handle/10665/350460).

health (44) and the *WHO global air quality guidelines (45)* can be considered, along with other NCD interventions, as appropriate to the local context.

The need to establish, strengthen and facilitate referral mechanisms with objective thresholds for referral up and down the system are an important aspect for consideration. Good referral systems can help maximize the use of expertise and health care infrastructure in line with the complexity of the disease being managed. A "hub and spoke model" can arrange service delivery assets into a network consisting of an anchor establishment (hub), which offers a full array of services, complemented by secondary establishments (spokes), which offer more limited service arrays, routing patients needing more intensive services to the hub for treatment.

Integration of NCD services with existing programmes

NCD control programmes can no longer be viewed as stand-alone. There is undoubtedly a co-existence of NCDs with other conditions; for example, comorbidity with TB and HIV is well established, and in many countries bi-directional screening under TB or HIV control programmes has already been implemented. HPV vaccination for cervical cancer prevention can be integrated with the country's national immunization programme. Gestational diabetes is an important condition to be addressed, which can be integrated with maternal care services. Cross-cutting areas, such as nutrition, are essential not only for the control of childhood obesity but for other disease conditions as well. All these can be integrated in the existing nutrition programmes. This holistic approach will also help to promote efficient disease control systems.

Life-course approach to addressing NCDs

Many of the NCDs experienced in adulthood stem from exposures early in life. Though major NCDs are often associated with older age groups, evidence suggests that they affect people of all ages. NCD prevention begins with the antenatal period, and proper nutrition that starts from infancy through childhood will have a long-lasting effect. Similarly, physical activity is required through all phases of life. Air pollution has detrimental effects on all stages of life, though manifestation of its effect may be seen later in adulthood. Other risk behaviours, such as tobacco use, alcohol consumption and certain sexual behaviours, need to be addressed in all stages of life. A life-course approach that considers the needs of all age groups and

44 WHO menu of cost-effective interventions for mental health. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/343074).

45 WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/345329).

addresses NCD prevention and control in its earliest stages is therefore essential for prevention-control of NCDs.

Implementation research

Implementation research investigates the various factors that affect how a new policy or intervention may be used (or implemented) in real-life settings. The focus of an evaluation of the implementation process is on the type and quantity of policies and interventions delivered, the beneficiaries of those policies and interventions, the resources used to deliver the policies and interventions, the practical problems encountered, and the ways in which such problems were resolved. Implementation research should be embedded in all stages involving the selection, adaptation and evaluation of policies or interventions for the prevention and control of NCDs.

It is also important for the knowledge created to be shared among policy-makers, implementers and researchers through cross-country and cross-sectoral platforms and collaborations. The WHO publication *A guide to implementation research in the prevention and control of noncommunicable diseases* provides more operational details *(46)*.

Universal health coverage

Progressive realization of universal health coverage can contribute to the achievement of the right to health. Consideration of the positive value of financial risk protection is particularly relevant for NCD priority-setting, given the long-term cost implications for the patient and their household. The 2019 global monitoring report indicates that there has been no pronounced progress for the NCD component since 2000 and this situation will have to be addressed in all countries *(47)*.

Those seeking to improve NCD service delivery through essential health benefit packages should consider the following eight principles. Essential benefit package design should be:

1. impartial, aiming for universality;
2. democratic and inclusive, with public involvement, including from disadvantaged populations;
3. based on national values and clearly defined criteria;
4. data driven and evidence-based, and should include revisions in light of new evidence;
5. respect the difference between data analysis, deliberative dialogue and decision;

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46 A guide to implementation research in the prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2016 (https://apps.who.int/iris/handle/10665/252626).

47 Primary health care on the road to universal health coverage: 2019 global monitoring report. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/344057).

6. linked to robust financing mechanisms;
7. include robust service delivery mechanisms that can promote quality care; and
8. open and transparent in all steps of the process, and decisions should be clearly communicated *(48)*.

Sustainable financing is required for countries to support population-level interventions and reduce the unmet need for services and financial hardship arising from out-of-pocket payments. Countries should incrementally increase the allocation for health and, within that, for NCDs. This also involves improving the effectiveness of catalytic funding support. Out-of-pocket expenditure can be reduced only when NCDs are well covered under financial protection schemes in countries.

Meaningful involvement of the private sector, quality of care and outcome-based information collection are important elements that need to be addressed. Public–private partnership is one option, but approaches such as engaging private care to replicate the primary care centres as per national guidance and other such options can be considered.

Shifting public sector spending towards primary health care interventions, which form the backbone of universal health coverage, requires not only financial resources but strong political and logistical commitments. Achieving universal health coverage is not merely a financial, technical, or rhetorical issue; successful national initiatives to provide genuine universal health coverage will require strong social movements and political leadership, among other factors *(49)*.

Scaling up digital solutions and innovations and aligning with ongoing programmes

COVID-19 has significantly affected delivery of health services in South-East Asia Region, and abrupt disruption of health services has affected individuals living with NCDs. These disruptions have resulted in increased use of digital health solutions and highlighted the role of health innovations for delivery of health services, for self-management and remote care. A recent review of digital health innovations for NCD management during COVID-19 has identified that telemedicine was the most frequently used digital health

48 Strengthening NCD service delivery through UHC benefit package: technical meeting report, Geneva, Switzerland, 14–15 July 2020. Geneva: World Health Organization; 2020:20 (https://apps.who.int/iris/handle/10665/338690).

49 Watkins DA, Qi J, Kawakatsu Y, Pickersgill SJ, Horton SE, Jamison T. Resource requirements for essential universal health coverage: a modelling study based on findings from Disease Control Priorities, 3rd edition. Lancet Glob Health. 2020. https://doi.org/10.1016/S2214-109X(20)30121-2 .

innovation for NCD management during the pandemic (93%), followed by targeted client communication (59%) and personal health tracking *(50)*.

The pandemic has also resulted in significant lifestyle changes for people living with NCDs, especially among those with diabetes and with risk factors for cardiovascular diseases. Interventions for self-management play an important role in mitigating the worsening of existing conditions due to, for instance, limited opportunities for outdoor physical activities.

Digital health innovations can effectively support integrated-care models for NCDs, and embedding them within health care delivery systems is a promising approach to improving sustainability.

Digital health should be an integral part of health priorities and benefit people in a way that is ethical, safe, secure, reliable, equitable and sustainable. It should be developed with principles of transparency, accessibility, scalability, replicability, interoperability, privacy, security and confidentiality.

The WHO *Global strategy on digital health 2020–2025* highlights the "digital determinants of health", such as digital literacy, access to communication technologies, including equipment, broadband and the internet are critical to preventing and addressing the digital divide *(51)*.

Digital health interventions can perform a useful function in ensuring continuity of care, an easy-to-use referral mechanism, and optimization of resources to match disease complexity. There is a need for countries to develop guidelines on telemedicine practice to streamline use of digital tools for health care delivery – while safeguarding patient and provider interests.

Civil society organizations continue to be an important stakeholder for a robust NCD prevention and control movement. They can develop shadow reports on national NCD targets, with on-the-ground updates on what is reported by the Member States. The strength of civil society organizations in engaging with communities should be leveraged in order to develop a network of persons living with NCDs and champions from the community to lead policy and programme action to create resilient health systems.

South-East Asia Region toolkit for supporting implementation

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50 Murthy, S, Kamath, P, Godinho, MA, Gudi, N, Jacob, A, John, O. Digital health innovations for non-communicable disease management during the COVID-19 pandemic: a rapid scoping review. BMJ Innovations. 2022. doi: https://doi.org/10.1136/BMJINNOV-2021-000903.

51 Global strategy on digital health 2020–2025. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/344249).

Achieving the SDG 3.4 target will require countries to scale up interventions faster than has been observed historically, and WHO has developed initiatives, guidance, and tools to help in the implementation of NCD prevention and control. The toolkit is a collation of 50 guidance documents and tools (Annex) and will be available on the web portal and phone app.

Strategic direction III: Promote accountability through timely, reliable and sustained national data on NCD risk factors, diseases, and mortality

NCD monitoring and evaluation takes place in three domains: risk factors, morbidity and mortality, and the readiness and response of national systems. These domains must be taken up as an integral part of the NCD policies, strategies and plans. Plans and actions without data is not helpful in NCDs. Unlike communicable diseases, immunization, and maternal and child health domains, where some systems for routine and reliable data collections are available, NCD data collection is often sporadic and not institutionalized.

Data and information from many sectors are needed for NCD prevention and control and should be one of the key areas in a national multisector plan and implementation mechanism. Depending on the national context, this may be a major step for national authorities. Dedicated resources and institutional capacity building are essential for ensuring timely and reliable data collection, analysis and use. Disaggregated data and data covering subnational areas are needed to develop targeted advocacy and actions.

NCD policy and programme monitoring

In May 2013, the Sixty-sixth World Health Assembly adopted the comprehensive global monitoring framework for the prevention and control of noncommunicable diseases *(52)*. This allows the monitoring of trends and assessment of progress made in the implementation of national strategies and plans on noncommunicable diseases. With the extension of the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020* to 2030, the global monitoring framework was updated, with targets aligned to 2030 *(**Error! Bookmark not defined.**)*. The South-East Asia Region NCD roadmap will adopt the targets for 2030, as given in Table 2. There are additional disease-specific targets, which are helpful in specific disease areas, and these will also serve as tracer conditions.

52 Resolution WHA66.10. Follow-up to the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. In: Sixty-sixth World Health Assembly, Geneva, 20–27 May 2013: resolutions and decisions. Geneva: World Health Organization; 2013:16–21 (WHA66/2013/REC/1; https://apps.who.int/iris/handle/10665/150207).

NCD risk factors

Investing in surveillance and monitoring is essential to obtain reliable and timely data at national and subnational levels through regular NCD risk-factor surveys and country-capacity assessments to prioritize interventions, assess implementation and learn from the impact of NCD prevention and control.

It is recommended that national surveys use standardized methods designed to capture multiple risk factors and provide a more granular assessment of the on-the-ground situation in relation to national policies and programmes. Opportunities to collect NCD-related information in other related surveys are encouraged. Surveys should also be planned to provide reliable disaggregated estimates to identify vulnerable and hard-to-reach groups to ensure that no one is left behind.

Morbidity and disease registries

Disease registries and health facility-level data, as appropriate, are critical for prioritizing and selecting the most appropriate and cost-effective interventions for NCD prevention and control. Cancer registries have shown the way, and the experience can be used for other conditions.

Strengthening reliable vital registration and civil registration systems, and improvements in medical cause of death reporting are essential for good-quality data. Strengthening systems for collecting cause-specific mortality data on a routine basis is essential for tracking the progress towards the targets. Dedicated resources and institutional capacity-building are essential for ensuring timely and reliable data from all sectors, including the private sector.

Country-specific accountability frameworks can be considered, in alignment with the WHO NCD accountability framework *(**Error! Bookmark not defined.**)*. Development and execution of a regional implementation research agenda to achieve universal health coverage for NCD services through the development of a South-East Asia Region NCD delivery network will also be a means to use the data collected. WHO will update the status of NCD prevention and control through a web portal to bring together data from different sources and render it comparable to allow tracking of global, regional, and country progress.

Data for action and accountability

Research into implementation is a tool that must be used in NCD prevention and control as many interventions are relatively new and only through testing them on the ground can countries learn about the challenges and opportunities. Evaluation of NCD programmes should consider outcome and impact in addition to the monitoring of progress. Impact will take time, but having a good grip on the indicators will help to strengthen accountability and spur action across sectors. NCD data should be included as an integral

component of the national and subnational health information systems aligned with the WHO SCORE package *(53)*.

53 SCORE for health data technical package [online tool]. Geneva: World Health Organization (https://www.who.int/data/data-collection-tools/score, accessed 22 June 2022).

4. Adapting the implementation roadmap to strengthen the national response to NCDs

The strategic directions of the roadmap provides guidance which can be adapted to the national context. Countries can consider establishing a national "think tank", or a Country Coordinating Mechanism, a national committee that submits funding applications to the Global Fund and oversees grants on behalf of its country, to ensure commitment and functional synergies across sectors *(28)*.

More energetic advocacy is required, including from civil society, for NCDs to be addressed in a multisectoral manner. Country-specific national strategic plans can be developed using the roadmap as a guide.

Member States can assess the status of NCD prevention and control, using data on NCD mortality, risk factor prevalence, country capacity surveys and health system capacity. Measures that can be taken include conducting a SWOT analysis and identifying areas for improvement and areas that are working well; holding a national workshop with relevant stakeholders to present the data and to get more insights into programme implementation; and studying the financial utilization in the programme and identifying bottlenecks.

The WHO SEARO NCD Impact Simulation Tool *(39)* can be used to study different interventions: their impact on premature mortality reduction at varying levels of coverage, and the costs associated with it. This exercise will help to identify some priority interventions that can be scaled up. This will also help in addressing the challenges and be preparation for scaling up other interventions. The roadmap will be available through the web portal and on the app to facilitate easy access to the tools and resources.

The SEARO NCD Impact Simulation Tool can also be used to prioritize high-impact and feasible interventions using relative burden and cost-effectiveness as criteria. Based on feasibility and impact, it is important to increase the depth and reach of interventions to achieve the desired impact.

The NCD toolkit app provides links to over 50 WHO guidance documents and online tools (Annex).

WHO will work closely with Member States and partners in the South-East Asia Region to operationalize the roadmap in the national context. At the global level, WHO is updating the menu of policy interventions through cost-effectiveness analysis and will update the set in 2022. Global initiatives on NCDs will also provide guidance on specific areas. The Regional Office for South-East Asia will bring out the roadmap as a web and mobile web app to make it easy to access the different tools and resources. WHO will update the NCD data portals and will also work on country-specific NCD data portals for easy access to data. At the

national level, WHO will work with national governments and partners to adapt the steps in the roadmap with technical support. There will be opportunities to learn across countries and from global good practices.

Menu of actions for a national response

Governance, plans, partnership, coordination

1. Raise public and political awareness, understanding and practice about prevention and control of NCDs.
2. Integrate NCDs into the social and development agenda and poverty alleviation strategies
3. Strengthen international cooperation for resource mobilization, capacity-building, health workforce training and exchange of information on lessons learned and best practices.
4. Assess national capacity for prevention and control of NCDs and develop and implement a national multisectoral policy and plan for the prevention and control of NCDs through multi-stakeholder engagement.
5. Strengthen national capacity including human and institutional capacity, leadership, governance, multisectoral action and partnerships for prevention and control of NCDs.
6. Engage and mobilize civil society and the private sector as appropriate and strengthen international cooperation to support implementation of the actions at national levels.

Reducing risk factors

1. Reduce tobacco use.
    a. For the Parties to the WHO Framework Convention on Tobacco Control (WHO FCTC):
        i. Strengthen the effective implementation of the WHO FCTC and its protocols.
        ii. Establish and operationalize national mechanisms for coordination of the WHO FCTC implementation as part of national strategy with specific mandate, responsibilities and resources
    b. For the Member States that are not Parties to the WHO FCTC:
        i. Consider implementing the measures set out in the WHO FCTC and its protocols, as the foundational instrument in global tobacco control.
        ii. Scale up the implementation of 'best-buys' and other recommended interventions as per the national context.
2. Reduce the harmful use of alcohol.
    a. Implement the WHO global strategy to reduce harmful use of alcohol through multisectoral actions in the recommended target areas.
    b. Strengthen leadership and increase commitment and capacity to address the harmful use of alcohol.

c. Increase awareness and strengthen the knowledge base on the magnitude and nature of problems caused by harmful use of alcohol by awareness programmes, operational research, improved monitoring and surveillance systems.

a. Adapt the global action plan (2022-2030) to effectively implement the global strategy to reduce the harmful use of alcohol as a public health priority.

3. Reduce unhealthy diet.

    a. Implement the global strategy on diet, physical activity and health.

    b. Implement the WHO recommendations on the marketing of foods and non-alcoholic beverages to children.

    c. Adapt and implement the WHO technical packages on salt reduction and elimination of trans fat.

4. Reduce physical inactivity.

    a. Implement the global strategy on diet, physical activity, and health.

Strengthening health systems for NCD management and universal health coverage

1. Integrate very cost-effective noncommunicable disease interventions into the basic primary health care package with referral systems to all levels of care to advance the universal health coverage agenda.

2. Explore viable health financing mechanisms and innovative economic tools supported by evidence.

3. Scale up early detection and coverage, prioritizing very cost-effective high-impact interventions including cost-effective interventions.

4. Train the health workforce and strengthen the capacity of health systems, particularly at the primary care level, to address the prevention and control of noncommunicable diseases.

5. Improve the availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases, in both public and private facilities.

6. Strengthen and orient health systems to address noncommunicable diseases and risk factors through people-centred health care and universal health coverage.

7. Develop and implement a palliative care policy, including access to opioids analgesics for pain relief, together with training for health workers.

Surveillance and monitoring

1. Strengthen human resources and institutional capacity for surveillance and monitoring and evaluation.

2. Establish and/or strengthen a comprehensive noncommunicable disease surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response.

3. Integrate noncommunicable disease surveillance and monitoring into national health information systems.

4. Evaluate progress of the programme implementation and provide guidance for action.

Cross-cutting areas

1. Promote digital health as an integral part of health priorities and benefit people in a way that is ethical, safe, secure, reliable, equitable and sustainable.

2. Develop and implement a prioritized national research agenda for noncommunicable diseases, with a focus on implementation research.

3. Strengthen human resources and institutional capacity for research.

Annex. NCD toolkit

Domain	WHO guidance	Weblink
Advocacy, partnerships, and leadership	Toolkit for developing a multisectoral action plan for NCDs	https://apps.who.int/ncd-multisectoral-plantool/
	Establishing country-level NCD multisectoral mechanisms	https://apps.who.int/iris/handle/10665/312110
	Country capacity survey and progress monitor	https://apps.who.int/iris/handle/10665/352358.
	NCD progress monitor	https://apps.who.int/iris/handle/10665/353048.
	Saving lives, spending less: the case for investing in noncommunicable diseases	https://apps.who.int/iris/handle/10665/350971
	It's time to invest in cessation: The global investment case for tobacco cessation	https://apps.who.int/iris/handle/10665/348534
	WHO FCTC MPOWER (tobacco control measures)	https://www.who.int/initiatives/mpower
	SAFER (alcohol)	https://www.who.int/initiatives/SAFER
	SHAKE Technical Package for Salt Reduction	https://apps.who.int/iris/handle/10665/250134
	WHO global sodium benchmarks for different foods categories	https://apps.who.int/iris/handle/10665/341081
	Committing to salt reduction: a toolkit for action	https://www.who.int/southeastasia/health-topics/healthy-diet/actions-for-salt-reduction
	REPLACE – an action package to eliminate industrially produced trans fat from the global food supply; outlines six strategic action areas	https://www.who.int/teams/nutrition-and-food-safety/replace-trans-fat
	Global database on the implementation of nutrition action (GINA)	https://extranet.who.int/nutrition/gina/en
	Levels and trends in child malnutrition: UNICEF/WHO/World Bank joint child malnutrition estimates (2021).	https://apps.who.int/iris/handle/10665/341135
	Nutrition Landscape Information System (NLIS).	https://apps.who.int/iris/handle/10665/332223.

Health promotion and risk reduction	Country profile indicators. Interpretation guide (2019)	
	Digital Marketing- CLICK	https://www.euro.who.int/__data/assets/pdf_file/0008/396764/Online-version_Digital-Mktg_March2019.pdf
	Nutrient profile model WHO SEARO	https://apps.who.int/iris/handle/10665/253459
	Physical activity: The global action plan on physical activity 2018–2030	https://apps.who.int/iris/handle/10665/272722
	WHO guidelines for indoor air quality	https://apps.who.int/iris/handle/10665/141496
	Clean Household Energy Solutions Toolkit (CHEST)	https://www.who.int/tools/clean-household-energy-solutions-toolkit#
	Health taxes to improve health and national prosperity	https://apps.who.int/iris/handle/10665/275715
	Partnership for Healthy Cities	https://partnershipforhealthycities.bloomberg.org/
	Urban HEART: Urban Health Equity Assessment and Response Tool	https://apps.who.int/iris/handle/10665/79060
	Health cities: an effective approach to a rapidly changing world. Organizing and implementing healthy cities	https://apps.who.int/iris/handle/10665/331946
	Making every school a health-promoting school	https://apps.who.int/iris/handle/10665/341907
	Health literacy toolkit	https://apps.who.int/iris/handle/10665/205244
	WHO Package of Essential NCD interventions (WHOPEN)	https://apps.who.int/iris/handle/10665/334186
	PEN Training modules for primary health care workers	https://apps.who.int/iris/handle/10665/274260
	The HEARTS technical package	https://www.who.int/publications/i/item/hearts-technical-package
	Guideline for the pharmacological treatment of hypertension treatment in adults	https://apps.who.int/iris/handle/10665/344424
	Global Diabetes Compact	https://apps.who.int/iris/handle/10665/331710
	Ageing and health in the South-East Asia Region	https://www.who.int/southeastasia/health-topics/ageing
	Guide to cancer early diagnosis	https://apps.who.int/iris/handle/10665/254500

Health systems strengthening	Global Strategy to Accelerate the Elimination of Cervical Cancer	https://apps.who.int/iris/handle/10665/336583
	Regional implementation framework for elimination of cervical cancer as a public health problem: 2021–2030	https://apps.who.int/iris/handle/10665/344762
	Cervical Cancer Elimination Initiative Knowledge Repository	https://www.who.int/initiatives/cervical-cancer-elimination-initiative
	Human Papillomavirus (HPV) vaccine	https://www.who.int/news/item/11-04-2022-one-dose-human-papillomavirus-(hpv)-vaccine-offers-solid-protection-against-cervical-cancer
	Screening and treatment recommendations	https://apps.who.int/iris/handle/10665/342365
	WHO Global Initiative for Childhood Cancer	https://www.who.int/docs/default-source/documents/health-topics/cancer/who-childhood-cancer-overview-booklet.pdf
	The Global Breast Cancer Initiative (GBCI)	https://www.who.int/publications/m/item/the-global-breast-cancer-initiative-gbci
	The Global Initiative for Cancer Registry Development (GICR)	https://gicr.iarc.fr/about-the-gicr/
	Setting Up a Cancer Centre: A WHO–IAEA Framework	https://www.iaea.org/publications/15052/setting-up-a-cancer-centre-a-who-iaea-framework
	Integrating palliative care into PHC	https://apps.who.int/iris/handle/10665/274559
	Implementing palliative care	https://apps.who.int/iris/handle/10665/250584
	UHC compendium - Repository of interventions for Universal Health Coverage	https://www.who.int/universal-health-coverage/compendium
	NCD kit for emergencies	https://apps.who.int/iris/handle/10665/272964
	STEPwise Approach to NCD Risk Factor Surveillance (STEPS)	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps
	The Global Adult Tobacco Survey (GATS)	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-adult-tobacco-survey
	The Global Youth Tobacco Survey (GYTS)	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-youth-tobacco-survey
	Tobacco Questions for Surveys (TQS)	https://www.who.int/publications/i/item/9789241500951
	The Global school-based student health survey (GSHS)	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey

Surveillance, monitoring and evaluation and research	Global School Health Policies and Practices Survey	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-health-policies-and-practices-survey
	Service Availability and Readiness Assessment (SARA)	https://www.who.int/data/data-collection-tools/service-availability-and-readiness-assessment-(sara)?ua=1
	Harmonised Health Facility Assessment (HHFA)	https://www.who.int/data/data-collection-tools/harmonized-health-facility-assessment
	mHealth Assessment and Planning for Scale- (MAPS)	https://apps.who.int/iris/bitstream/handle/10665/185238/9789241509510_eng.pdf?sequence=1
	SCORE for Health Data Technical Package	https://www.who.int/data/data-collection-tools/score
	Guide to Implementation Research in NCDs	https://apps.who.int/iris/handle/10665/252626

Annex 2

Action plan for oral health in South-East Asia

2022–2030

Towards universal health coverage for oral health

(29 July 2022)

World Health Organization
REGIONAL OFFICE FOR South-East Asia

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Acronyms and abbreviations

NCD	noncommunicable disease
PHC	primary health care
UHC	universal health coverage
WASH	water, sanitation and hygiene

1. Introduction

Context

Recognizing the global importance to public health of addressing major oral diseases and conditionspromoting oral health, and the growing body of evidence of the interrelations between poor oral health and noncommunicable diseases (NCDs), in May 2021 the World Health Assembly adopted resolution WHA74/A74/R5 on oral health *(1)* and requested the Director-General to develop a draft Global Strategy on tackling oral diseases, in consultation with Member States.

A *Global Strategy on oral health (2)* was adopted in May 2022 to support Member States in effectively addressing oral diseases and conditions with the vision of integration into universal health coverage (UHC) by 2030. The Global Strategy focuses on six strategic objectives: oral health governance, oral health promotion and oral disease prevention, health workforce, oral health care integrated in primary health care (PHC) and universal health coverage, oral health information systems, and oral health research. A Global Action Plan and a Global Monitoring Framework on oral health will complement the *Global Strategy on oral health* in 2023, together with other technical guidance documents such as evidence-based "best buy" interventions for oral health with proven cost-effectiveness, as requested in Resolution WHA74/A74/R5.

Mandate

The Seventy-fourth session of the Regional Committee for South-East Asia, having considered the Working Paper on Agenda item 8.1, SEA/RC74/6 Rev. 1 *(3)*, on accelerating progress on prevention and control of NCDs, including oral health, noted the progress made in the establishment of oral health programmes and, as a way forward, requested the Regional Director to convene technical consultations to develop a Regional Action Plan on oral health with monitoring framework and measurable targets.

Its mandate is to support Member States in the translation of strategic guidance into appropriate and impactful national actions. The Action Plan has conceptual and policy roots in the previous *Strategy for oral health in South-East Asia, 2013–2020 (4)*, as well as the *Global Strategy on oral health* approved at the Seventy-fifth World Health Assembly *(2)*. It is also focused on addressing the specific oral health challenges of the region.

Disease burden, risk factors, health system capacities and other aspects differ between and within the eleven regional Member States. This Regional Action Plan for oral health therefore proposes a set of core actions that apply to all countries across the region in order to facilitate progress towards universal health coverage for oral health. Additional actions to further strengthen prevention, control and management of

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[1] Resolution A74.R5. Oral health. In: Seventy-fourth World Health Assembly: Geneva, 24 May-1 June 2021: resolutions and decisions, annexes. Geneva: World Health Organization; 2021:12–15 (A74.R5; https://apps.who.int/iris/handle/10665/352594).

[2] Seventy-fifth World Health Assembly. Provisional agenda item 14.1. Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable disease. Annex 3. Draft global strategy on global health. Geneva: World Health Organization; 2022 (A75/10 Add1; https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_10Add1-en.pdf).

[3] SEA/RC74/6 Rev. 1. Seventy-fourth regional committee meeting. Provisional agenda item 8.1. Accelerating progress on prevention and control of NCDs including oral health and integrated eye care in the WHO South-East Asia Region. New Delhi: WHO Regional Office for South-East Asia; 2021 (https://apps.who.int/iris/bitstream/handle/10665/343753/sea-rc74-6Rev1-eng.pdf?sequence=1&isAllowed=y).

[4] Strategy for oral health in South-East Asia, 2013-2020. New Delhi: WHO Regional Office for South-East Asia; 2013 (https://apps.who.int/iris/handle/10665/205929).

oral diseases and conditions are provided, from which Member States may choose and adapt those most appropriate to their context, depending on available resources and capacities.

2. Oral health in the South-East Asia Region

WHO considers oral health to include the state of the mouth and teeth, and of orofacial structures that enable individuals to perform essential functions such as eating, breathing and speaking, and to encompass psychosocial dimensions, such as self-confidence, well-being and the ability to socialize and work without pain, discomfort and embarrassment. Oral health problems have social, economic and psychological consequences with negative impact on quality of life.Oral health varies over the life course from early life to old age, is integral to general health and supports individuals in participating in society and achieving their potential. Poor oral health significantly impacts individuals, families, communities, populations, health systems, economies and societies at large. Oral diseases often have comorbidity with other NCDs. Evidence has shown an association between oral diseases, particularly periodontal disease, and a range of NCDs such as diabetes and cardiovascular diseases. Oral health is therefore an issue of major public health concern worldwide.

Burden of oral diseases in the South-East Asia Region

Oral diseases are highly prevalent and among the most common NCDs in the South-East Asia Region. The disease burden shows strong inequalities, with higher prevalence and severity in poor and disadvantaged populations who generally have lower access to prevention, care and rehabilitation for oral health care and services. In 2019, there were estimated to be more than 900 million cases of untreated dental caries, severe periodontal diseases and edentulism in the region. Prevalence of untreated caries of deciduous teeth among children of one to nine years old was estimated as 43.8%, with an estimated 135 million cases across the eleven Member States. Estimated prevalence of untreated caries of permanent teeth in people over five years of age was 28.7%, translating into 526 million cases. Severe periodontal disease was estimated at 307 million cases, with a prevalence 20.8% among people older than 15 years, while edentulism was estimated at 52.7 million, with a prevalence of 4.1% among people older than 20 years *(5)*.

The South-East Asia region has the highest oral cancer incidence and mortality rates among all WHO regions, with the estimated age-standardized mortality for males (8.1 per 100 000) being more than double the global average (3.7 per 100 000). The incidence rate for males and females at 14.4 per 100 000 and 4.5 per 100 000 respectively, are also more than double the global average (males 7.8 per 100 000 population; females 2.7 per 100 000 population) *(5)*.

Other diseases and conditions, such as oro-facial clefts, dental trauma, diseases of the oral mucosa and oral manifestations of systemic diseases, add to the overall burden.

All countries of the region have shortage of dentistry personnel (dentists, dental assistants dental laboratory technicians) *(5),* and where they are available there is significant geographic misdistribution.

[5] GBD 2019 Human Resources for Health Collaborators. Measuring the availability of human resources for health and its relationship to universal health coverage for 204 countries and territories from 1990 to 2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2022; S0140-6736(22)00532.

Oral health care is often associated with high out-of-pocket expenditure, leading to catastrophic expenditure for poorer households *(6)*.

Strategy for oral health in the South-East Asia Region, 2013–2020, and the status of implementation

Strategy for oral health in South-East Asia, 2013–2020, adopted in 2013, envisioned "For all people of the South-East Asia Region to enjoy the highest attainable status of oral health enabling them to live healthy and productive lives" *(4)*. Two overall targets were:

- a 25% relative reduction of premature mortality from oral cancer by 2025; and
- a 25% relative reduction prevalence of dental caries by 2025.

The plan focused on five strategic objectives: advocacy and partnerships; integration in universal health coverage and community engagement; community involvement; oral health promotion, prevention and healthy settings; and oral health systems development. It had five priority action areas: integration of oral health with NCDs; addressing oral cancer; promotion of oral health through fluorides; increasing and diversifying the oral health workforce; and strengthening of school oral health.

A review of the implementation status of the *Strategy for oral health in South-East Asia, 2013–2020*, was commissioned by WHO in 2020. Information on progress of the strategic objectives in relation to the priority action areas was obtained from the focal points for oral health in the ministries of health of the 11 Member States using a structured questionnaire. Selected key findings were as follows:

- eight of 11 Member States had dedicated oral health policies and a dedicated oral health unit at their ministry of health;
- five Member States had conducted a national oral health survey between 2002 and 2018;
- four Member states had an oral cancer registry, and two had a national screening programme for oral cancer;
- five Member States had an integrated dental workforce in primary health care, two had training programmes on oral health for other professionals;
- five Member States had policies in place to regulate fluoride content in toothpaste;
- 10 Member States had guidelines for promotion of oral health in schools; and
- five Member States had policies for phasing out the use of mercury/dental amalgam in the context of the Minamata Convention on Mercury *(7)*.

The findings revealed unequal implementation progress and persisting oral health challenges for populations in most Member States of the region.

[6] Bernabé E, Masood M, Vujicic M. The impact of out-of-pocket payments for dental care on household finances in low and middle income countries. BMC Public Health. 2017;17:109.

[7] Minamata Convention on Mercury [website] (https://www.mercuryconvention.org/en).

3. An overview of the Action lan

Underlying principles of the *Action Plan for oral health in South-East Asia, 2022–2030,* are summarized in Table 1. The plan comprises six broad strategic action areas, with three core actions relevant to all countries and a set of additional actions that are optional depending on needs, national priorities and resources available. The countries are invited to adapt the plan to accelerate the national response with a view to achieving the agreed targets and promoting universal coverage for oral health.

Vision

Universal coverage for oral health for all people of the South-East Asia Region by 2030, empowering them to enjoy the highest attainable state of oral health and enabling them to live healthy and productive lives.

Goal

To guide and support Member States and partners to accelerate the implementation of appropriate and impactful actions on comprehensive oral health care in the South East Asia Region.

Targets

Based on the guidance of the WHO NCD Accountability Framework, including Global Monitoring Framework for NCD prevention and control in alignment with the extension of the NCD Global Action Plan to 2030 (8) and considering the non-progress of the Region on the targets of the *Strategy for oral health in South-East Asia, 2013–2020* , the Action Plan adopts two overall targetswith 2013 as the baseline:

- Target 1: a 33.3% relative reduction of premature mortality from oral cancer by 2030
- Target 2: a 25% relative reduction of prevalence of untreated dental caries of permanent teeth by 2030

See Appendix 1 for the definitions of the targets.

Guiding principles

The *Action Plan for oral health in South-East Asia, 2022–2030* is founded on four guiding principles that provide a framework for planning integrated, appropriate and impactful actions to promote oral health, and to prevent and control oral diseases and conditions and to achieve universal coverage for oral health.

Public health approach

A public health approach to oral health is based on clear prioritization of interventions that maximize benefits for the largest number of people by addressing the diseases and conditions of major public health concern for the region. This includes a foundation on the best available evidence and a focus on upstream actions to address social and commercial determinants of oral health.

[8] https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/who-ncd-accountability-framework-for-ncd-implementation-roadmap.pdf?sfvrsn=346fb61b_1&download=true

Equity focus, life-course and people-centred approach

Oral health is part of the human right to health. People must be empowered to maintain their oral health throughout their life-course by the creation of health-promoting environments, a reduction in risk factors and in the influence of social and commercial determinants of oral health, and the provision of a realistic mix of preventive and curative services that addresses the needs of all age groups and populations. The reduction of inequities and the protection of vulnerable and disadvantaged population groups is of particular concern.

Integration of oral health in primary health care and NCDs

Improving equity and achieving universal health coverage in oral health requires a health system focus on achieving universal availability and access to an identified set of quality and essential oral health services that are fully integrated with primary health care and the prevention and control of NCDs, while ensuring that other essential oral health care services are available across other levels of care and can be accessed by people through a referral system. The aim is to provide preventive, curative and rehabilitative services at different levels of the health care system, and to foster progressive realization from essential to comprehensive oral health services for all across the life-course.

Leadership, collaboration and accountability

Addressing the persisting oral health challenges requires bold and strong political and professional leadership to initiate and implement the required health system reforms and policy actions. Collaboration with general health, social, education, economic, financial, environmental and other relevant stakeholders will enhance the impact of actions on the wider determinants of oral health. Comprehensive data collection and monitoring and evaluation allows for data-driven decision-making, outcome assessment and overall accountability of policy actions.

Table 1. Overview of the *Action pPlan for oral health in South-East Asia, 2022–2030*

<table>
<tr><td colspan="2">Vision: Universal coverage for oral health for all people of the South-East Asia Region by 2030, empowering them to enjoy the highest attainable state of oral health and enabling them to live healthy and productive lives</td></tr>
<tr><td colspan="2">Goal: To guide and support Member States and partners to accelerate the implementation of appropriate and impactful actions on comprehensive oral health care in the South East Asia Region</td></tr>
<tr><td>Target 1: a 33.3% relative reduction of premature mortality from oral cancer by 2030</td><td>Target 2: a 25% relative reduction of prevalence of untreated dental caries of permanent teeth by 2030</td></tr>
<tr><td colspan="2">Guiding principles
Public health approach; equity focus, life cycle and people-centred approach; integration with primary health care and NCDs; leadership, collaboration and accountability</td></tr>
<tr><td colspan="2">Monitoring & Evaluation</td></tr>
</table>

4. Strategic action areas

The *Action Plan for oral health in South-East Asia, 2022–2030* identifies six broad strategic action areas, building on the *Strategy for oral health in South-East Asia, 2013–2020*, and aligning with the *Global strategy on oral health (2)*. For each of the six strategic action areas, three core actions are suggested that are relevant to all countries aiming to achieve the targets. The plan is complemented by a set of additional actions that may be chosen for implementation, depending on needs, national priorities and resources available (Appendix 2).

1. Oral health governance, leadership and resources

Leadership for improving oral health and effective management capacities at ministry of health and all levels of the system is crucial, guided by a dedicated sector policy and supported by financial resource allocations and partnerships within and outside the health sector.

Expected outcomes: Improved awareness and leadership among policy makers and stakeholders, strengthened policy guidance and capacity for accelerated implementation of actions to improve oral health.

Core actions

1.1 Establish an effective **national oral health coordinating entity** within the ministry of health, led by a skilled national chief dental/oral health officer.

Rationale: Effective planning and management of resources and programmes for oral health require a dedicated, qualified, functioning and well-resourced national oral health unit within the ministry of health, fully integrated with existing internal structures and working closely with those in other relevant public health areas, such as NCDs, maternal and child health, school health, and others. The entity should posses the capacity to conduct stewardship function to work with private sectors.

1.2 Develop, update or review the **national oral health policy**, integrated with and contributing to other health sector policies (such as NCDs, primary health care or universal health coverage) and based on broad stakeholder consensus; and, wherever possible, fully costed over time.

Rationale: Policy guidance reflecting the needs and capacities of the health sector is important to provide a vision for oral health relevant for all populations and sectors of society. It is also the basis for increasing advocacy and awareness and defines the roles and responsibilities of stakeholders and partners.

1.3 Establish/increase dedicated **budget allocations for oral health** to ensure implementation of evidence-informed oral health policy provisions and to expand coverage of essential services.

Rationale: Financial resources for oral health within and outside the health sector are crucial to ensure provision of essential oral health services at all levels, to strengthen workforce and capacities, and to support the implementation of settings that promote oral health. Oral health as a public good should be a priority in the distribution of government resources; partnerships within and outside the health sector can also be an important resource.

2. Oral health promotion and oral disease prevention, life-course disease priorities and healthy settings

Addressing the oral disease burden through oral health promotion and oral disease prevention and strategies across the entire life-course and through health-promoting settings is fundamental to improving oral health.

Expected outcomes: Population-based strategies for prevention of oral diseases, risk reduction, and oral health promotion across the life-course and in key settings are in place and contribute to reducing the burden of oral diseases.

Core actions

2.1 Establish **population-based strategies for oral disease prevention, risk reduction, oral health promotion and effective exposure to appropriate fluorides;** recognizing the specific needs of high-risk, disadvantaged and vulnerable groups such as mothers, children, the elderly, refugees and people with disabilities.

Rationale: Evidence based population-based strategies to address the social and commercial determinants and risk factors for oral health, fully integrated with other relevant NCD prevention strategies, is key to addressing the main oral diseases. Reducing the intake of sugars and increasing exposure to appropriate fluorides are the most important evidence-based measure to address dental caries. Taxation of food and drinks high in sugar, and other measures to address high sugars intake, as well as regulations to address availability, quality and affordability of fluoride toothpaste and other community-based interventions, ensuring appropriate exposure to fluorides, are important in this context.

For several countries in the region, lip and oral cavity cancer is a particular public health problem. Accelerating and scaling up evidence-based interventions to reduce the use of smokeless tobacco, betel nut and harmful alcohol consumption are imperative.

2.2 Align and integrate with other programmes to address **common oral diseases and risks across the life-course**, including giving particular attention to early detection of lip and oral cavity cancer

Rationale: The burden of oral diseases has specific age-related patterns across the life-course from early childhood to old age. Oral health interventions can be integrated into other health programmes, such as those for mother and child health, vaccination programmes, routine health screenings, geriatric care.

For several countries of the Region, cancer of the lip and oral cavity is a particular public health problem, requiring screening programmes of at-risk people for premalignant oral conditions and oral cancers, linked to timely diagnostic work-up such as laboratory tests or biopsy for tissue diagnosis.

2.3 Strengthen and expand **health-promoting environments** in schools, workplaces and communities

Rationale: Policies and activities that facilitate working, learning and living in environments conducive to health are of high public health importance. Schools and other education settings, workplaces and other community settings are particularly relevant for oral health promotion. An oral-health-in-all policy approach fosters physical environments more conducive to health and empowers populations to focus on improving their own oral health and wellbeing. This includes universal access to at least basic water, sanitation and hygiene (WASH) services.

Particular attention should be paid to strengthen school oral health programmes to expand the scope of services to include promotional, preventive and treatment interventions. The WHO Health Promoting Schools initiative provides guidance on appropriate school health activities and the integration of oral health interventions in existing school health programmes *(9)*.

[9] Health promoting schools [website]. Geneva: World Health Organization (https://www.who.int/health-topics/health-promoting-schools).

3 Oral health workforce for universal coverage for oral health

Integrated oral health workforce planning, innovative approaches to addressing shortages and distribution imbalances in the oral health workforce, and measures to enable a team approach to service provision based on competency-based education and flexible task-shifting arrangements are crucial prerequisites to ensuring quality essential oral health services for universal health coverage.

Expected outcomes: Increased availability of a skilled, motivated oral health workforce able to deliver essential and advanced oral health services at all levels of the health care system, responding to population needs and priorities.

Core actions

3.1 Ensure **integrated oral health workforce planning** as part of national health workforce strategies and foster holistic workforce planning responding to population needs, including measures to ensure quality of oral health professional training

Rationale: Integrating oral health workforce planning as part of national health workforce planning can address shortages and misdistributions of oral health professionals, thereby strengthening the role of government in ensuring quality professional training across public and private training institutions.

3.2 **Design effective workforce models** that will likely involve a new mix of dentists, mid-level oral health care providers (such as dental assistants, dental nurses, dental prosthetists, dental therapists and dental hygienists), community-based health workers and other relevant health professionals who have not traditionally been involved in oral health care, such as primary care physicians and nurses. Review and strengthen definitions of oral health professions and their scope of practice to enable effective, flexible and competency-based service delivery as a wider oral health team at all levels of the health system; and develop related legislation to ensure compliance and implementation. The new WHO *Global competency framework for universal health coverage (10)* should guide the development of health workforce models for oral health.

Rationale: Effective workforce models which involve a new mix of dentists, mid-level oral health care providers will contribute to overcoming the dentist-led model of oral health care.

Clear definitions of oral health professions, including their required competencies, skills, training and scope of practice helps to improve quality of care by enabling a population- and patient-centred, team-based health workforce that can flexibly respond to changing population needs at all levels. Defining roles and responsibilities of non-dentists/non-dental providers assigned to provide ensures patient safety.

A reorientation of education and training programmes towards skills-based education is required to ensure that knowledge, skills and attitudes of non-dentist health workers involved in dental care are available to deliver the needed essential oral health services.

[10] Global competency framework for universal health coverage. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/352710).

3.3 **Engage both public and private oral health providers** in establishing effective models of oral health care delivery by defining clear roles and responsibilities, contracting and financing mechanisms with the aim of maximizing population coverage of essential oral health care services.

Rationale: Depending on the national situation and resources, a sustainably financed mix of public and private oral health services should be developed to expand population coverage, particularly for marginalized and disadvantaged populations so that essential oral health services are universally available, accessible, and affordable without financial hardship. Expanded coverage of quality essential oral health services contributes to reducing the risks from illegal unlicensed providers and quacks.

4 Essential oral health care and universal coverage for oral health

WHO defines essential oral health care as a set of safe, cost-effective interventions at the individual and community levels to promote oral health, as well as to prevent and treat the most prevalent and/or severe oral diseases and conditions, including appropriate rehabilitative services and referral *(2)*. Defining the service components of essential oral health services comprising preventive, promotive, curative and rehabilitative services appropriate to the country context, and identifying the services that can be integrated into primary health care is key to achieving universal health coverage. Achieving universal health coverage also requires functioning facilities, availability and affordability of essential supplies and medicines.

Expected outcomes: Essential oral health care and universal health coverage through universal availability and coverage of defined evidence-based and cost-effective essential oral health interventions and services that meet priority population needs at primary health care levels, and the provision of advanced services at higher levels of the health care system accessible through a functioning referral system.

Core actions

4.1 Define a package of evidence-based and cost-effective **essential oral health interventions** in response to population needs.

Rationale: Essential oral health interventions are those that address the most common population needs, covering promotive, preventive, curative and rehabilitative services. Which bundle of essential oral health interventions is delivered through different levels of a health care system depends on needs and resources available for a given setting or country. The spectrum of oral health services to address the most common population needs are presented in Appendix 3 to guide Member States in designing service packages based on their national priorities and available resources.

4.2 Improve access to essential oral health care of the entire population, particularly in underserved areas by **integrating essential oral health care in primary health care**, existing or emerging universal health coverage frameworks and in other levels of care.

Rationale: Universal access to essential oral health as part of primary health care is a foundation for addressing inequalities and for improving population coverage. Appropriate oral health care and prevention services should be available and affordable for all, particularly vulnerable, deprived, disadvantaged or remote populations, fully integrated with essential care for NCDs, and aligned with the primary health care system.

4.3 Promote and enable **access to essential dental medicines** as defined in the WHO model list of essential medicines (EML/EMLc) *(11)* by establishing and/or reviewing national lists of essential medicines, where possible, and by taking effective policy measures to ensure universal availability and affordability.

Rationale: The dental medicines included in the WHO model list of essential medicines for adults and children (EML/EMLc) include sodium fluoride, fluoride toothpaste, silver diamine fluoride, glass ionomer cement and are highly cost-effective for addressing dental caries as the most prevalent oral disease across the life-course; they also provide a mercury-free dental restorative material alternative to dental amalgam in the context of the Minamata Convention on Mercury *(7)*, which calls for phasing down of mercury use in oral health facilities.

5. Surveillance, monitoring and evaluation

Availability of timely information related to service performance, integrated surveillance and information systems to provide timely and relevant feedback on oral health to decision-makers for evidence-informed policy-making are fundamental in achieving the targets for oral health.

Expected outcomes: Strengthened evidence-informed policy and service decisions through appropriate and relevant oral health information and programme evaluation

Core actions

5.1 **Integrate and strengthen oral health information**, enhance data quality and timeliness using available health information and disease surveillance systems. Investing on oral health surveys designed to collect data relevant to the national context and programme evaluation is imperative. The establishment of effective cancer registries is particularly important for countries with a high burden of oral cancer.

Rationale: Integrated, relevant and appropriate information systems for oral health planning and management are a crucial foundation to assess risk factors, disease burden and the impact of oral health care services, as well as tracking progress in improving oral health. The oral health module of the WHO STEPS survey should be integrated into community-based surveys to provide essential oral health information *(12)*.

5.2 Ensure effective reporting and **contribution to the Global Strategy on oral health, the Global Action Plan on oral health** and the accompanying Global M**onitoring Framework**.

Rationale: The WHO Global oral health Monitoring Framework is a global mechanism to assess global progress in implementation of the WHO Global Strategy. Effective and transparent accounting for national and regional achievements using agreed targets, indicators and data sources is an important part of the mechanism.

5.3. Strengthen capacities to **translate oral health information into action**.

Rationale: The capacity of oral health planners and decision makers to translate data into action is a crucial element of evidence-informed policy. This includes the capacity of individuals and organizations to identify, filter, analyse, interpret, contextualize and communicate evidence and oral health information to inform policy actions.

[11] World Health Organization model list of essential medicines: 22nd list (2021). Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/345533).

[12] Noncommunicable disease surveillance, monitoring and reporting. STEPS instrument [online tool] (https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps/instrument

6 Oral health research, digital innovation and emerging issues

A focus on public health and population-wide measures supports the improvement of oral health and contributes to achieving universal oral health coverage. At the same time, new digital technologies to improve prevention and patient care are available and have been increasingly used during the COVID-19 pandemic. Other emerging issues, such as the implementation of the Minamata Convention on Mercury *(7)*, environmental sustainability, pandemic preparedness and resilience, antimicrobial resistance, and oral health in the context of humanitarian and other emergencies, require national attention of both public and private sectors.

Expected outcomes: The oral health sector, including oral health research, leverage the opportunities of operational research, digital innovation, and emerging issues of public health relevance.

Core actions

6.1 Strengthen **public health and operational research** as a basis for evidence-informed decision-making, policies and advocacy by establishing research priorities, making dedicated research funding available, and by strengthening the interface between public health science and policy making.

Rationale: For continuous improvement of oral health and oral health care services it is important to sharpen research focus on implementation and evaluation of oral health intervention to inform planning, management and decision making of programmes. This also requires strong and effective exchange interfaces between science and policy practice, as well as incentivizing a focused national and regional research agenda.

6.2 Promote **patient-centred digital innovations** to strengthen oral health care

Rationale: Digital innovations have the potential to expand reach and scope of oral health promotion and disease prevention and access to oral health in remote and underserved populations. They help in the supervision and training of oral health professionals and can support monitoring and evaluation of oral health interventions. The use of digital innovations should lower access thresholds and strengthen self-care, foster inclusiveness and be fully compliant with patient confidentiality, privacy and ethical guidelines.

6.3 Ensure that **emerging issues** such as pandemic preparedness and response, antimicrobial resistance, environmental sustainability and the phase-down of dental amalgam as part of the Minamata Convention on Mercury *(7)* are part of an agenda to strengthen the oral health sector.

Rationale: Strengthening environmental protection and considering aspects of sustainability in oral health care are important contributions to the 2030 Agenda for Sustainable Development. The rigorous implementation of the Minamata Convention on Mercury, including national plans to phase out the use of dental amalgam and other measures, aim to reduce the environmental impact of oral health care. Continuity of essential oral health care services in a pandemic situation requires concerted planning and preparation efforts. Antimicrobial resistance is a major challenge in health care. Oral health professionals have a vital role in addressing the issue through their regular prescription of antibiotics and infection-control measures in clinical settings. Other issues, such as resilience of oral health services in natural disasters, war or migrations contexts, should also be considered.

5. Implementation

The implementation of the *Action Plan for oral health in South-East Asia, 2022–2030* requires the leadership and collective efforts of ministries of health in all Member States, particularly in those countries where policies and systems to address oral diseases are less developed. A functioning national oral health coordinating entity is needed to lead and coordinate efforts of all stakeholders in this context and to ensure that action is taken through a multisectoral response.

Core elements of a national oral health programme

A national oral health unit acts as the central national coordinating entity that is part of the organizational structure of a ministry of health, ideally part of, or associated with, the national programme to address NCDs, and with strong links to programmes overseeing primary health care and universal health coverage. The programme should be adequately staffed and resourced sufficiently to be able to fulfil its roles and responsibilities. The desirable capacities and the core organizational elements mirror the programme's key functions, which should comprise:

1. oral health policy and programme leadership in collaboration and coordination with other health, environmental and other sector programmes;
2. responsibility for oral health services, including delivery, workforce, equipment and facility infrastructure in line with primary health care and universal health coverage;
3. oral health promotion, including healthy settings, risk reduction and effective self-care;
4. surveillance and monitoring, including regular data collection on oral health integrated into national health surveillance and system monitoring;
5. research and innovation, including a national oral health research priority agenda and effective translation of evidence and data to action; and
6. partnerships and civil society engagement, to ensure ownership, alignment and acceleration of efforts.

Appendix 4 illustrates a schematic overview of the fundamental operative and logistical functions of an oral health unit within a ministry of health.

Roles and responsibilities of key stakeholders

The entire national government, related line ministries and a wide range of other stakeholders, including subnational administrations, health regulatory bodies, professional associations, education and training institutions, research entities, civil society organizations, the media, development partners, individuals, families and communities have important roles in promoting oral health and in ensuring tangible action. Roles and responsibilities include leading, managing, supporting, financing, promoting, advocating and communicating aspects related to oral health and improving oral health status. Specific roles and responsibilities of key stakeholders in implementing the *Action Plan for oral health in South-East Asia, 2022–2030* are indicated in Appendix 5.

Role and responsibilities of WHO

In line with its normative and technical mandate, the Regional Office for South-East Asia and country offices will provide the required leadership and coordination to promote and monitor the *Action Plan for oral health in South-East Asia, 2022–2030*. WHO will provide technical support, in collaboration with UN agencies, WHO collaborating centres and other partners to strengthen national responses to the oral disease burden through capacity-building. Additional technical documents and guidance will be

developed to support national implementation in alignment with evolving regional and global policies, in particular with the WHO Global oral health Action Plan, guidance on evidence-based “Best Buys” interventions for oral health and the monitoring framework, which are scheduled for adoption by the World Health Assembly in 2023. WHO will also foster exchange and knowledge transfer among Member States within the region and across WHO regions to enhance horizontal collaboration through lessons learnt and best practices to ensure universal access to oral health for all.

6. Monitoring and reporting on progress

Comprehensive and regular monitoring and reporting on implementation progress of the *Action Plan for oral health in South-East Asia, 2022–2030* will ensure transparency, provide valuable information for planning and resource allocation, and motivate stakeholders to engage. WHO's *Global Strategy on oral health* requests Member States to "improve oral health surveillance, data collection and monitoring to inform decision-making and advocacy" *(2)*. This includes developing and standardizing updated methods and technologies for gathering oral health epidemiological data, integrating electronic dental and medical records and strengthening the integrated surveillance of oral diseases and conditions. It also includes the analysis of oral health system and policy data, operational research and the evaluation of oral health interventions and programmes.

WHO will provide leadership and coordination in monitoring and reporting. Tracking implementation progress towards 2030 of both the *Global Strategy on oral health* and of the *Action Plan for oral health in South-East Asia, 2022–2030*, are equally important. Global Monitoring Framework withIndicators and reporting mechanisms are still evolving. The regioanl monitoring framework to monitor and the porgress of the *Action Plan for oral health in South-East Asia, 2022–2030* will be updated based on the Global Monitoring Framework ensuring close alignment between the global and regional policies to reduce the reporting burden on countries. Oral health information may not always be readily available, yet the strengthening of information systems is part of the proposed actions of this document and Member States are encouraged to improve capacities, processes and indicator alignment.

Annex

Appendix 1	Definition of the targets of the Action Plan for oral health in South-East Asia, 2022–2030
Appendix 2	Suggested core actions and additional actions by strategic action areas,
Appendix 3	Promotive, preventive, curative and rehabilitative oral health services to address the most common population needs
Appendix 4	Schematic overview of the fundamental operative and logistical functions of an oral health unit within a ministry of health
Appendix 5	Roles and responsibilities of key stakeholder groups and partners

Appendix 1
Definitions of the targets of the Action Plan for oral health in South-East Asia, 2022–2030

Target 1: a 33.3% relative reduction of premature mortality from oral cancer by 2030

Indicator
Unconditional probability of dying between ages of 30 and 70 from oral cancer (cancers of the lipand oral cavity)

Definition
Unconditional probability of dying between the ages of 30 and 70 years from oral cancer, defined as the per cent of 30-year-old-people who would die before their 70th birthday from oral cancer assuming that s/he would experience current mortality rates at every age and s/he would not die from any other cause of death).

Data type
Percent

Data source at country level
The preferred data source is death registration systems with complete coverage and medical certification of cause of death. Other possible data sources include household surveys with verbal autopsy, and sample or sentinel registration systems.

Target 2: a 25% relative reduction of prevalence of untreated dental caries of permanent teeth by 2030

Indicator
Estimated prevalence of untreated caries of permanent teeth in people

Definition
Rate of persons with one more carious permanent teeth. Untreated caries is defined as a lesion in a pit or fissure, on a smooth tooth surface, has an unmistakable cavity, undermined enamel, or a detectably softened floor or wall (coronal caries), or feel soft or leathery to probing (root caries)

Data type
Percent

Data source at country level
Population-based surveys, routine surveillance systems

Appendix 2
Suggested core actions and additional actions by strategic action areas

Core action	Additional action

Strategic action area 1: Oral health governance, leadership and resources		
Expected outcomes: *Improved awareness and leadership among policy makers and stakeholders, strengthened policy guidance and capacity for accelerated implementation of actions to improve oral health*		
Core and additional actions		
1.1	**Establish an effective national oral health coordinating entity led by a dedicated and skilled national Chief Dental Officer or focal person**	
1.1.1	Institute an oral health unit to provide essential policy, technical, surveillance, management, coordination and advocacy functions	
1.1.2	Appoint a skilled and dedicated technical officer for oral health in the ministry of health	
1.1.3	Establish and support appropriate management structures for oral health services at the national and subnational level	
1.2	**Develop, update or review national oral health policy; if possible fully costed**	
1.2.1	Ensure a valid national oral health policy or strategy is available (newly established, updated, standalone or part of wider NCD policies)	
1.2.2	Develop an oral health policy implementation plan, including monitoring and evaluation framework	
1.2.3	Provide a fully costed budget plan for implementation of the oral health policy	
1.2.4	Ensure orientation of all administrative levels of the health system based on the national oral health strategy through briefings, circulars, ordinances etc	
1.3	**Establish/increase dedicated budget allocations for the implementation of the oral health policy**	
1.3.1	Provide dedicated budget for national oral health unit and programme activities	
1.3.2	Provide oral health budget for subnational levels	
1.3.3	Plan for regular budget increases to strengthen oral health services	
1.3.4	Initiate or support implementation of health taxes, including earmarked revenue for oral health	
Strategic action area 2: Oral health promotion and oral disease prevention, life-course disease priorities and healthy settings		
Expected outcomes: *Population-based strategies for prevention of oral diseases, risk reduction and oral health promotion across the life-course and in key settings are in place and contribute to reducing the burden of oral diseases*		
Core and additional actions		
2.1	**Establish population-based strategies for oral disease prevention, risk reduction, oral health promotion and effective exposure to appropriate fluorides**	
2.1.1	Support and engage with initiatives to reduce common risk factors such as tobacco use, harmful use of alcohol and diets high in sugar, fat and salt	
2.1.2	Create a supportive policy and regulatory environment to facilitate appropriate use of fluorides to prevent caries	
2.1.3	Address specific risk factors for lip and oral cavity cancer, such as betel nut/betel quid use (for countries with high prevalence rates)	

2.1.4	Establish national policies, strategies or action plans with a specific policy goal or action towards reducing social and commercial determinants of oral health	
2.1.5	Initiate or engage in ongoing activities targeting high sugars consumption, such as taxation of sugar-sweetened beverages, labelling requirements for unhealthy foods and beverages, and healthy school meals in line with the WHO guideline on sugars intake, 2015 *(8)*	
2.2	**Address priority oral diseases across the life-course, including particular attention to early detection of lip and oral cavity cancer**	
2.2.1	Develop interventions to address caries and severe periodontal disease, including self-care, prevention, treatment and rehabilitation integrated into other health programmes such as for mother and child health, vaccination programmes and routine health screenings	
2.2.2	Develop interventions to address edentulism, including prosthetic services (partial or full dentures) integrated into other health programmes for geriatric care	
2.2.3	Create programmes addressing oral cancer (for countries with high prevalence rates), including screening of risk populations, timely diagnostic work-up, early referral and comprehensive treatment	
2.2.4	Develop oral health programmes targeted for specific conditions or populations (i.e. Early Childhood Caries, mother/child health, elderly, displaced persons)	
2.3	**Strengthen and expand health-promoting environments in schools, workplaces and communities**	
2.3.1	Establish a school oral health programme, including daily supervised tooth brushing, preventative fluoride application and referral for advanced care, in collaboration with education sector	
2.3.2	Establish/strengthen protective policies in schools/workplaces (e.g. healthy food, banning tobacco/alcohol, improving WASH, promoting physical activity)	
2.3.3	Develop workplace-based oral health promotion programme	
2.3.4	Develop community-based oral health promotion programme	
2.3.5	Ensure, in collaboration with the education sector, that oral health is an integral part of national school health programme and guidelines	
Strategic action area 3: Oral health workforce for universal coverage for oral health		
Expected outcomes: *Increased availability of a skilled, motivated oral health workforce able to deliver essential and advanced oral health services at all levels of the health care system, responding to population needs and priorities*		
Core and additional actions		
3.1	**Ensure integrated oral health workforce planning as part of national health workforce strategies**	
3.1.1	Establish oral health workforce needs using disease burden, population needs, available resources and the entire oral health team as a basis	
3.1.2	Integrate oral health workforce planning into national workforce planning and strategies	
3.1.3	Strengthen oversight and coordination of oral health training institutions and professional organizations to ensure equitable availability and service deployment of oral health workforce	
3.1.4	Develop approaches to ensure equitable distribution of oral health services and workforce across different geographical regions (rural/urban)	
3.2	**Design effective workforce models, develop definitions of oral health professions and their scope of practice**	

[8] Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015 (Guideline: sugars intake for adults and children. World Health Organization. https://apps.who.int/iris/handle/10665/149782).

3.2.1	Design effective workforce models involving a new mix of dentists, mid-level oral health care providers community-based health workers and other relevant health professionals	
3.2.2	Define oral health professions in line with international recommendations from the International Labour Organization, including scope of practice and roles within the oral health care team	
3.2.3	Agree on core competencies, skills and education requirements for all oral health team members	
3.2.4	Ensure legislative and policy support for all members of the oral health team and their scope of practice	
3.2.5	Expand the oral health workforce by training non-dental personnel (community health workers etc) in accordance with national legislation	
3.3	**Engage both public and private oral health providers in establishing effective models of primary oral health care delivery**	
3.3.1	Assess needs for oral health care at different levels of the PHC system and define effective and flexible workforce models for each level with engagement of both public and private oral health providers	
3.3.2	Ensure service quality and job satisfaction through continuous education and training	
3.3.3	Promote transparent career paths and task-shifting arrangement to flexibly address needs and changing circumstances	
3.3.4	Promote and foster inter-professional and inter-sectoral collaboration, training and practice, particularly with public health and medical professionals	
Strategic action area 4: Essential oral health care and universal coverage for oral health		
Expected outcomes: *Improved oral health status through universal availability and coverage of defined evidence-based and cost-effective essential oral health interventions and services that meet priority population needs at primary health care levels, and the provision of advanced services at higher levels of the health care system accessible through a functioning referral system*.		
Core and additional actions		
4.1	**Define a package of evidence-based and cost-effective essential oral health interventions**	
4.1.1	Establish national disease and needs priorities as a basis for defining essential oral health care	
4.1.2	Define an essential oral health in the UHC benefit package to address priority needs	
4.1.3	Develop sustainable financing models through UHC financing mechanisms with the goal of no or very little out-of-pocket payments and maximum coverage	
4.1.4	Define advanced levels of oral care to address more complex service needs, including special needs groups and prosthetic care	
4.2	**Improve access to essential oral health integrated with PHC**	
4.2.1	Ensure availability and increase number of functioning facilities at all levels of PHC, including required equipment and supplies	
4.2.2	Provide training and capacity development related to implementing the package of essential oral health interventions	
4.2.3	Availability of oral health services in primary health care facilities	
4.3	**Promote access to essential dental medicines**	
4.3.1	Ensure alignment of national essential medicines list with WHO model list (EML/EMLc)	
4.3.2	Ensure quality of dental essential medicine preparations, particularly of fluoride toothpaste, through appropriate regulation and standards, including oversight and laboratory capacities	

4.3.3	Enact measures to improve availability and affordability of essential dental medicines, including taxation, procurement and other measures	
4.3.4	Review and amend facility inventory and supply lists to strengthen availability of dental essential medicines in all oral service delivery facilities	
Strategic action area 5: Surveillance, monitoring and evaluation		
Expected outcomes: *Strengthened evidence-informed policy and service decisions through appropriate and relevant oral health information and programme evaluation.*		
Core and additional actions		
5.1	**Integrate and strengthen oral health information**	
5.1.1	Integrate collection of oral health information in routine health information and surveillance systems, such as district health surveys, WHO STEPS, etc	
5.1.2	Assess the specific oral disease burden in a realistic and pragmatic way every 3–5 years	
5.1.3	Establish mechanisms to simplify and standardize collection of oral health information	
5.1.4	Establish uniform oral health information system covering public and private services	
5.2	**Contribute to the WHO global strategy, the WHO Global Action Plan on oral health, and use the Global oral health Monitoring Framework**	
5.2.1	Ensure alignment of national monitoring frameworks for oral health with the WHO Global oral health Monitoring Framework and the monitoring framework of the Regional Action Plan	
5.2.2	Collect and submit data to the WHO Global oral health Monitoring Framework as defined and specified by WHO	
5.2.3	Develop a national oral health update report, using the globally reported data and additional oral health information	
5.2.5	Identify oral health information gaps and develop strategies to address them	
5.3	**Translate oral health information into action**	
5.3.1	Implement measures to enhance transparency and availability of data (e.g. website, database)	
5.3.2	Develop approaches to effective knowledge management for action (e.g. regular reports, events, policy briefs, data portals, best practice collections)	
5.3.3	Strengthen capacity of all actors in the context of integrated oral health information	
5.3.4	Promote a culture of evidence-based decision-making by establishing governance structures that allow for engagement between scientists, public and decision makers	
Strategic action area 6: Oral health research, digital innovations and emerging issues		
Expected outcomes: *The oral health sector, including oral health research, leverages the opportunities of operational research, digital innovation, and emerging issues of public health relevance*		
Core and additional actions		
6.1	**Strengthen public health and operational research**	
6.1.1	Develop a national oral health research strategy to support the national oral health policy and priority knowledge gaps	
6.1.2	Incentivize national research institutions to engage in oral health research, aligned with research priorities for oral health	
6.1.3	Foster national and international partnerships and collaboration to enhance exchange and develop research capacities	
6.1.4	Establish and promote undergraduate and postgraduate education and training to strengthen the oral health research workforce	

6.2	**Promote patient-centred digital health innovations**	
6.2.1	Include digital innovations, such as telehealth, mOral Health , in national policies and service regulations	
6.2.2	Strengthen national policies on data confidentiality and protection and ensure that digital health innovation complies with these policies	
6.2.3	Establish process and platform to provide access to oral health information/knowledge and to individuals' personal health data	
6.3	**Address emerging issues to strengthen the oral health sector**	
6.3.1	Ensure ratification and implementation of the Minamata Convention on Mercury, focusing on the provisions for safe handling and phase-down of dental amalgam	
6.3.2	Strengthen pandemic preparedness and response to ensure service continuity in the event of pandemics or other emergencies and disasters	
6.3.3	Build awareness and capacities to address antimicrobial resistance in oral health care	
6.3.4	Strengthen infection control measures and universal precautions in clinical care, including documentation, quality control and training of practitioners	
6.3.5	Establish plans for pandemic preparedness and response to ensure service continuity during future pandemics	

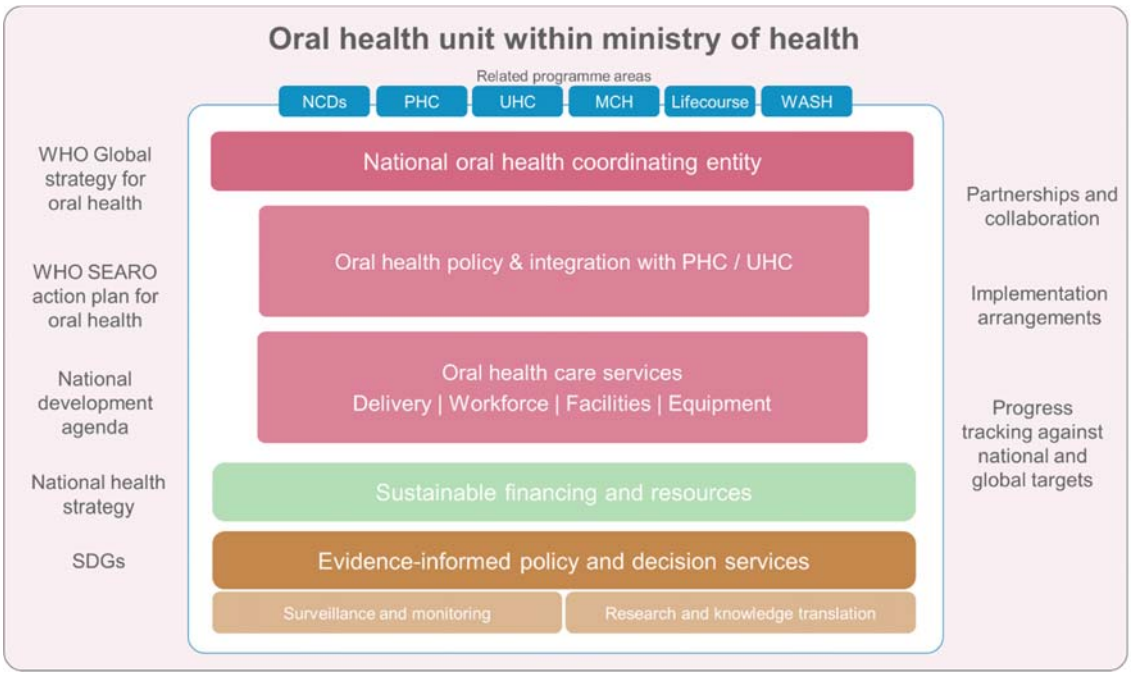
Appendix 3 Promotive, preventive, curative and rehabilitative oral health services to address the most common population needs

Intervention category	Actions
Health promotion and prevention of oral diseases	Counselling on daily oral hygiene using soft toothbrush and fluoridated toothpaste and rinsing mouth with water after every meal and snacking; promoting self-mouth examination
	Counselling on nutrition, healthy diet, cessation of tobacco use in any form and advocating behaviour change for avoiding excess sugar
Screening and diagnosis of oral disease	Oral health examination for school children and patients visiting health care setting, and encouraging referral to oral health professionals
	Screening of oral cancer and potentially malignant oral disorders in high-risk groups linked with timely diagnostic work-up such as laboratory tests or biopsy for tissue diagnosis (in countries with significant burden of oral cancer)
	Screening of oral HIV and AIDS manifestations in settings with significant disease burden and where programme is recommended
	Screening of birth defects such as cleft lip and palate and other oro-facial developmental anomalies
Emergency management of oral diseases	Urgent treatment for providing oral- and tooth-related pain relief, extraction of severely loose/mobile tooth, and abscess drainage; encourage referral to oral health professionals
	First aid for oral infections and oro-facial and dento-alveolar trauma
Management of oral and dental diseases	Fluoride varnish application
	Silver diamine fluoride application
	Pits and fissure sealant application
	Glass ionomer cement restoration (atraumatic restorative treatment)
	Resin composite restoration of tooth
	Removal of plaque and calculus through scaling and root planing
	Fabricating removable acrylic resin partial/full denture
	Pulp capping/pulpotomy (paediatric/adult)
	Root canal treatment
	Preformed crowns (paediatric))
	Simple tooth extraction
	Complex or multiple teeth extraction
	Incision and drainage of dento-alveolar abscess
	Prescription of medicines for oro-facial and dento-alveolar infection
	Dental splint for mobile tooth/teeth due to trauma
	Management of oral cancer and oral potentially malignant disorders with time-bound referral
	Management of oral manifestation of HIV and AIDS
	Management of cleft lip and palate and or-facial development anomalies

Appendix 4 Overview of the operative and logistical functions of an oral health unit within a ministry of health

A functioning oral health unit within the structure and mandate of a ministry of health is ideally fully integrated or aligned with the unit in charge of NCDs, family health, life-course or other related topic areas. The unit is usually guided by a national oral health policy or similar document, led by dedicated staff with required public health/administration capacities, and is part of the overall budgeting process of the ministry. Fig A1 below shows the fundamental operative and logistical functions of an oral health unit within the wider health care system. Adaptations and other models of organization and governance are possible and should be determined in accordance with national priorities and principles.

Fig A1. Functions of an oral health unit



Appendix 5 Roles and responsibilities of key stakeholder groups and partners

Stakeholder	Roles and responsibilities
National governments	Strengthen advocacy and political commitment for oral health. Adapt the using *Action Plan for oral health in South-East Asia 2022-2030* to the national context prioritizing a set of simple, doable actions to improve oral health. Develop policy, legislation, standards and regulation to foster integration of oral health and NCDs, PHC and UHC Provide appropriate budgetary and other resources for oral health. Coordinate with other line ministries so that oral health promotion and disease prevention are part of their respective agendas and policies. Provide technical support and coordination for subnational administrations. Provide a platform for development partners, implementing organizations, private sector and other stakeholders to coordinate actions and foster knowledge exchange. Promote comprehensive health and oral health workforce planning, training, recruitment and retention of oral health workers with appropriate skills for all populations and geographical regions of the country. Mobilize, involve and empower communities to control and improve their oral and general health. Invest in appropriate oral health surveys and stregthen oral health information and programme evaluations
Subnational administrations	Include, prioritize and strengthen oral health in national and subnational planning and implementation frameworks, including required resources. Provide capacity building and technical support for implementation, management, monitoring and evaluation of oral health services and targeted programmes. Encourage, mobilize, involve and empower communities to engage in programmes and control and improve their oral and general health Conduct apppropriate oral health surveys and stregthen oral health information and programme evaluations
Health regulatory bodies	Formulate legislations and regulations enabling the effective implementation of national action plans Ensure effective regulation and licensing of oral health professionals including their scope of practice. Promote quality facilities through licensing and regulation. Ensure proper professional conduct and resolve complaints against registered professionals.
Professional associations	Conduct activities enabling design and continuous professional development of oral health professionals Facilitate maintenace of professional and ethical standards Advocate for oral health on all decision levels and provide technical advice.
Education, training and research institutions	Support training curricula responding to national needs and international standards, including innovative delivery models and skill mixes, appropriate for integration in primary health care. Recommend evidence-based approaches for oral disease control and management.

	Conduct and disseminate research on oral health to inform policy implementation.
Media	Support advocacy and increased awareness on oral health-related matters.
Development and implementation partners	Integrate oral health in interventions addressing common risk factors of NCDs and commit to increased and sustainable support for NCDs and oral health in the context of PHC and UHC. Develop and provide technical support capacities to effectively accelerate the implementation of integrated national oral health action plans and priorities. Mobilize resources and promoting investment, as well as reinforce public–private partnerships to support integrated national oral health action plans as part of NCD programmes. Support operational research to demonstrate the public health impact, cost-effectiveness and feasibility of oral health interventions and their integration in PHC and UHC.
Communities, families and individuals	Participate and engage in local priority setting and service design. Advocate for and support community-based oral health programmes. Support local implementation of policies and regulations such as healthy school settings, smoke-free public environments, improving water, sanitation and hygiene in schools and households. Engage in activities improving inclusive access to oral health care for all age groups across the life-course. Be role-models for change and promote oral health wherever possible.

Annex 3

Action Plan for integrated people-centred eye care in South-East Asia

2022–2030

World Health Organization
REGIONAL OFFICE FOR South-East Asia

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Abbreviations

BCVA	best corrected visual acuity
DR	diabetic retinopathy
ICD	International Classification of Diseases
IPEC	integrated people-centred eye care
NCD	noncommunicable disease
NGO	nongovernmental organization
ROP	retinopathy of prematurity
UHC	universal health coverage

1. Introduction

Vision is the most dominant of human senses. Eye health is "the state in which vision, ocular health, and functional ability are maximized, thereby contributing to overall health and wellbeing, social inclusion, and quality of life" *(1)*. Impairment of vision impacts all these. Eye conditions affect all stages of life, with young children and older people being most vulnerable. Women, rural populations and ethnic minority groups are more likely to have vision impairment and least likely to access care.

Globally, at least 2.2 billion people have vision impairment or blindness. This includes those with near vision impairment due to presbyopia (1.8 billion, including both addressed and unaddressed presbyopia), and moderate-to-severe distance vision impairment or blindness due to unaddressed refractive error (123.7 million, e.g. myopia or hypermetropia), cataract (65.2 million), age-related macular degeneration (10.4 million), glaucoma (6.9 million), corneal opacities (4.2 million), diabetic retinopathy (3 million), trachoma (2 million), and other causes (37.1 million) and 188.5 million people with mild vision impairment of unknown causes. At least 1 billion cases of vision impairment could have been either prevented or are as yet undiagnosed. These include 123.7 million refractive errors, 65.2 million cataracts, 6.9 million corneal opacities, 3 million diabetic retinopathy, 2 million trachoma and 826 million unaddressed presbyopia *(2)*. Left unaddressed, the number of people with distance vision impairment or uncorrected presbyopia would increase from 1.1 billion in 2020 to 1.8 billion in 2050 *(3)*, further compounded by increased life expectancy and lifestyle changes. Ninety per cent of people living with vision loss reside in low- and middle-income countries. The estimated economic cost of blindness and moderate-to-severe vision loss was US$411 billion in 2020 (equivalent to 0.3% of the world's GDP in 2018), costing the most in East Asia (US$90 billion) and South Asia (US$70 billion) *(3)*.

Globally, 137 million people are at risk of trachoma infection and about 2.5 million people require surgery for trachomatous trichiasis. WHO aims to eliminate trachoma as a public health problem by 2030 through the SAFE strategy (surgery, antibiotic application, facial cleanliness, and environmental improvement) and WASH (water, sanitation, and hygiene) *(4)*.

2. Eye health in the South-East Asia Region

Nearly 30% of the world's blind and vision-impaired population lives in the WHO South-East Asia Region. The common causes of vision impairment in adults are uncorrected refractive errors, cataract, glaucoma, age-related macular degeneration, diabetic retinopathy, corneal scarring and trachoma. In children, the

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[1] Dasa T, Nayar PD, editors. South-East Asia eye health: systems, practices, and challenges. Springer; 2021:xi.

[2] World report on vision. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/328717).

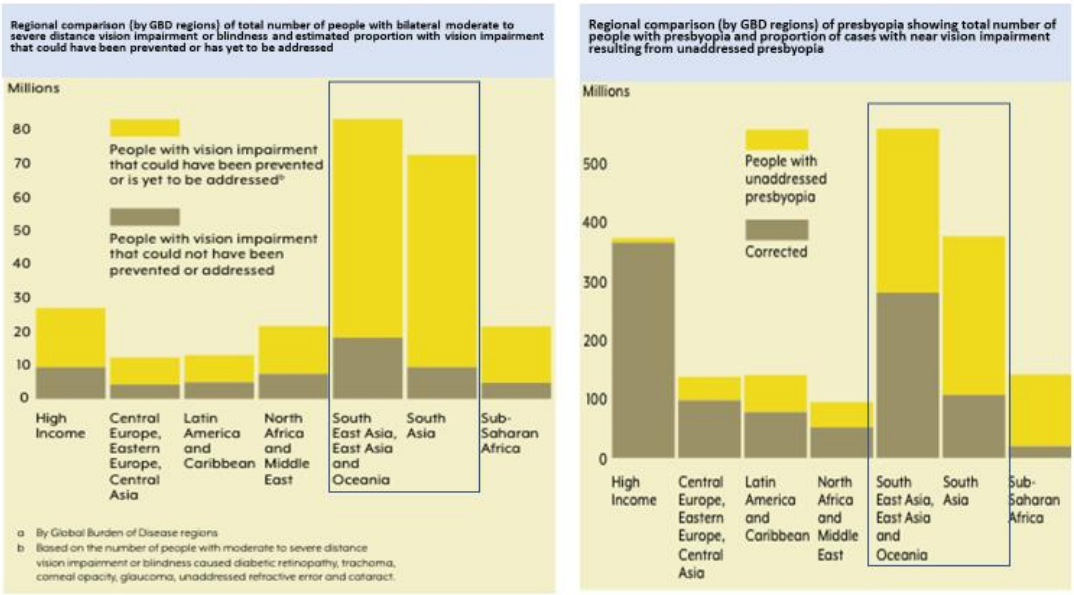
[3] Burton MJ, Ramke J, Marques AP, Bourne RA, Congdon N, Jones I, et al. The Lancet Global Health Commission on Global Eye Health: vision beyond 2020. Lancet Glob Health 2021;9(4):e489-e551 (https://globaleyehealthcommission.org/reports/report/).

[4] Ending the neglect to attain the sustainable Development Goal: a road map for neglected tropical disease 2021-2030. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/338565).

common causes of vision impairment are uncorrected refractive errors, cataract, retinopathy of prematurity, congenital ocular anomalies, corneal scarring, and cerebral visual impairment *(1)*.

The Global Burden of Disease (GBD) has clustered 11 countries of the WHO South-East Asia Region (SEAR) into three regions: South-East Asia (Indonesia, Maldives, Myanmar, Sri Lanka, Thailand, Timor-Leste), South Asia (Bangladesh, Bhutan, India, Nepal), and East Asia (Democratic People's Republic of Korea). The region bears a high burden of eye disease (Fig. 1).

Fig. 1 Regional comparison of people with vision impairment (left) and presbyopia (right)



Source: World report on vision, 2019 *(2)*, adapted from Flaxman et al. *(5)*

While trachoma continues as a public health problem in 43 countries globally, as of March 2022, 14 countries had achieved elimination goals *(6)*. Within the Region of South-East Asia, Myanmar (2020) *(7)* and Nepal (2018) *(8)* were verified for elimination in recent years.

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[5] Flaxman SR, Bourne RRA, Resnikoff S, Ackland P, Braithwaite T, Cicinelli MV, et al. Global causes of blindness and distance vision impairment 1990–2020: a systematic review and meta-analysis. Lancet Glob Health. 2017;5(12):e1221–e34.

[6] Trachoma. Key facts. 7 March 2022 (https://www.who.int/news-room/fact-sheets/detail/trachoma, accessed 3 July 2022).

[7] Myanmar eliminates trachoma: WHO. News release. 11 September 2020. New Delhi: WHO Regional Office for South-East Asia; 2020 (https://www.who.int/southeastasia/news/detail/11-09-2020-myanmar-eliminates-trachoma-who#:~:text=New%20Delhi%20%2D%20The%20World%20Health,leading%20causes%20of%20blindness%20globally, accessed 3 July 2022).

[8] WHO felicitates Nepal for trachoma elimination, rubella control. News release 23 November 2018. New Delhi: WHO Regional Office for South-East Asia (https://www.who.int/southeastasia/news/detail/23-11-2018-who-felicitates-nepal-for-trachoma-elimination-rubella-control#:~:text=Nepal%20is%20the%20first%20country,in%20May%20and%20August%20respectively, accessed 3 July 2022).

Mandate for developing a Regional Action Plan for integrated people-centred eye care

Addressing eye health is critical to health and development, ending poverty, improving education levels and promoting socio-economic growth. Universal eye health contributes to attainment of multiple Sustainable Development Goals and is pre-requisite for universal health coverage. Member states have committed to universal eye health through various governing body discussions, decisions, and resolutions.

- The Seventy-third World Health Assembly, 2020, adopted the resolution on integrated people-centred eye care, calling upon Member States, WHO and partners, including intergovernmental and nongovernmental organizations, to support Member States, as appropriate, in the national implementation of the recommendations in the *World report on vision (2);*
- The Seventy-fourth World Health Assembly, 2021, endorsed the global targets for effective coverage of refractive errors and effective coverage of cataract surgery to be achieved by 2030 *(9);*
- The Seventy-fifth session of the United Nations General Assembly, 2021, adopted the resolution Vision for everyone: accelerating action to achieve the Sustainable Development Goals, and called upon Member States to ensure access to eye care services for their populations and to mobilize the necessary resources and support to contribute to global efforts to reach, by 2030, at least 1.1 billion people who have a vision impairment and currently do not have access to the eye care services they need *(10)*.
- The Seventy-Fourth session of the WHO South-East Asia Regional committee in 2021, mandated the development of a Regional Action Plan for integrated people-centred eye care taking into consideration the 2030 global targets for effective cataract coverage and refractive error coverage that were endorsed by the Seventy-fourth World Health Assembly *(11)*

The WHO *World report on vision* (2019) calls on countries to make eye health part of efforts to achieve universal health coverage (UHC) and to implement integrated people-centred eye care (IPEC) within health systems reoriented towards primary health care.

The World Report on Vision defines IPEC as services that are managed and delivered so that people receive a continuum of health interventions covering promotion, prevention, treatment and rehabilitation, to address the full spectrum of eye conditions according to their needs, coordinated across the different levels and sites of care within and beyond the health sector, and that recognizes people as participants and beneficiaries of these services, throughout their life course.

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[9] Annex 3. Recommendations on feasible global targets for effective coverage of refractive error and effective coverage of cataract surgery to be achieved by 2030. In: Seventy-fourth World Health Assembly: Geneva, 24 May-1 June 2021: resolutions and decisions, annexes. Geneva: World Health Organization; 2021:96 (WHA74/2021/REC/1; https://apps.who.int/iris/handle/10665/352594).

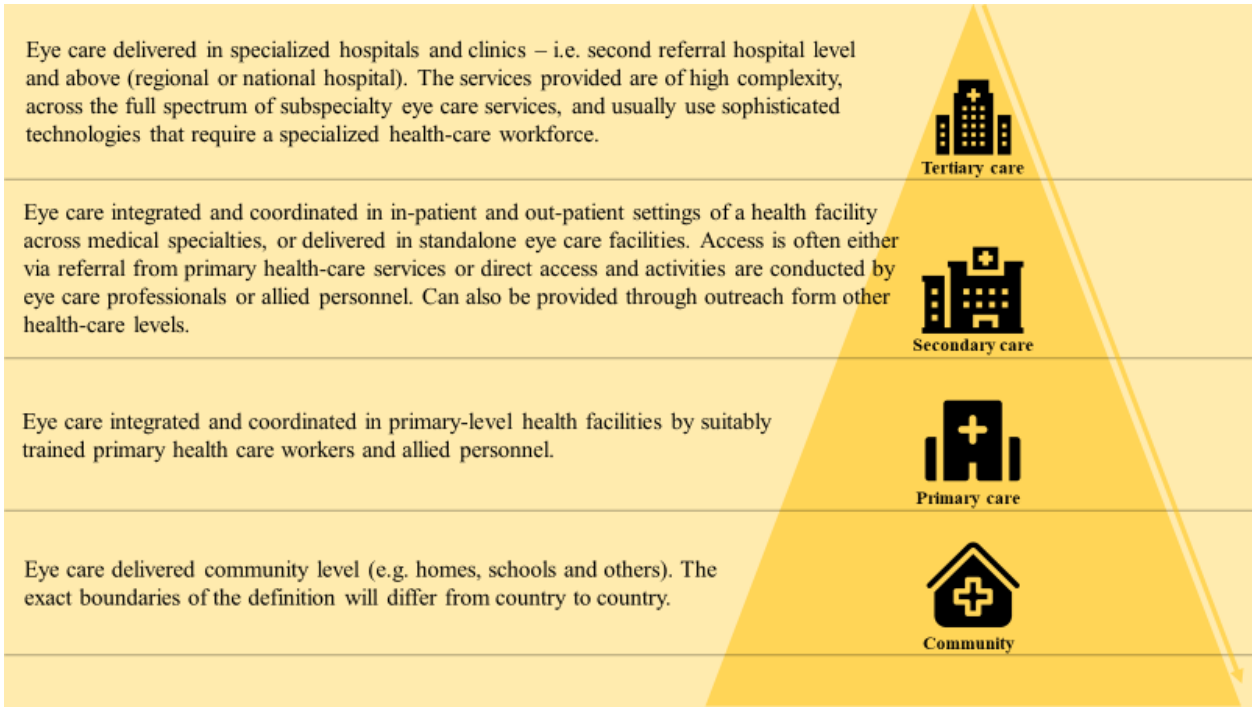
[10] Resolution A/RES 75/310. Vision for everyone: accelerating action to achieve the Sustainable Development Goals. Resolution adopted by the General Assembly on 23 July 2021. New York: United Nations; 2021 (A/RES/75/310; https://digitallibrary.un.org/record/3933853?ln=en).

[11] SEA/RC74(2). Accelerating progress on prevention and control of NCDs including oral health and integrated eye care in the WHO South-East Asia Region. In: Decisions. New Delhi: WHO Regional Office of South-East Asia; 2021 (https://apps.who.int/iris/bitstream/handle/10665/345273/sea-rc74-decisions-eng.pdf?sequence=1&isAllowed=y).

IPEC helps to address the significant eye care challenges and ensure that people receive a continuum of eye care based on their individual needs throughout their lives, contributing to good health and wellbeing.

The integration of services can be achieved through a team of health and social workers who are in close contact and engaged with individuals and the communities they serve. There are many opportunities for integrating eye care into various levels of health care across and within different service delivery platforms *(12)* (Fig. 2).

Fig. 2. Integrated people-centred eye care (IPEC)



Source: Package of eye care interventions (13).

[12] Integrating health services: brief. Geneva: World Health Organization; 2018 (https://apps.who.int/iris/handle/10665/326459).

[13] Package of eye care interventions. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/354256).

3. An overview of the Action Plan

This section presents the underlying principles of the *Action Plan for integrated people-centred eye care in South-East Asia, 2022–2030.*

Vision

All people in the South-East Asia Region have equitable access to high-quality, comprehensive eye health services to achieve universal eye health by 2030.

Mission

Comprehensive and coordinated continuum of eye health care services for all ages with equal geographical distribution through an integrated people-centred primary health care.

Goal

To guide and support Member States in developing, adopting and implementing appropriate and impactful national and subnational actions to achieve universal eye health through integrated people-centred eye care.

Targets for eye care

Given the large unmet need for care associated with cataract and refractive errors, coupled with the fact that highly cost-effective interventions exist, WHO proposed to its Member States that effective refractive error coverage and effective cataract surgery coverage serve as ideal indicators to track progress in the uptake and quality of eye care services at the global level *(9)* (Table 1).

Table 1. Global eye care targets

Target 1: A 40-percentage point increase in effective coverage of refractive error
Countries with a baseline effective coverage rate of 60% or higher should strive for universal coverage
Countries should aim to achieve an equal increase in effective coverage of near and distance refractive error in all relevant population subgroups, independent of baseline estimates
Target 2: A 30-percentage point increase in effective coverage of cataract surgery
Countries with a baseline effective coverage rate of 70% or higher should strive for universal coverage.
Countries should aim to achieve an equal increase in effective coverage of cataract surgery in all relevant population subgroups, independent of baseline estimates

In addition to the global targets, the Regional Action Plan proposes the following targets (Table 2).

Table 2. Regional targets

Target 3: Ensure at least 80% of people with diabetes are screened regularly for retinopathy, and 80% of those identified with sight-threatening diabetic retinopathy are treated by 2030
Target 4: To eliminate trachoma in the region by 2025

Guiding principles

- Universality: Ensure everyone has access to high-quality eye care without discrimination and without financial hardships. Efforts can target immediate factors driving inequitable service utilization but may also address more fundamental social determinants to be disability inclusive and gender responsive.
- Member states leadership: Implementation of these strategies for pursuing integrated people-centred eye care services should be developed and led by Member States and should respond to local population health needs, conditions, and contexts, supported by WHO and other partners multi-sectoral approach in consultation with relevant sectors and stake-holders .
- Evidence-based actions: Decisions at all levels should be based on the best available evidence, using recommended actions. Focus should be on the ongoing monitoring of progress through specific and measurable objectives and results.
- People-centredness: People should be at the core of the decision-making, policy development, and delivery of eye health. All strategies should address the population health needs particularly unmet eye care services are provided closer to where they live, in a comprehensive, coordinated, and continued manner.
- Leverage technology: Wherever needed, appropriate technology should be used to bridge the gaps between primary, secondary, and tertiary care and to reduce out-of-pocket expenses to make the delivery of eye health efficient, cost effective and sustainable.

Strategic areas

In line with the recommendations of the *World vision report* of 2019, and the global targets to be achieved by 2030, the Regional Action Plan proposes the following five strategic areas.

Strategic area 1: Engaging and empowering people and communities

Engaging and empowering people and communities is about providing the necessary opportunities, skills and resources to empower users of health services. It is also about reaching the underserved and marginalized to guarantee universal access to comprehensive eye care services to all, leaving no one behind.

Strategic approaches

- Empower communities and develop health promotion strategies through positive behaviour change for promotion of eye health and prevention and early care seeking for eye conditions through leveraging existing community-based structures/ networks.
- Strengthen health literacy to improve effectiveness of interventions through better understanding and compliance.
- Reach the underserved to guarantee universal access to health services, including persons with disabilities, in all stages of policymaking and decision-making.
- Engage with and leverage community-based organizations to provide IPEC.

Strategic actions

- Improve public awareness, empower communities, enable access and generate demand for eye care services, including for assistive products through community-based initiatives, primary health care and school health programmes, as well as utilizing occasions such as World Sight Day and World Diabetes Day for advocacy and awareness raising.
- Promote integrated screening for eye diseases above 40 years of age for conditions like cataract, refractive errors, diabetic retinopathy, glaucoma, trachoma, corneal scarring and other common eye conditions through leveraging opportunities with other health care screening programmes.
- Raise awarness on new-born eye screening, especially of premature babies for congenital cataract, retinopathy of prematurity, congenital ocular anomalies etc.
- Leverage school health programmes to include eye screening in pre-school and school children for refractory errors, low vision, prevention of eye injuries, and other eye conditions.
- Develop specific programmes for reaching out to underserved and marginalized communities, people with special needs and other vulnerable populations. This could be done with relevant organisations working with these groups, such as organization for people with disabilities.
- Raise awareness about available and accessible rehabilitation services, assistive technology products and low-vision devices for those with irreversible vision loss.
- Raise awareness of facial cleanliness and environmental sanitation to prevent trachoma infection.
- Advocate for eye (corneal) donations and sensitization about healthy occupational behaviours through use of protective gear to avoid eye injuries at workplaces.

Strategic area 2: Reorienting the model of care to prioritize primary care and community-based services with functional referral linkages

This strategic area focuses on reorienting the model of care to ensure that efficient and effective eye care services are provided through integrated models of care and that primary-level care meets population eye care needs through the life-course approach.

Strategic approaches

- Strengthening health systems at all levels of care to include eye care in different health programs and across the life course. Integrating eye care in health systems will ensure that our health systems

including health facilities have capacities and resources to deliver eye care and support referral and follow-up.

- Innovate and incorporate new models, programmes and technologies to share information, track quality of care, and reach remote communities.
- Ensure availability and accessibility of low-vision and vision-rehabilitation services and related assistive technology products.
- Involve all stakeholders across health and non-health sectors i.e., government, NGOs, private sector for provision of essential comprehensive eye care at the primary level.
- Ensure availability and accessibility to essential medicines, medical products and assistive technology products for common eye conditions at all levels of health care delivery.

Strategic actions

- Strengthen eye care and vision rehabilitation at primary health care level to improve access, and to adapt and respond to rapidly changing eye care needs at the population level.
- Integrate and mainstream management of common eye health issues in routine health services for example maternal and child health and disease control programs.
- Initiate collaboration between eye care providers and other health care providers, focusing on conditions such as diabetes, hypertension, childhood eye conditions and eye injuries, and strengthening eye health rehabilitation.
- Utilize the WHO *Package of eye care interventions* (*13*) for the planning of eye care services at various levels of health care delivery.
- Use technology to improve access to eye care as well as to improve coverage. For example, telemedicine can be used at all levels of health care delivery including promotion of disabled friendly telemedicine by adopting the *WHO-ITU global standard for accessibility of telehealth services (14)*.
- Strengthen mobile clinics and other innovative models of eye care to reach geographically difficult terrains through bundled service approaches, for example by bringing eye and ear care together in one mobile clinic and select fixed facilities.
- Depending upon the context, Member States can adopt a menu of eye care services to be provided at different levels of health facilities (Table 3, Table 4). (Note that awareness creation and health promotion and education should be done at all levels of care, especially at the primary level.) The WHO *Package of eye care interventions* also provides a detailed set of evidenced-based eye care interventions across the continuum of care and the material resources required for implementation *(13)*.

[14] WHO-ITU global standard for accessibility of telehealth services. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/356160).

Table 3. Integration of care for eye conditions

Age groups	Primary	Secondary	Tertiary	Cross sectoral collaboration
0–4 years	Congenital cataract Ophthalmia neonatorum Screening for retinopathy of prematurity (ROP)/ retinoblastoma /childhood glaucoma/other congenital anomalies	ROP screening	Surgery for congenital cataract and squint Management of retinoblastoma Amblyopia management	Maternal and child health Primary health care Women and child welfare Neonatologists and Paediatricians
5–15 years	Screening for refractive errors through school eye health programmes Information, education and communication for prevention of eye injuries Community-based rehabilitation	Spectacles for children Low-vision care Follow-up care for amblyopia management	Surgery for developmental cataract Amblyopia management	School education department Special educators
16–39 years	Workplace screening Screening for refractive error Information, education and communication for prevention of eye injuries Health promotion/lifestyle for prevention of diabetes Community-based rehabilitation	Refractive error Comprehensive eye examination of glaucoma Lasers for diabetic Retinopathy and glaucoma Low-vision care Management of eye injuries.	Surgical management of diabetic retinopathy (DR) and glaucoma Corneal transplantations Low-vision care (advanced) Contact lenses Management of complex eye conditions such as keratoconus Refractive surgeries	School/college system Physicians and diabetologists Ministry of labour NGOs Primary health care
40–59 years	Health promotion/lifestyle for prevention of diabetes Spectacles for uncorrected refractive error and presbyopia	Comprehensive eye examination of glaucoma Lasers for diabetic retinopathy and glaucoma Cataract surgery Low vision care	Cataract surgery Surgical management of DR and glaucoma Low-vision care (advanced)	Physicians and diabetologists Ministry of labour Primary health care
60 and above	Cataract detection Detection for other comorbidities Spectacles after cataract surgery Information, education and communication to promote healthy aging	Cataract surgery Comprehensive eye examination of glaucoma Lasers for diabetic Retinopathy and glaucoma	Cataract surgery Surgical management of DR and glaucoma Low vision care (advanced)	Ministry of social justice and empowerment Physicians Other nongovernmental agencies Primary health care

	Low-vision care	Integration with other specialists, such as hearing, injuries, and mental health

Table 4. Suggested eye care interventions at different levels of care

Condition	Primary	Secondary	Tertiary
Cataract	Awareness creation Screening/case detection Post-operative surveillance Spectacle correction after cataract surgery	Clinical diagnosis Surgery Laser for posterior capsular opacification formation	Surgery for complicated cataract Surgeries under general anaesthesia
Refractive error	Awareness creation Diagnosing for refractive errors and presbyopia Spectacle dispensing Spectacles compliance	Spectacle dispensing for complex prescription Spectacles for children	Spectacle dispensing for complex prescription Contact lenses Refractive surgeries
Childhood blindness	Screening of high-risk groups Health promotion for prevention of Vitamin A deficiency Information, education and communication to promote immunization and neonatal care Screening for retinoblastoma and congenital cataract, congenital glaucoma, Retinopathy of prematurity (ROP) (using tele-ophthalmology)	Follow up of surgical cases Retinopathy of prematurity (ROP) screening Tele-ophthalmology models for ROP	Surgery for paediatric cataract, squint, childhood glaucoma, ROP Management of retinoblastoma Amblyopia management
Diabetic retinopathy	Screening of high-risk groups Screening for hypertension Screening for DR (using tele-ophthalmology) Surveillance Information, education and communication of healthy lifestyle	Lasers and injections for DR Follow-up care Tele-ophthalmology models follow care	Retinal laser, injections, and surgeries
Glaucoma	Screening of high-risk groups Surveillance for follow-up care Information, education and communication	Comprehensive eye examination for the diagnosis of glaucoma Medical management of glaucoma, including lasers Surgical management of glaucoma	Medical and surgical management of complex cases
Cornea	Screening and referral Health promotion to prevent eye injuries	Medical management of corneal infections Corneal tear repair	Corneal transplantations Management of complex eye injuries Eye banking

	Information, education and communication for eye donation First aid for chemical injuries Prophylactic treatment	Basic microbiology investigations Eye donation centres Follow-up care after corneal surgeries	
Trachoma	Screening high-risk groups Health promotion to promote facial cleanliness and sanitation Antibiotic distribution	Trichiasis surgery	Trichiasis surgery
Low vision/ rehabilitation	Case detection and referral Counselling services Community-based rehabilitation Promotion of assistive devices and technology	Low-vision care and devices Promotion of assistive devices and technology	

Strategic area 3: Coordinating services within and across sectors

Eye care should be coordinated and integrated with the needs and preferences of people at every level of care, with a focus on improving the access, affordability and quality of care.

Strategic approaches

- Harnessing synergies by strengthening coordination, collaboration and convergence of care for the individuals. For example, eye care can be provided as an integral part, when an individual comes to health facility for accessing maternal and child health hypertension, diabetes and other non-communicable diseases etc.
- Coordination, collaboration and convergence using “whole-of-government” and “whole-of-society” approaches to provide integrated eye health services. This includes, but is not limited to, ministries of health and other ministries, academia, research institutions, scientific community, civil society, private sector, people living with disabilities, relevant national and international agencies and organizations.

Strategic actions

- Develop inter-ministerial and inter-agency coordination for cross-linkages and better planning and delivery of comprehensive eye care services. This includes development of common implementation plans at subnational/district level by strengthening coordination with relevant stakeholders, such as with health education programmes (screening, promotion), organizations for people with disabilities, for women and child development, labour organizations (injury prevention, promotion), the private sector (refractive and optical services), the development sector (such as poverty alleviation and female empowerment), and water and sanitation departments.
- Forge partnerships to harness synergies (public–private and with NGOs) to explore means of providing affordable and quality eye care. Partnerships can be leveraged for advocacy, community engagement, health literacy, screening and provision of services.
- Strengthen coordination with other health care sectors for screening, early detection and treatment of eye conditions, such as coordination with neonatal services (screening), child health services

(screening, detection, management) and NCD services (promotion, screening, diabetes, hypertension, ageing).

Strategic area 4: Strengthening and reorienting eye health workforce

An adequate and appropriately trained and positioned workforce is critical to achieving targets and provision of IPEC. None of the strategies and actions can be implemented – and will, indeed, fail – without adequate investment in the health workforce including social workers and education sector. Reorientation, training, and re-training of the workforce is imperative for the delivery of integrated people-centred eye care.

Strategic approaches

- Map the health workforce to understand the gaps in existing human resources for integrated eye care services.
- Develop a nationally appropriate competency-based framework.
- Establish multi-disciplinary teams and institute clinical governance and quality assurance for continuous quality improvement in eye health.
- Ensure optimum utilization of human resources through task delegation and task sharing and use of technology to enable cross-functioning along different levels of care and types of health workforce.
- Collaboration with learning institutions and hubs established within the Region to support Member tates on training, research, and innovation

Strategic actions

- Assess the gaps in human resources, conduct a training needs assessment for the delivery of quality comprehensive eye care services, and prepare a long-term Action Plan for filling the gaps across professional profiles (ophthalmologists, optometrists and allied ophthalmic personnel) as per the nationally approved norms and laws.
- Ensure that eye care workforce planning is an integral part of the health workforce and a long-term Action Plan for filling the gaps is developed. Health care workers at the primary level can assist in eye screening alongside screening for other primary health care conditions. For example, eye and ear care (basic audiology and optometry) can be combined, especially during school screening.
- Address maldistribution, staff motivation, task sharing and needs-based upskilling of workforce to ensure equitable access to well-trained health workers, including in underserved areas.
- Develop, implement, and monitor programmes, including training, to improve and update the skills of the existing eye care workforce, including continuing professional development.
- Development a nationally appropriate competency-based training curriculum, and promote certification by a national body/council/accreditation board for all levels of eye health care workers.
- Coordinate and collaborate with learning hubs, including WHO collaborating centres, for training and capacity strengthening, data analysis and use, and research.

Strategic area 5: Creating an enabling environment

The creation of an enabling environment including review or development of policies, the strengthening of governance, inclusion of eye care in national health strategic plans, integration of relevant eye care

data within existing health information systems, facilitation of technology adoption, access to technical support for implementation, monitoring and evaluation, and the planning of eye care workforce according to population needs is important in achieving IPEC.

Strategic approaches

- Strengthen leadership and governance for eye care at national and subnational levels and primary health care centres.
- Develop policies to ensure access to quality and affordable eye services and minimize out-of-pocket expenditure.
- Review existing data management systems and identify gaps. Strengthen and integrate eye health data into the overall health information system.
- Promote investment in capacity building, research, and innovation in eye health as an investment in eye health that would impact multiple Sustainable Development Goals.
- Support the adoption of available technologies that positively impact access to eye care.

Strategic actions

- Integrate eye health into national health strategic plans and eye health information to be part of the annual health reports with target and indicators.
- Allocate needed budget for comprehensive eye care, including essential medications, spectacles, low-vision aids, rehabilitation, and required assistive products.
- Advocate for increased affordability of essential medical equipment and supplies (including spectacles) through reduced duties on imports, as applicable, as well as lowered taxation.
- Enable policies for financial risk protection to low-income groups and vulnerable populations that ensure universal access to high-quality vision rehabilitation for optimal functioning.
- Create opportunities for people with disabilities (including those with low vision) through education, and by creating and enhancing job opportunities and rehabilitation.
- Develop supportive policies for innovations, research and use of digital technologies for improved access to universal comprehensive eye care.
- Set up comprehensive accountability, monitoring and evaluation framework.

4. WHO resources for technical support

The implementation of the Regional Action Plan will primarily depend on the stewardship of the ministry of health in all Member States. WHO has prepared the following resources that can be used by Member States while implementing IPEC (Table 5).

Table 5. Integrated people-centred eye care (IPEC) implementation process and relevant WHO tools

IPEC implementation processes	Technical resources available and links
1. **Carry out a comprehensive situation analysis of the eye care sector** • Ensure government is committed, and leading the analysis	Eye Care Situation Analysis Tool (ECSAT) *(15)*
2. **Develop or revise, if already existing, an eye care strategic plan in line with IPEC recommendations (mid-term plan, 3–5 years)** • Identify priority action areas based on the ECSAT findings • Ensure the eye care strategic plan aligns with other related plans across the health sector and other related sectors	*Eye care in health systems: guide for action (16)* *Package of eye care interventions (17)* *Eye care competency framework (18)*
3. **Implement the eye care strategic plan** • Establish a cycle to periodically plan and review eye care services • Increase capacity of leadership and governance for eye care	*Eye care guide for action*
4. **Establish eye care monitoring, evaluation, and review processes** • Develop a monitoring framework with indicators, baselines and targets • Establish evaluation and review processes to assess progress towards the achievement of objectives (annual or biennial reporting period)	*Eye care guide for action* *Eye care indicator menu (ECIM) (19)*

Monitoring and reporting on progress

WHO has developed an *Eye care indicator menu* (ECIM), which includes 13 core indicators and 13 expanded indicators to help monitor eye care programmes at national and subnational level *(19)*. Table 6 lists the core indicators, alongside three regional indicators developed to monitor trachoma.

[15] Eye Care Situation Analysis Tool [online tool] (https://www.who.int/news/item/14-10-2021-eye-care-situation-analysis-tool-(ecsat)-launch).

[16] Eye care in health systems: guide for action. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/354382).

[17] Package of eye care interventions. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/354256).

[18] Eye care competency framework. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/354241).

[19] Eye care indicator menu (ECIM): a tool for monitoring strategies and actions for eye care provision. Geneva: World Health Organization; 2022 (https://apps.who.int/iris/handle/10665/354257).

Table 6. Core indicators and regional indicators for trachoma

Core indicators *Regional indicators for trachoma*
Input
Eye care integrated into the national health plan
Trachoma elimination programme embedded in national health plan
Financial risk protection for cataract surgery
Financial risk protection for optical devices acquisition
Eye conditions and visual acuity categorized by International Classification of Diseases (ICD) code (or equivalent)
Eye care workforce density and distribution
Output
Cataract surgical outcome (visual acuity)
Number of people who received trachomatous trichiasis surgery in that year
Outcome
Effective cataract surgical coverage (eCSC)
Effective refractive error coverage (eREC) distance vision
Effective refractive error coverage (eREC) near vision
Retina screening coverage for people with diabetes
Newborn screening coverage for congenital and neonatal eye conditions
Retinopathy of prematurity screening coverage
Impact
Prevalence of vision impairment and blindness
Elimination of trachoma as public health problem

Full details of the core indicators and a list of expanded indicators is available in Appendix 1 and Appendix 2. Core indicators are considered essential and represent a minimum set of indicators necessary for the monitoring of trends and evaluation of progress towards implementing IPEC within each health information system domain. Expanded indicators can be selected as and when they are relevant, and adjusted to the specific objectives of a country's eye care strategic plan. In addition, the Regional Action Plan has incorporated indicators for trachoma elimination as core indicators.

Roles and responsibilities of key stakeholders

Member states

- Respond to the population needs for eye care and include eye care in health policies to provide comprehensive quality eye health care closer to where people live.
- Ensure that people do not suffer catastrophic financial spending on eye care.
- Ensure that there are sufficient and competent human resources at all levels of health care.
- Reorient the primary health care system and health human resources through task delegation and task sharing; ensure equitable distribution and promote rural retention of workers.

- Strengthen academic qualification through competency-based training framework and promote recognition of the allied eye care health workers, including optometrists and ophthalmic technicians, as core eye health workforces.
- Improve eye health surveillance, data collection, analysis and use for informed decision-making, advocacy, and course correction, as needed.

WHO

- Provide stewardship, coordination, and guidance to Member States and partners in promoting and implementing IPEC.
- Develop and update technical and strategic guidance documents to support Member States in capacity building, supporting development of national strategy documents, and strengthening eye health care literacy
- Engage with global, regional, and national partners, including WHO collaborating centres, to establish capacity-building networks in training and research for eye health.
- Engage with non-state actors, including nongovernmental organizations, civil society organizations and private sector, to facilitate collaboration and leverage partnerships for improving access to quality comprehensive eye care.
- Partner with global technology and digital innovation hub to harness the potential of digital innovation, and leverage technology for equitable access for universal eye health.

International partners, nongovernmental organizations, civil society and private sector

- Advocate for and commit to universal eye care.
- Collaborate with WHO, national governments, and other partners in promoting and supporting universal eye health through strengthened primary health care.
- Leverage local presence and capacities to forge partnerships with government to mobilize and share knowledge, provide eye care services, and support voices of the people, particularly the unreached and vulnerable.
- Private sector has a key role in innovation and expanding digital technologies for improved availability and access to affordable, effective, and quality eye care products and services.

Annex

Appendix 1. Set of core and expanded indicators, including for regional trachoma elimination

Indicators			
Input	Output	Outcome	Impact
Governance	***Eye care service access***	***Eye care coverage***	Prevalence of vision impairment and blindness*
Eye care integrated into the national health plan*	Cataract surgical rate (CSR)**	Effective cataract surgical coverage (eCSC)*	Cause-specific prevalence of vision impairment**
National eye care strategy implementation plan**	Availability of refractive services in the government health system**	Effective refractive error coverage (eREC) distance vision*	Elimination of trachoma as public health problem***
Primary eye care integrated into the national primary health-care training**	Availability of vision rehabilitation services covered by the government health system**	Effective refractive error coverage (eREC) near vision*	
Pre-school (aged 3–5 years) eye care programme**	Waiting time for cataract surgery**	School eye care programmes coverage**	
Trachoma elimination programme embedded in National Health Plan***	Preoperative visual acuity amongst cataract surgery patients**	Retina screening coverage for people with diabetes*	
Eye care financing	Number of people who received trachomatous trichiasis surgery in that year***	Newborn screening coverage for congenital and neonatal eye conditions*	
Financial risk protection for cataract surgery*	***Eye care service quality***	Retinopathy of prematurity screening coverage*	
Financial risk protection for optical devices acquisition*	Cataract surgical outcome (visual acuity)*		
Financial risk protection for diabetic retinopathy laser treatment**			
Financial risk protection for glaucoma surgeries**			
Financial risk protection for antivascular endothelial growth factor (anti-VEGF) injections**			
Eye care information			
Eye conditions and visual acuity categorized by International Classification of Diseases (ICD) code (or equivalent)*			
Eye care workforce			
Eye-care workforce density and distribution*			

*Core: To monitor and evaluate progress towards IPCEC
**Expanded: Can be selected as per country requirement
*** Region-specific indicator

Appendix 2. Description of monitoring indicators

Indicators	Rationale	Definitions	Data source
Input indicators			
Governance			
Eye care integrated into the national health plan	The integration of eye care into wider national health plans is a key objective of IPEC.	Existence of high-level, national or subnational plans, beyond operational plans, that explicitly include eye care integrated at the level of activities and in the context of specific actions.	Ministry of health reports National eye care committee reports
National eye care strategy implementation plan	The existence and implementation of a comprehensive national strategy for eye care, with a defined set of actions or, alternatively, the availability of eye care embedded in the health system strategy that leads to a substantially improved provision of eye care services.	Availability and implementation of a national eye care strategy (or integrated eye care in the health system strategy), based on recent scientific evidence, with clearly defined targets and indicators.	Ministry of health reports National eye care committee reports
Primary eye care integrated into the national primary health care training	One of the strategies for achieving IPEC is to strengthen and sustain primary care since many eye conditions can be effectively managed at this level.	Primary eye care training curriculum integrated into national trainings for primary care providers	Ministry of health reports Ministry of education reports Data from professional associations for health care workers National eye care committee reports
Pre-school (aged 3–5 years) eye care programme	Early detection and referral are essential to provide the first indication of a possible vision impairment or eye condition in children.	Development of comprehensive eye care screening programme for pre-school children	Ministry of health reports Ministry of education reports National eye care committee reports
Trachoma elimination programme embedded in national health plan	Number of people who received trachomatous trichiasis surgery in that year.	The number of people no longer at risk of trachoma infection	Elimination of trachoma as public health problem
Eye care financing			
Financial risk protection for cataract surgery	Financial protection is at the core of UHC and is directly affected by health financing policy.	Percentage of the population with coverage from governmental or compulsory health insurance schemes that covers 75% or more of the cost of the cataract surgery	Ministry of health reports National eye care committee reports Data from other government agencies, including insurance schemes

Indicators	Rationale	Definitions	Data source
Financial risk protection for optical devices acquisition	Financial protection is at the core of UHC and is directly affected by health financing policy.	Percentage of the population with coverage from governmental or compulsory health insurance schemes that covers 75% or more of the cost of optical devices, such as spectacles and contact lenses (but not low vision aids)	Ministry of health reports National eye care committee reports Data from other government agencies, including insurance schemes
Financial risk protection for diabetic retinopathy (DR) laser treatment	Financial protection is at the core of UHC and is directly affected by health financing policy	Percentage of the population with coverage from governmental or compulsory health insurance schemes that covers 75% or more of the cost of laser treatment for diabetic retinopathy	Ministry of health reports National eye care committee reports Data from other government agencies, including insurance schemes
Financial risk protection for other major intraocular surgeries	Financial protection is at the core of UHC and is directly affected by health financing policy.	Percentage of the population with coverage from governmental or compulsory health insurance schemes that covers 75% or more of the cost of glaucoma surgeries	Ministry of health reports National eye care committee reports Data from other government agencies, including insurance schemes
Financial risk protection for antivascular endothelial growth factor (anti-VEGF) injections	Financial protection is at the core of UHC and is directly affected by health financing policy.	Percentage of the population with coverage from governmental or compulsory health insurance schemes that covers 75% or more of the cost of anti-VEGF injections	Ministry of health reports National eye care committee reports Data from other government agencies, including insurance schemes
Eye care information			
Eye conditions and visual acuity categorized by ICD code (or equivalent)	Mapping the distribution of eye conditions of the population accessing health facilities, by classification and frequency, provides important information for planning eye care services. This information makes it possible to identify the needs of the population and services and also reflects changes in trends that may affect service use.	Proportion of population utilizing eye care services categorized according to the main condition by ICD code or a national equivalent code, or by selected eye condition categories (presented below in “Further information”)	Routine data from health facilities, including from private for-profit and private not-for-profit sectors, at all levels
Eye care workforce			
Eye care workforce density and distribution	Having in place a sufficient and well-trained workforce is a key strategy for IPEC.	Total number of eye care workers disaggregated by the professions: a) ophthalmologists b) optometrists c) allied ophthalmic personnel	Ministry of health reports Registration or certification bodies Where possible, routine data from health facilities reporting

Indicators	Rationale	Definitions	Data source
Output Indicators			
Eye care service access			
Cataract surgical rate	Cataract surgical rate is a quantifiable measure of cataract surgical service delivery and can be used to set national targets for this service, to identify countries in need of capacity-building and to track trends in output.	Total number of cataract surgeries performed per year per million population	Ministry of Health reports Data from private for-profit and private not-for-profit sectors
Preoperative visual acuity amongst cataract surgery patients	The assessment of the preoperative visual acuity of patients referred for cataract surgery provides a measurement of access to services and can contribute to the review of the visual acuity threshold for surgery to be recommended.	Percentage of cataract operated eyes that had preoperative visual acuity as normal/mild visual impairment (VI)/moderate VI/severe VI/blindness	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Availability of vision rehabilitation services covered by the government health system	A significant number of people with irreversible severe vision impairment or blindness would benefit from rehabilitation services to mitigate the consequences of lost vision and to optimize functioning in everyday life.	Percentage of the government secondary or tertiary care level facilities providing eye care services in the country with available vision rehabilitation services	Ministry of Health reports
Waiting time for cataract surgery	Timely delivery of cataract surgery is critical to maintain visual function and avoid preventable vision impairment or blindness.	Average waiting time and range (in days) to receive cataract surgery, from the day the patient is first registered for surgery to the surgery itself.	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Availability of refractive services in the government health system	Uncorrected refractive errors affect persons of all ages and groups and are the main cause of vision impairment. There is a growing need to expand the coverage of interventions for refractive errors in order to meet the current and future ongoing demand for this condition, to provide access to services to underserved populations and to ensure quality of service delivery over time.	Percentage of government facilities providing eye care services in the country with available refractive services	Ministry of Health reports
Trachomatous trichiasis surgery in that year	Surgery to treat the blinding stage (trachomatous trichiasis) is one of the core strategies for trachoma elimination. Therefore, everyone should have access to it at an affordable cost.	Number of people who received trachomatous trichiasis surgery in that year	Health facility data

Indicators	Rationale	Definitions	Data source
Eye care service quality			
Cataract surgical outcome (visual acuity)	Monitoring and evaluating the visual outcome after cataract surgery will help to identify possible gaps and adopt measures to improve the outcomes and strengthen the confidence of the population recommended for surgery.	WHO classification (BCVA): good 6/6 – 6/18; borderline less than 6/18 – 6/60 and poor less than 6/60	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Eye care coverage			
Effective cataract surgical coverage (eCSC)	Effective cataract surgical coverage not only captures the magnitude of coverage, but also the concept of "effective" coverage to ensure that people who need health services receive them with sufficient quality to produce the desired gain in vision.	Proportion of people who have received cataract surgery and have a resultant good-quality outcome (6/12 or better) relative to the number of people in need of cataract surgery	Population-based surveys
Outcome indicators			
Eye care coverage			
Effective cataract surgical coverage (eCSC)	Effective cataract surgical coverage not only captures the magnitude of coverage, but also the concept of "effective" coverage to ensure that people who need health services receive them with sufficient quality to produce the desired gain in vision.	Proportion of people who have received cataract surgery and have a resultant good-quality outcome (6/12 or better) relative to the number of people in need of cataract surgery	Population-based surveys
Effective refractive error coverage (eREC) – distance vision	Effective refractive error coverage at distance vision not only captures the magnitude of coverage, but also the concept of "effective" coverage to ensure that people who need health services receive them with sufficient quality to produce the desired gain in vision.	Proportion of people who have received refractive error services (i.e. spectacles, contact lenses or refractive surgery) and have a resultant good-quality outcome relative to the number of people in need of refractive error services	Population-based surveys
Effective refractive error coverage (eREC) – near vision	Effective refractive error coverage at near vision not only captures the magnitude of coverage, but also the concept of "effective" coverage to ensure that people who need health services receive them with sufficient quality to produce the desired gain in vision.	Proportion of people who have received refractive error services (i.e. spectacles, contact lenses or refractive surgery) at near vision and have a resultant good quality outcome relative to the number of people in need of refractive error services for near vision	Population-based surveys
School eye care programmes coverage	When considering the importance of vision in education and the frequency of refractive error in school-age children, the inclusion	Percentage of school-age children in the country undertaking periodic eye care	Ministry of health reports Ministry of education reports School health reports

Indicators	Rationale	Definitions	Data source
	of vision screening in school health services and initiatives, followed by the timely provision of spectacles and other eye care services, is important to mitigate the impact of unaddressed vision impairment.	screening for eye and vision conditions	Population-based surveys
Retina screening coverage for people with diabetes	DR is a leading cause of vision impairment globally. The majority of vision impairment caused by DR is avoidable through early detection and timely treatment.	Percentage of people with diabetes undertaking a periodic retinal examination at the interval recommended and defined in nationally adopted guidelines	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Newborn screening coverage for congenital and neonatal eye conditions	Screening of newborns, preferably within 72 hours of birth, is recommended to ensure early diagnosis and timely referral of congenital and neonatal eye conditions.	Percentage of newborns screened for the detection of congenital and neonatal eye conditions, preferably within 72 hours of birth, or at first encounter with a health facility	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Retinopathy of prematurity (ROP) screening coverage	Systematic retinal screening of preterm infants, preferably 4–5 weeks postnatal, for early detection, followed by urgent treatment of infants developing the vision-threatening signs of ROP, can prevent vision impairment and blindness.	Percentage of preterm and/or low-birth-weight infants receiving ROP screening, preferably 4–5 weeks post-natal	Routine data from health facilities, including from private for-profit and private not-for-profit sectors
Impact indicators			
Prevalence of vision impairment and blindness	Prevalence data allow decision-makers to improve resource allocation, planning, and developing synergies with other programmes.	Prevalence of the population with vision impairment and blindness categorized according to severity, based on visual acuity in the better eye, as per WHO definition	Population-based surveys
Cause-specific prevalence of vision impairment	Determining the prevalence of the leading causes of vision impairment and blindness provides important information on estimates of the population unmet need for addressable causes of vision impairment (e.g. cataract and refractive error) and of the population needs for vision rehabilitation services. This information also provides an important insight into the effectiveness of public health and clinical strategies targeted at the leading causes of vision impairment.	Prevalence of the leading causes of vision impairment and blindness categorized according to the condition by ICD code (or equivalent, or by the below selected eye conditions that represent the leading causes of vision impairment)	Population-based surveys

Indicators	Rationale	Definitions	Data source
Elimination of trachoma as public health problem	Validation of the elimination status of Member States is very important to ensure that trachoma as public health problem.	WHO defined elimination as (i) a prevalence of trachomatous trichiasis "unknown to the health system" of <0.2% in adults aged ≥15 years (approximately 1 case per 1000 total population), and (ii) a prevalence of trachomatous inflammation—follicular in children aged 1–9 years of <5%, sustained for at least two years in the absence of ongoing antibiotic mass treatment, in each formerly endemic district; plus (iii) the existence of a system able to identify and manage incident trachomatous trichiasis cases, using defined strategies, with evidence of appropriate financial resources to implement those strategies *(20)*.	As per the WHO-elimination validation process *(21)*

[20] Trachoma. Key facts [website]. Geneva: World Health Organization; 2022 (https://www.who.int/news-room/fact-sheets/detail/trachoma, accessed 30 June 2022).

[21] Validation of elimination of trachoma as a public health problem. Geneva: World Health Organization; 2016 (https://apps.who.int/iris/handle/10665/208901).