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Making every school a health-promoting school

Implementation guidance for School health services

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Inside cover

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Foreword

To be added

Acknowledgements

To be added

Abbreviations and acronyms

Abbreviation	Term
CDC	Centers for Disease Control and Prevention (USA)
HIPAA	Health Insurance Portability and Accountability Act (USA)
HPS	Health promoting schools
NGO	Non-governmental organization
SBHCs	School-based Health Centers
SHS	School Health Services
SHN	School Health & Nutrition
SBV	School Based Vaccination
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Glossary

Adolescence	WHO defines adolescence as the period between 10–19 years
Barrier	Any factor that obstructs implementation of SHS initiatives.
Child	Any individual below the age of 18 years (United Nations Human Rights, 1990: WHO 2022a: WHO, 2022b). For health programming purposes, WHO often distinguishes between children (0-9 years) and adolescents (10-19 years).
Comprehensive School Health Services	The extent to which the spectrum of care and range of services respond to the full range of health problems in a given community. Ideally, comprehensive services address all health areas relevant to their student population, including: positive health and development; unintentional injury; violence; sexual and reproductive health, including HIV; communicable disease; noncommunicable disease, sensory functions, physical disability oral health, nutrition and physical activity; and mental health, substance use and self-harm. The term “comprehensive” is used in this document consistent with the WHO guideline on school health services (WHO, 2021c).
Curriculum	“A collection of activities implemented to design, coordinate and plan an education or training schedule. This includes the articulation of learning objectives, content, methods, assessment, material and training for teachers and trainers” (3 in IGHPS) that enables students “to develop skills, knowledge and an understanding of their own health and well-being and that of their community” (4 in in IGHPS). The curriculum encompasses the totality of students’ experiences that occur in the educational process and it includes planning and development and students’ educational experience beyond the classroom.
Dedicated school health personnel	Health personnel specifically dedicated to school health services provision (school nurse and/or school doctor)
Enabler	Any factor that facilitates, improves or increases the probability that SHS are implemented.
Governance	The rules, mechanisms, relationships and processes through which SHS activities and roles are led, managed, monitored and held to account for use of allocated resources and achievement of specified objectives.
Health	“A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO Constitution)
Healthy Development	Positive development: healthy transitions and growth in childhood and adolescence, including healthy physical, sexual, cognitive, and psychosocial development." (WHO guideline on SHS, Page xiii).

Health Promotion	“Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions” (7 in GSHPS). Its scope and activities are ideally comprehensive and multifaceted. Often framed in the context of prevention strategies for a group, community or population, it is also embodied in individual approaches such as treatment and continuing care.
Health-Promoting Schools (HPS)	A school that consistently strengthens itself as a safe, healthy setting for teaching, learning and working (8 in GSHPS). The global standards and indicators are applicable to any whole-school approach to health, even if the term “HPS” is not used (e.g. comprehensive school health, healthy learning environment, école en santé, escuela para la salud).
Health-care professional	A person who has been formally trained and is registered with a relevant organization to provide health care. They include doctors, dentists, nurses, clinical psychologists, mental health professionals, allied health professionals, certified health educators and counsellors, and in some countries, community health workers (adapted from WHO telehealth consultation guide, 2021).
Implementation	"Conduct of a specified set of activities to establish or put in place a programme or initiative. The activities include identification of an issue, determination of a desired outcome, planning, use of monitoring and feedback, collection and use of data and collaboration of internal and external stakeholders throughout the process. Particularly in schools, implementation is considered to represent complex interactions among the characteristics of the education system, implementers and the organizational context in which a programme is implemented." (Making every school a health-promoting school, Page viii)
Intersectoral Collaboration	"A working relation between two or more sectors to achieve health and education outcomes in an effective, efficient, sustainable manner." (Making every school a health-promoting school, Page ix)
Progressive realisation	In this guidance, progressive realization of school health services means their iterative and continuous development. The principle of progressive realization recognizes that countries of very different level of experience with school health services can make incremental steps for their development in terms of access, quality, sustainability, and institutional anchoring in national policies and plans. A particular aspect of progressive realization is described in Figure 1 in relation to universal access to quality services and priority interventions.
School community	A school community includes “All school staff, including teachers, school governance (e.g. school board members), management staff, other school staff (e.g. administrative staff, cleaners, health professionals) and volunteers who work in the school, students, caregivers, legal guardians and the wider family unit” (Making every school a health-promoting school: global standards and indicators, page ix)

School Health Policy	Decisions, plans, actions or intentions to promote health and well-being that are formally included in a school's documentation.
School Physical Environment	"The school has a healthy, safe, secure, inclusive physical environment." (Making every school a health-promoting school - Global standards and indicators, page 10)
School Health Services	Health services provided to students enrolled in primary or secondary education by health care providers and/or allied professionals, which may be provided on site (school-based health services) or in the community (school-linked health services). The services should be mandated by a formal arrangement between the educational institution and the health-care providers' organization (ref. GSHPS). While we recognize that other professionals and cadre, such as teachers (see the example from Malawi), informal educators, peer counsellors are also providing services that contribute to health, for example sexuality education or menstrual hygiene management, these, insofar they are not provided by a health-care professional (see definition), are not included in the definition of school health services.

292_Malawi

An example how teachers are trained to identify basic health issues (including mental health); □ provide first aid; address some identified issues and refer others to more specialized services, and □ provide guidance and counselling on health matters, including HIV/AIDS (page 8). We can use this in intro when we say that health related activities are also conducted by non health workers

School Social Environment	"The school has a safe, supportive social–emotional environment." (Making every school a health-promoting school - Global standards and indicators, page 10)
Stakeholder	"A person, group or organization with an interest in or that may be affected by the implementation of HPS (or similar). They include individuals within the school community such as students, parents, teachers, administrative staff, HPS coordinators and principals. Stakeholders outside the school may include local health service providers, business owners, United Nations agency staff, nongovernmental organizations and their representatives and district, provincial and national ministerial staff." (Making every school a health-promoting school, Page ix)
Subnational	Political–administrative unit that operates at the level of a state, region, province, municipality, district or zone. Countries may have different levels of school governance.
Sustainability	The extent to which an initiative is maintained or institutionalized in a given setting (WHO, 2021a; WHO, 2021b).

Well-being	A physical, emotional, mental and social state “in which every individual realises his or her potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to [their] community” (24 in IGHPS).
Whole-school approach	“An approach which goes beyond the learning and teaching in the classroom to pervade all aspects of the life of a school” (3 in IGHPS). Includes teaching content and methods, school governance and cooperation with partners and the broader community as well as campus and facility management. It is a cohesive, collective, collaborative approach by a school community to improve student learning, behaviour and well-being and the conditions that support them (25 in IGHPS).

Overview of the guidance

Background

Schools have an extraordinary potential to provide intensive, long-term and large-scale health programmes that address both immediate health needs and broader determinants of health and well-being for children and adolescents." Globally, while primary school enrolment exceeds 90%, secondary school enrolment remains around 60%, highlighting both opportunities and challenges for reaching adolescents.". A system of school health services (SHS) may be the only institutional mean to meet the health needs of most school-age children and adolescents on a daily basis. Additionally, SHS may also be a highly effective way to support schools in the task of preparing children and young people to be educated, healthy citizens.

In 2021, the WHO in collaboration with UNESCO and other partners published a package of guidance to support school health programmes, including global standards for health promoting schools (HPS) and the WHO guideline on school health services:

1. Making every school a health-promoting school – global standards and indicators.

> The World Health Organization defines SHS as “Health services provided to students enrolled in primary or secondary education by health care and/or allied professionals, which may be provided on site (school-based health services) or in the community (school-linked health services). The services should be mandated by a formal arrangement between the educational institution and the health-care providers’ institution (WHO HPS standards, 2021)

(https://apps.who.int/iris/rest/bitstreams/1352165/retrieve)

2. Making every school a health-promoting school – implementation guidance (https://apps.who.int/iris/rest/bitstreams/1352169/retrieve)

3. Making every school a health-promoting school – country case articles (https://apps.who.int/iris/rest/bitstreams/1352173/retrieve)

4. WHO guideline on school health services (https://apps.who.int/iris/rest/bitstreams/1352177/retrieve)

The WHO guideline on school health services (SHS), published in 2021, offers a comprehensive menu of evidence-based interventions that are acceptable, feasible and effective in the context of school health services. The menu recommends interventions and services across health promotion, health education, screening (and referral), preventive interventions, clinical assessment, health services management and support for other components of HPS. The guideline does not provide guidance on *how to* implement school health services, and recognizes the need for an implementation guidance to cover the practical aspects on planning, implementing, monitoring and evaluating school health services.

This guidance aims to address this gap. Global and regional reviews of SHS identify that, while most countries have some form of school health services, these programs often lack a robust evidence base, suffer from poor implementation, are underfunded, and have limited reach and scope. Notably, SHS are frequently seen as external to the education system and subsequently excluded from national whole-school approaches to health. An international needs assessment highlighted the widespread demand for guidance on the practical aspects of planning, implementing, monitoring, and evaluating SHS.

This document provides targeted guidance specifically for implementing and sustaining SHS, with a concluding section discussing their integration within the broader Health Promoting Schools (HPS) framework. The implementation guidance was developed based on feedback from the needs assessment and input from a technical advisory group, which pinpointed the areas of greatest need. It addresses the key facilitators and barriers identified in the literature and by international experts, including policy frameworks, collaboration between ministries of health and education, training, and the involvement of community partners, families and caregivers, and students. Additionally, the guidance covers the importance of organizational hierarchy in effectively managing SHS.

Scope and target readership

This document offers practical guidance on organizing and improving school health services in line with the principle of progressive realization (see *Glossary*). The recommendations are relevant to all countries, including those seeking to enhance and strengthen existing SHS as well as countries establishing SHS for the first time.

The primary target audience are policy makers, planners and managers in change of school health and school health services at local, subnational, and national levels, from the Ministry of Health and/or Ministries of Education. The secondary target audience are SHS providers, researchers, development partners, CSOs with interest in developing school health services. The guidance may also be of interest to policymakers in child health more generally.

The aim of this practical guidance is to encourage greater use and consistency in SHS. It is recognized that health needs, health systems, health and education systems, along with workforce capacity differ widely by country and within countries. SHS operate in the context of each country's education and health system and are intended to maximize the country's capacity to deliver person-centered primary health care. Effective implementation should therefore reflect the organizational changes required with regard to factors such as socioeconomic status, social and political drivers, local health concerns, and education systems, and also the legislative and policy environment. A cohesive approach to implementation should ensure that SHS function as an integral part of the health system and of the broader school health framework, tailored to each context and country.

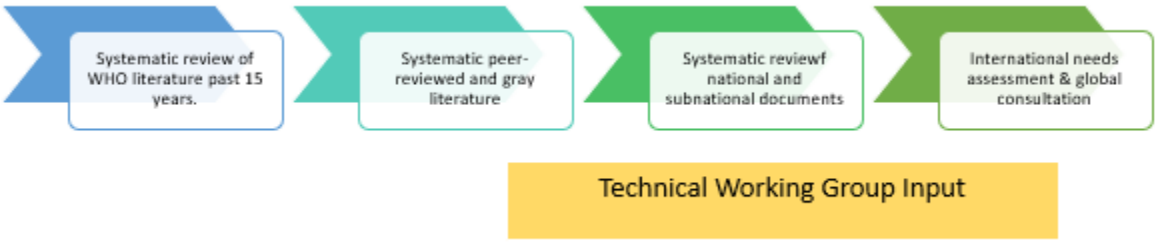
While comprehensive, the implementation guidance is not intended to provide detailed descriptions of other components of school health, and the reader is referred to other WHO guidance for this purpose (see *Complementarity with other WHO resources*).

How this guidance was developed

The development of this guidance took a comprehensive, stepwise approach. First several systematic reviews of the literature were conducted. These reviews included a systematic review of the topics addressed in existing WHO implementation guidance from the past 15 years; a systematic review of peer-reviewed and gray literature on the enablers and barriers to effective implementation of school health services (SHS); and a systematic review of national and subnational normative documents describing the implementation of SHS. The results of these reviews were summarized, and recommendations identified for this guidance.

In addition to the reviews, an international needs assessment was conducted with SHS leaders to identify the areas of greatest need in an implementation guide. The literature was further searched to fill in gaps and then a landscape assessment of SHS practitioners was disseminated to collect exemplars that could be used in the final report. A technical advisory group including UN agencies, oversaw and provided input throughout the process.

Process:



How to use this guidance in different contexts

Each chapter is organized to assist readers in the following manner:

Rationale	• Why this aspect of SHS is important, and what barriers and facilitators may exist
Intent	• What is addressing this aspect of SHS is trying to achieve
Implementation strategies	• Practical strategies to achieve the intent
Checklists	• Specific steps to guide readers in monitoring implementation

Case studies with specific country examples are also included to illustrate the concept.

Quotes (found in green boxes) are from the needs assessments conducted in preparation for this document.

This guidance is applicable in countries with different levels of experience and resources for school health services. Some countries have no school health services and are at the initial stage of discussing the feasibility of school health services. Timor-Leste, for example, in its National Strategic Plan for School Health 2021-2023 sets to establish a Joint Working Group of MoH and Ministry of Education, Youth and Sports with the task to build delivery mechanisms for school health services, mobilize resources and discuss the package of services (Ref. Timor-Leste National Strategic Plan for School Health 2021-2023). Other countries have school health services with a limited provision. Mali for example, in its national strategic plan for school health 2017-2021 aims to establish or reinforce 250 school nurse offices and ensure the availability 300 trained cadres (ref. PLAN STRATEGIQUE DE LA SANTE SCOLAIRE 2017 – 2021, 2016.). Other countries, such as Cuba, Sweden, United Kingdom have a long history of implementing school health services, with high accessibility and broad spectrum of services. Even within one country, different districts or schools can be at different stages of implementing school health services. In Myanmar, for example, the government mandates four levels of provision based on the situation in each school (Box XYZ). This guidance is applicable to all these contexts.

The guidance recognizes that the implementation of SHS is iterative and continuous, and guides an incremental, process-driven approach to progressive realization of school health services.

Box XYZ

From basic to advanced provision of school health services in Myanmar

One of the strategic objectives of Myanmar' National Comprehensive School Health Strategic Plan (2017-2022) is to improve health and well-being of learners through health literacy and services. The governments recognizes that different school may have different level of resources, and mandates four level of services based on the situation in each school:

- **Basic health services (minimum package) (BHS):** mostly feasible in all school without financial support

1.Basic health education and literacy on healthy behaviour (physical activity, diet, personal hygiene, awareness of tobacco products and alcohol consumption, etc.)
2.Promote physical activity and active life-style to reduce NCD risk factors, and sustainable development
3.Prevention of infectious disease through improving hygiene include oral health and menstrual hygiene
4.Nutrition services or school food programme (safe and standard nutrition, including school lunch menu and cafeteria/food service environment, along with

health education)
5.Prevent injury and develop the safety environment in/around school
6.Basic sanitation and waste management in school(Basic WASH facilities)
7.Basic life-skills education including reproductive health

- **Basic health promotion package plus (BHP+):**including the "basic health services" with additional items that are mostly feasible in all school with financial support

8.Promote specific healthy diet and nutrition to reduce obesity and address double burden of malnutrition
9.Provide the school health service for improvement of overall health for students including parents, peer and community supports including address bullying and violence in schools
10. Prevent and control specific communicable diseases (HIV/AIDs, Dengue, TB, malaria, encephalitis, leprosy, etc.)

- **Intermediate package with advancement (IPA):** including the implementation of all the basic school health services, other health promotion package, and select these objectives based on the school/community situations and resources

11. Oral Health Check-up by dentist
12. Eye check-up by otolaryngologist
13. Reproductive health and gender equality
14. Prevent alcohol and substance abuse

- **Advance stage of school health services (ASH):** depend on resource and needs in each school the following activities can be integrated to response to specific needs. As the country still have low capacity on counselling and psychosocial support for schools, mental health issue required more advance steps to advocate for human resources, training, research, and active participations of students to address mental health issue in schools.

15. Mental health including suicide prevention, screening and treatment of mental health related problems.
16. Strengthen school resilience for climate change and disaster preparation

Source: Myanmar National Comprehensive School Health Strategic Plan (2017-2022)

A progressive realization of school health services has the end goal of universal access to quality services and priority interventions. This can be achieved by acting on three dimensions of access (Figure 1).

Figure 1. The cube of universal access to school health services

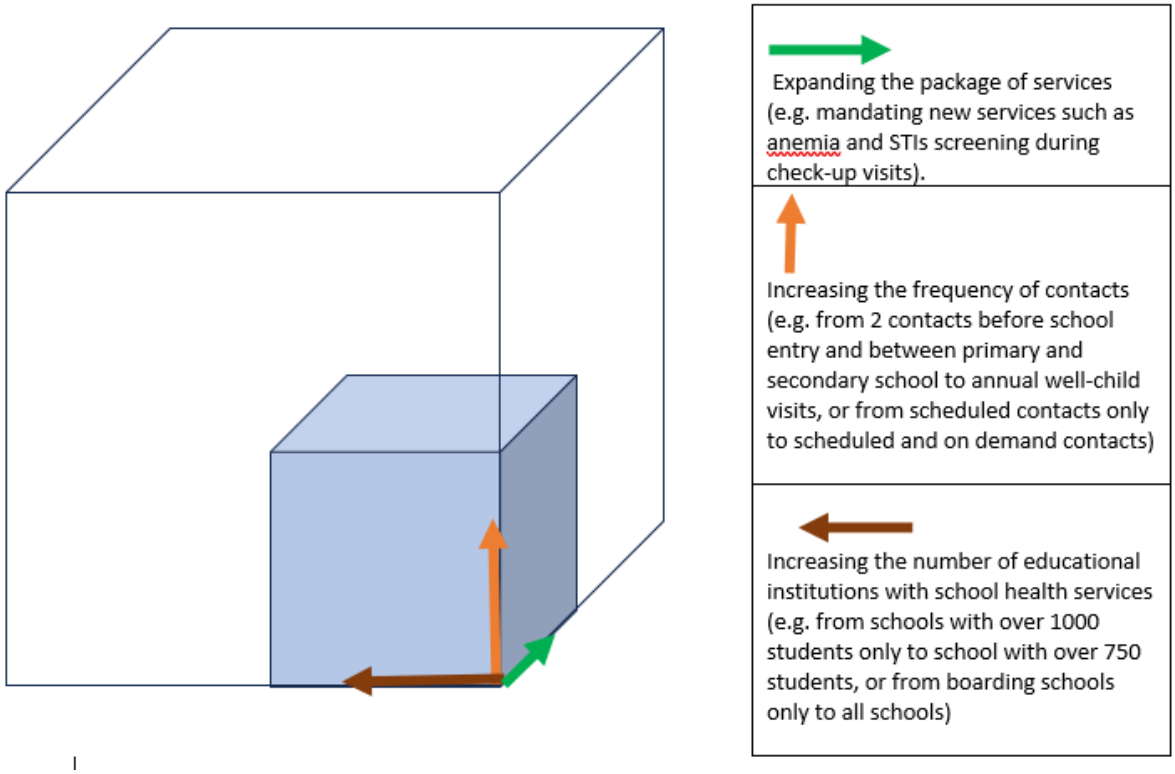


Table XYZ presents 3 hypothetical scenarios on how this guidance can be used depending on the prior experience of implementing school health services and level of resources.

Table XYZ. Application of the global guidance in countries with various experience of implementing SHS

Experience in implementing school health services		
No or limited experience	**Some experience**	**Extensive experience**
Hypothetical examples		
The country has no national policy on school health services. A donor-supported project on health-promoting schools is implemented in several districts but health service provision is not part of it. Given the raise in mental health problems, substance use and chronic conditions, the government is exploring the feasibility of	The country has a national school and university health programme that mandates school nurse offices in all schools with over 1000 students. In practice, only 40% of schools have such offices, and there is a high attrition and turnover of personnel. The package of services is delivered during school entry check-ups as well as in check-up visits for	The country has a clear policy for school health services, standalone or as part of national school health policy. The policy was recently reviewed or updated. The policy was operationalized in all districts, but the quality of implementation varies from district to district and from school to school.

implementing school health services.	students in grade 4 and 7. Services include immunizations, physical examination, height and weight measurement, visual screening and SRH/HIV information and counselling for older students. There is no clear mechanism how data from annual check-ups are used for follow up and action planning.	
Context-specific application of the implementation guidance		
•Make a context specific investment case for school health services with key stakeholders (Chapter 1). •Establish an intersectoral multistakeholder coordination team including students and parents (Chapter 6) to explore the feasibility, desirability and modalities of implementing school health services. Based on needs assessment and landscape analysis (Chapter 2), decide priorities for the package of school health services (WHO guideline for SHS). •Consider the implementation cycle and other aspects in preparing and planning SHS (Chapter 2), implications for human resources (Chapter 3) and premises (Chapter 4). •Develop a 1–2-years implementation plan and decide how success will be monitored (Chapters 5 and 7). • Make sure school health services are part of, and contribute to, broader school health programmes and objectives (Chapter 8). •Evaluate, learn, improve and extend/expand (Chapter 7).	•Make a context specific investment case for strengthening school health services and expanding access to underserved areas and schools (Chapter 1). •Identify resources and modalities of extending access to school health services in underserved schools. •Based on needs assessment and landscape analysis (Chapter 2), consider revising the package of school health services to aligned with evidence-based interventions (WHO guideline for SHS) and address emerging/neglected priorities (e.g. mental health problems, chronic conditions). •Consider expanding school health services by (i) adding new essential or suitable interventions from the menu recommended in the WHO guideline for SHS (ii) increasing the frequency of well-child visits and/or (iii) by including drop-in on request individual services. •Consider the implementation cycle and other aspects in planning revision of SHS (Chapter 2), implications for human resources (Chapter 3) and premises (Chapter 4).	•Use the global guidance to conduct a rapid "gap analysis" of the current policy. • If necessary, update the package of services provided (WHO guideline for SHS), and expand access by considering additional delivery models (e.g. drop-in school-based service provision, teleconsultations) •Consider the implementation cycle and other aspects in planning revision of SHS (Chapter 2), implications for human resources (Chapter 3) and premises (Chapter 4). •strengthen accountability by better reporting on indicators and targets (Chapter 7). • Consider reinforcing intersectoral government and multi-stakeholder coordination mechanisms in districts. • Support districts and schools by providing capacity development, including training, operational manuals and tools. • Support prospective learning between districts and schools. • Evaluate, learn, improve and extend/expand (Chapter 7).

	•Develop an implementation plan and decide how success will be monitored (Chapters 5 and 7). •Reinforce intersectoral government and multistakeholder coordination. •Support districts and schools by providing capacity development, including training, operational manuals and tools. • Support prospective learning in districts and schools. • Strengthen the links between school health services and existing broader school health programmes and initiatives (Chapter 8). • Evaluate, learn, improve and extend/expand (Chapter 7).	

Complementarity with other WHO resources

This implementation guidance should be used in connection with the WHO guideline for school health services. The guideline recommends *what to do*, and the implementation guidance describes *how to do*. It also supports the implementation of school health policies and programmes, insofar school health services is one of the eighth components of school health. Key complementary documents are listed below.

	QR code and short description
 *WHO guideline on school health services* World **Health** Organization; UNESCO (Publication Date: 2021	

 *Making every school a health-promoting school: global standards and indicators* World Health Organization; UNESCO (Publication Date: 2021,)	QR code and short description
 *Making every school a health-promoting school: implementation guidance* World Health Organization; UNESCO (Publication Date: 2021,	QR code and short description
	QR code and short description

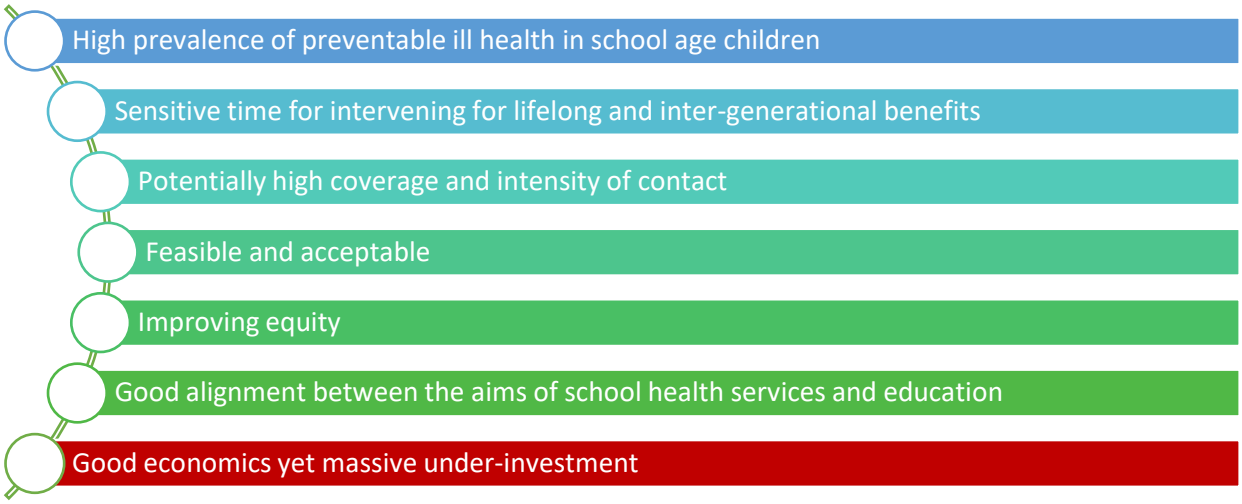
Making every school a health-promoting school: country case studies World Health Organization; UNESCO (Publication Date: 2021	
 *Improving the health and wellbeing of children and adolescents: guidance on scheduled child and adolescent well-care visits* World Health Organization; United Nations Children's Fund (UNICEF) (Publication Date: 2023,	QR code and short description
• Global platform to monitor school health https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/adolescent-and-young-adult-health/school-health/global-platform-to-monitor-school-health	QR code and short description

Chapter 1: Why invest in school health services?

Rationale

Investing in school health services is recommended on several grounds (Figure XYZ).

Figure XYZ. Rationale to invest in school health services



High prevalence of preventable ill health in school age children

Children in middle childhood and adolescents are affected by a range of largely preventable and treatable health problems, including unintentional injury, interpersonal violence, communicable and non-communicable diseases, malnutrition, sexual and reproductive health issues and poor mental health. Education is also undermined by hunger, school violence and bullying, and early and unintended pregnancy. Overweight and obesity are growing global problems affecting almost one in five of those aged 5–19 years. There are differences between the sexes, for physiological reasons and as a result of gender norms. Many of the risk factors and behaviours that adversely affect learning and health begin or are established in childhood and adolescence, for example, unhealthy diet, insufficient physical activity, consumption of tobacco, alcohol and other substances, and risky sexual behaviours.

Depression, anxiety and behavioural disorders greatly affect children ability to learn, yet they are among the leading causes of illness and disability among adolescents. Globally, one in seven 10-19-year-olds experiences a mental disorder, accounting for 15% of the global burden of disease in this age group (ref. MH fact sheet, WHO 2024).

At least 10 million unintended pregnancies occur annually among adolescent girls aged 15–19, including among 10–14 years old, often signaling the end of their formal education (UNESCO 2023). Girls who are pregnant are often pressured or forced to drop out of school, which can impact their educational and employment prospects and opportunities.

Oral diseases are also widespread affecting children and adolescents (WHO brighter future report, 2024) The prevalence of health conditions contributing to developmental disability is 13.9% for those aged 15–19 years, with hearing loss, idiopathic developmental intellectual disability, attention deficit hyperactivity disorder (ADHD), cerebral palsy and vision loss being the most prevalent conditions (7 in WHO brighter future report, 2024). For eye care and hearing interventions, school health services and school linked models have been shown as highly effective and recommended in WHO guidelines (41 and 138 in brighter future).

Sensitive time for intervening for lifelong benefits

The school-age child and adolescent brain experience key developmental years of learning and growth. Exposure to healthy lifestyle as well as early identification of mental health problems and developmental delays can prevent a lifetime of sickness and disability. For instance, the consequences of failing to address adolescent mental health conditions extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults (ref. MH fact sheet, WHO 2024). This is why SHS, that are well positioned to act early, is such an important investment.

Investment in improving health and well-being in these critical years optimizes human capital and reduces inequity. It enables children and adolescents to become resilient, even in the face of adversity (ref. investing in our future). To help set a pattern of healthy lifestyles and reduce morbidity and premature mortality later in adulthood, support is needed to establish healthy behaviours in adolescence (for example, healthful diet, physical activity and, if sexually active, use of condoms and other contraceptives) and to reduce harmful exposures, conditions and behaviours (for example, air pollution, obesity, alcohol, drug and tobacco use). Investing in preventing NCDs among adolescents, for example, has been estimated to translate into 21 million avoided premature deaths from NCDs over the next 50 years (ref. AA-HA!) . School health services can provide a platform for ensuring the healthy growth, development and well-being of children in their school years and for supporting and guiding parents and caregivers in caring for their children and themselves.

"Our young people are our future. It is imperative to invest wisely in our youth, for tomorrow they will become our leaders who make decisions that affect all of us. Nurses in schools prepare our young people with a kiti or tool box for their future in health promotion and prevention of diseases. This helps society keep healthy and economies are then able to invest in other more pressing issues/concerns."

Potential for high coverage, early intervention and long-term care

Over 90% of children are in primary school, and 60% of children attend secondary school. This positions school health services uniquely well in achieving high coverage with essential interventions. Moreover, because of their proximity and ease of access, school health services are uniquely placed to intervene early. There are typically more schools than health facilities in all income settings, and rural and poor areas are significantly more likely to have schools than health centres (ref. AA-HA!). The intensity of contact is another opportunity to intervene early and provide long-term care. In OECD countries, children spent in schools around 8,000 hours of focused time over 8 to 10 years that can be used not only for educational outcomes but also to address the health and well-being of learners.

Feasible and acceptable

The evidence review that underpinned the recommendation of the WHO guideline for school health services demonstrated that school health services are feasible in all settings, and highly acceptable by students, caregivers and education personnel (WHO 2021). To be effective, SHS should be adequately resourced and implemented well. Even if in some settings it may be difficult and/or not yet feasible to implement comprehensive SHS similar to those in HIC, in many LMIC, it may nonetheless be feasible to implement some aspects of comprehensive SHS

now, even if not yet all aspects (see Figure 1. The cube of universal access to school health services and the Table XYZ How the guidance can be applied in different contexts).

Evidence shows that if designed and implemented to a high standard, SHS might well be acceptable to most stakeholders (ref. SHS guideline). Studies from HIC show strong beneficial findings related to SHS acceptability in terms of student use, access and confidentiality. Evidence from LMIC, although limited, shows overall satisfaction with SHS of various stakeholders such as school principals (ref 82 SHS guideline), and the perceived value of school nurses by teachers in both public and private schools (ref 83 SHS guideline).

Improving equity

The education system is particularly well-situated to promote health and well-being among children and adolescents in poor communities that lack effective health systems – children who otherwise might not receive health interventions (ref. AA-HA!). For some children and young people, SHS are their only source of timely and accessible healthcare. These services are particularly crucial for those living in low-income or underserved communities, where barriers such as lack of transportation, financial constraints, or limited availability of local healthcare providers can prevent families from seeking health care. By offering health services directly within the school setting, SHS can bridge these gaps, providing essential care that might otherwise be out of reach. This access is especially important for managing chronic conditions, providing preventative care, and addressing acute health issues that, if left untreated, could hinder a student's ability to engage in their education.

In areas with significant health disparities, SHS has the potential to be transformative. For example, school-based health centres in the United States of America helped African-American children and adolescents from low-income families receive health care they may not have otherwise received, closing the gap in potential health-care disparities (ref 67 in the SHS guideline). By integrating healthcare into the school setting, SHS can ensure that every student has an opportunity to achieve their full potential. This approach can improve attendance, enhance academic performance, and foster a healthier, more equitable school community.

Good alignment between the aims of school health services and education

Investing in the health and well-being of school-age children and adolescents optimizes investment in education. Healthy, well-nourished school-age children and adolescents learn better yet many learners miss school or do not learn well while at school due to preventable or treatable illness and hunger (UNESCO, 2023). School health services are well placed within health and education. Health and education have a reciprocal relationship: Students who are in good physical and mental health are more likely to attend school regularly, more likely to engage in the educational opportunities schools offer and more likely to demonstrate stronger academic outcomes. These children grow into adults who are more likely to have better health literacy, more likely to enjoy positive health across the lifespan and more likely to influence positive health outcomes for their own children. The benefits of effective school health services are therefore intergenerational. Ninety percent of countries have some type of SHS programme (UNESCO, 2023).

Although a single SHS activity can be helpful, comprehensive approaches are best. Yet, currently many countries only implement a service, such as vaccinations, and do not take a

comprehensive approach to SHS. This often confuses policymakers and educators as to the nature of SHS and how it differs from terms such as health promoting schools (HPS), school health, and even health education.

SHS activities include health promotion, health education, screening (and referral), preventive interventions, clinical assessment, health services management and support for other components of HPS. Comprehensive SHS go beyond basic provisions and include at least four health elements from the following topics: sexual and reproductive health (including HIV), communicable and noncommunicable disease management, oral health, nutrition, physical activity, mental health (addressing substance use and self-harm), injury prevention, violence prevention, and support for physical disabilities and sensory issues. These topics and activities overlap with health education and other components of HPS. The key difference is that SHS involves a health worker and should be part of a comprehensive approach. A comprehensive approach addresses a wide array of wellbeing domains, including physical, mental, social, and developmental health. Difficulties in these areas often occur concurrently and can profoundly impact a student's ability to learn and succeed. By addressing these challenges at the intersection of wellbeing domains, comprehensive SHS have the potential to prevent lasting negative effects, yielding significant benefits for children and young people, their families, and the broader community.

A comprehensive approach to promoting health and well-being in Norway

ref. UNESCO global report

Good economics yet massive underinvestment

SHS are effective and cost-effective across a range of outcomes. Interventions delivered through schools, including deworming, insecticide-treated bed net promotion, tetanus toxoid and human papillomavirus vaccination, oral health promotion, vision screening and provision of spectacles, micronutrient supplementation, multi-fortified foods and school feeding interventions, offer excellent cost–effectiveness and very high benefit–cost ratios (WHO SHS guideline). For every $1 spent on SHS, the return on investment in doubled (Wang et al, 2014; Olneck et al, 2024. Comprehensive SHS result in critical effectiveness outcomes such as reduction in suicide planning, hospitalization for asthma, emergency department visits for asthma (ref. WHO guideline for SHS). SHS decrease school absenteeism, and increase youth's quality of life. This is particularly true related to chronic conditions such as asthma and diabetes (PLOS, 2023). In addition, SHS workers help students become healthier (Cochrane, 2022). Yet only US$2billion is invested each year in addressing health needs of school-age children, compared to US$210billion is spent in low and middle income countries on education (UNESCO, 2023).

The returns on investments in nutrition, health care, quality education and skills are manifested through greater productivity and enhanced human capital (ref AA-HA!), not least because on many countries school-age children and adolescents comprise a substantial proportion of a country's population. The substantial presence of students within a nation's population presents significant opportunities for economic growth and social development when they are empowered. For example, investing in a comprehensive package of interventions to prevent

NCDs during adolescence over a 50-year period would translate into about US$ 400 billion in cumulative economic benefits (ref.83 in AA-HA!). Investing in learners' connectedness and agency further potentiates the effects and increases social capital.

Despite these benefits, global data suggest that the coverage of school health services is higher in higher-income countries than in lower-income countries, which means that many learners that would benefit the most are not reached. Around half of countries have some form of school-based mental health programme, but more needs to be done to address the increasing prevalence of mental and emotional health problems among school-age children and adolescents. Although school health services can play an important role in prevention, early detection and referral for substance use and substance-use disorders, in most countries, substance use is not addressed by school health services (ref. UNESCO report ready to learn and thrive).

Rationale

Placeholder: Why it is important to make an investment case with policy makers, education staff, caregivers, students and communities.

Implementation strategies

Key strategies how to advocate for SHS - to be developed

Checklists

To be developed

Chapter 2: Preparing and Planning for SHS

Rationale

Even in well-established systems, planning never stops. An iterative implementation cycle should be observed. Early planning is essential for the successful implementation and sustainability of SHS. This task should be prioritized as the process can run from a few months to a year (Pearrow et al., 2016; Lott & Johnson, 2012). While early planning improves the likelihood of success, a short timeline can be overcome in cases where the introduction of legislation requires compliance, for example in the cases of immunization (Glow & Spearhac, 2003), asthma prevention (Nuss et al., 2016) or concussion management (Howland, 2018).

The evidence review that underpins this guidance highlighted the following priority areas to be addressed in the planning for SHS: inter-ministerial collaboration, secure resources for SHS implementation, decide on/improve models for SHS provision, ensure managerial capacity and effective management practices, ensure operational guidance for district and local level. It is important therefore to translate the lessons learned in relation to these components in practical guidance for policy makers and planners.

Intent

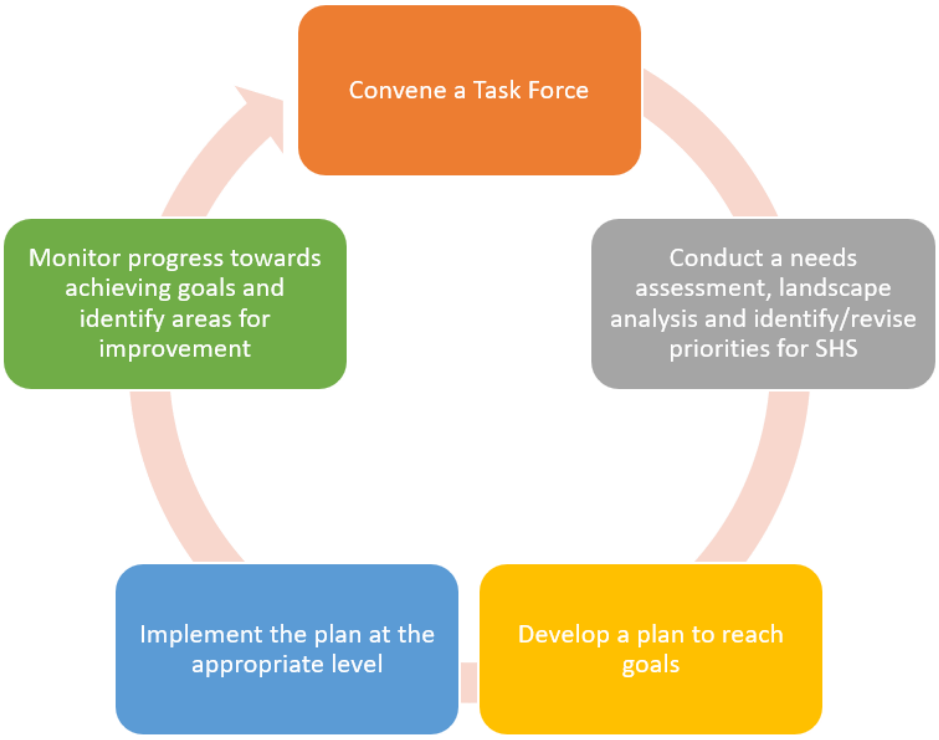
The WHO implementation guidance for Global Standards for Health-promoting schools describes five steps of the implementation cycle to Make Every School a Health Promoting School. In this guide the five steps are adapted to reflect the iterative planning for school health services specifically. Following the description of the implementation cycle, the priority planning components are described in depth with the intention to equip policy makers with knowledge and implementation strategies to anticipate barriers and leverage on opportunities during the iterative planning process.

The implementation cycle

Authorities interested in establishing or strengthening SHS might consider the following steps (Figure XZY):

1. Convene a multi-disciplinary task force of interested parties and consult the WHO guideline for SHS, the WHO/UNESCO global standards for HPS, and this guidance
2. Conduct a needs assessment and landscape analysis to identify local needs, concerns, priorities, goals and key supporters.
3. Develop a plan to reach goals, including implementation strategies described in this guidance and adapting them to local context and setting. This includes ethical consideration.
4. Implement the plan at the appropriate level (national, subnational and school level)
5. Monitor and evaluate how the plan progresses towards goals and identify areas of improvement.

Figure XYZ. SHS implementation cycle



Convene a Task Force

Planning commences with the identification of an individual or agency to provide effective leadership. Subsequently, a genuinely collaborative approach involving both health and education stakeholders is essential (see *Inter-ministerial collaboration*). Planning should take into account the current situation including the resources and competencies at the school level, and level of buy-in from stakeholders (Samdal & Rowling (2011) as adapted in WHO (2022). These elements help inform the development of a timeline for implementation or enhancement of SHS. In addition to formal stakeholder engagement, it is important to communicate with and seek feedback from families and caregivers, students, community workers, health care providers, teachers and school administrators. It is crucial not to forget the community at large in the planning in order to obtain buy in (Lott & Johnson, 2012).

Depending on where is the country on the continuum of implementing school health services (see Table XZY on 3 hypothetical scenarios), the specific terms of reference for the Task Force will vary from country to country. Below examples of tasks relevant across all contexts are provided.

Example of specific tasks for the Task Force	• Make/update the investment case (see Chapter 1) • Ensure buy-in and commitment to the whole process from key stakeholders including representation from key sectors, students and caregivers • Ensure that the principles of students meaningful participation are upheld, and good practices followed, during the entire process of plan development throughout the M&E • Oversee and facilitate the process of needs assessment, landscape analysis, national prioritization, programming, and developing a monitoring and evaluation framework for the Strategy • Decide on the implementation model and implementation mechansims • Secure resources for implementation • Ensure institutional anchoring through policy development • Mandate the development of operational guidance to district and local level • If external technical assistance is required, secure support from the relevant partners

Timor-Leste creates a Joint working group of Ministry of Health and Ministry of Education, Youth and Sports to propose a package for SHS

Timor-Leste National Strategic Plan for School Health 2021-2023 envisaged the creation of the Joint working group of Ministry of Health and Ministry of Education, Youth and Sports. AMong other things, the group was tasks to propose a package for SHS and discuss the mechanism to deliver services. Among other tasks related to school health more broadly, the Terms of Reference (TOR) of the Joint Working Group include the need to review the previous MOU of 2002 and discuss whether a new revised MOU between MOH and MOEYS is required to be signed; propose a package of school-based health and nutrition services; discuss possible mechanisms for delivery of school health services; oversee the undertaking of the Global School Health Survey (GSHS) and Global Youth Tobacco Survey (GYTS) with the aim of conducting them periodically; clearly define the role and responsibility of MOEYS and MOH for funding of activities in National Strategic Plan for School health.

Source: National Strategic Plan for School Health 2021-2023, Timor-Leste

Needs assessment

A needs assessment looks at the qualitative and quantitative data related to SHS to identify trends in mortality, morbidity, risk factors and social determinants, and inequity of care. The assessment identifies conditions at the national, subnational or school level (depending on the focus) that have the greatest impact on the school-age population and looks at differences between gender, racial/ethnicity, disability, and socioeconomic status that may be causing inequities. The aim of the needs assessment is to establish a clear understanding of the most important health concerns and trends in school age children, including:

- levels and trends in mortality and morbidity of school-age children
- levels and trends in behaviours most closely linked to mortality and morbidity
- levels of harmful practices affecting learners (such as child marriage, adolescent pregnancy, FGM);
- the sociocultural context that affects health and learning, including protective and risk factors
- the influence of gender norms, roles and relations on the health and well-being of both girls and boys during adolescence;
- subgroups of students who may be in the greatest need of services and programmes; and
- data gaps

A detailed description of the process of needs assessment is available in the Chapter 4 of the AA-HA! guidance and in the AA-HA! manual. The principles and data sources for the assessment of the needs of school age-children are very similar, therefore the reader is referred to the existing guidance.

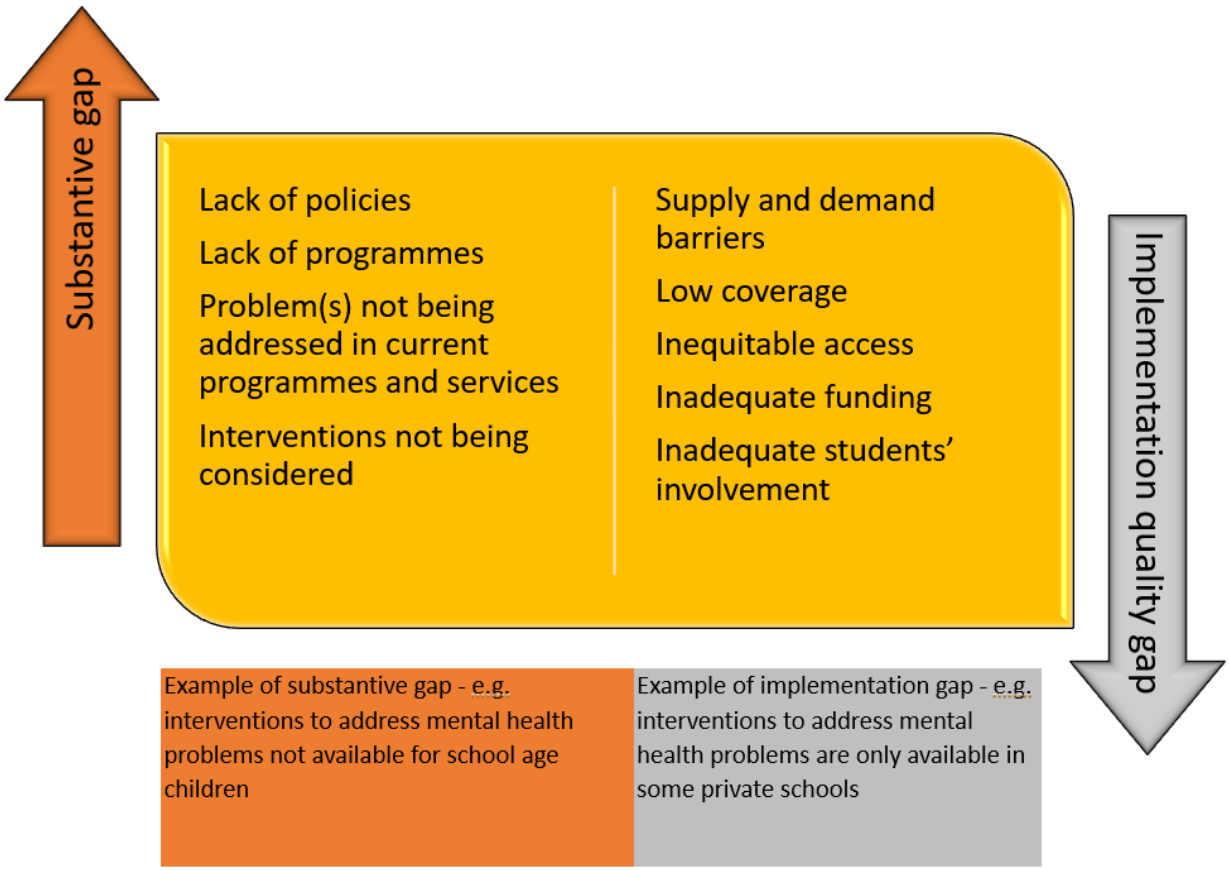
Document	Relevant contents
AA-HA! guidance	Short description – to be added
AA-HA! facilitator manual	Short description – to be added

Landscape analysis

Landscape analysis examines the extent to which the problems identified during needs assessment are addressed in national plans, polices and services. It entails a review of current policies, services, and programs at the same level of the needs assessment (i.e. national, subnational, or school level) to determine how well they are addressing needs. The landscape analysis also looks at barriers to services for the entire student population, as well as for particular groups who may be more vulnerable. Data can be collected using qualitative methods such as interviews, focus groups, or observations. Finally, the landscape analysis looks at what evidence-based interventions exist and are most effective in addressing the concerns addressed in the needs assessment. For school health services, these are already summarized in the menu of interventions described in the WHO guideline for SHS.

By comparing what is currently available with the recommendations of the SHS guideline, and findings of landscape analysis, substantive as well as implementation quality gaps can be identified (Figure XYZ).

Figure XYZ. Gap analysis for SHS



Similarly to needs assessment, a detailed description of the process of landscape analysis is available in the Chapter 4 of the AA-HA! guidance and in the AA-HA! manual. The principles and data sources for the landscape analysis in relation to school age-children are very similar to those in relation to adolescents described in the AA-HA! guidance, therefore the reader is referred to the existing guidance.

Document	**Relevant contents**
AA-HA! guidance	Short description – to be added
AA-HA! facilitator manual	Short description – to be added

Priority setting

The menu of 87 interventions listed in the WHO guidelines for SHS includes interventions that are essential everywhere, suitable everywhere, and essential or suitable in certain geographic

areas. Ideally, SHS should include all essential and suitable interventions, as well as relevant, based on the local epidemiology, interventions that are recommended for certain geographical areas (e.g. screening for tuberculosis). However all governments face resource constraints, and so they must make difficult choices to ensure that their resources for school health services are used most effectively, not only in relation to priority problems, but also in relation to what SHS can do best and in relation to other services available.

A priority setting exercise therefore uses the data and results of the needs assessment, as well as the findings of the landscape analysis, and identifies what interventions would be the most effective and efficient to meet current needs of the entire population, but especially vulnerable subpopulations.

Priority setting should be explicit and guided by several criteria. In details, priority setting process is described in the AA-HA! guidance.

Document	**Relevant contents**
AA-HA! guidance	Short description – to be added
AA-HA! facilitator manual	Short description – to be added

Table XYZ summarizes the application of guiding criteria to identify national priorities for school health services.

Table XYZ. Guiding criteria to identify national priorities for school health services.

Criteria	Explanation	Example of application
Magnitude and public health importance of the issue that the intervention addresses	Resources should be directed at the important/main causes of death and illness or injury as well as go beyond them to address risk behaviours and exposures that could affect learners' health now and in the future and to strengthen overall well-being (for example, resilience and connectedness).	To be developed
Equity: Is the intervention likely to address the needs of vulnerable populations and	All students have health-related needs and can experience difficulties, but not all are equally vulnerable to health and social problems. Special consideration should be given to interventions that are likely to address the	To be developed

poorly served groups?	needs of the students who are most vulnerable and/or need them most.	
Availability of effective intervention(s)	Scarce resources must be used for interventions that have the highest chance of effectiveness for the subpopulations that need them most. All interventions recommended in the WHO guideline for SHS are known to be effective, but not all of them will address the issue in the specific country context with the same high impact.	-
Feasibility of delivering the intervention(s)	Social, economic and cultural constraints may make it difficult to deliver certain interventions. Priority setting should be based on a careful and pragmatic analysis of the feasibility of delivering each intervention at scale in the country context. Acceptability of the intervention by the communities and political support for it are important considerations when selecting interventions.	Making contraceptives easily available to adolescents, and removing cost, travel and other barriers is recommended. In countries with high adolescent birth rates making contraceptives available in schools is one of the strategy to increase access. However planning for such intervention should be accompanied by getting communities and political support first.
Potential to go to scale	A realistic assessment is required to gauge how much capacity would be needed to grow each intervention with high quality and good coverage. Costing exercises can inform overall resource needs and how plans can be implemented in a phased approach.	WHO recommends that psychosocial support and emotional regulation interventions to prevent mental health problems should be universally available. However to current cadre of school nurses is not trained in relevant techniques. Resources for capacity building, roll-out, supportive supervision and M&E might require a step-wise approach to implementation.

Inter-ministerial collaboration

Inter-ministerial collaboration refers to the strategic partnership and joint working arrangements between Ministries (or Departments) of Health and Education to deliver health services in schools. This intersection requires coordinated governance, whether led by Health, Education, or jointly managed via an MOU, to ensure effective implementation and sustainability of school health programs.

Table. Authorities Responsible for SHS scope and content of service (Europe WHO)

Country	Ministry of Health	Ministry of Education	Local Health Authorities	Local Education Authorities
Azerbaijan	X	X		
Estonia	X			
Netherlands	X	X	X	X
Portugal			X	
Sweden	X	X	X	X

Switzerland Geneva		X		

The literature identifies several critical barriers that can undermine effective inter-ministerial collaboration in SHS. These are listed here as warnings to avoid. Poor prior planning and lack of support from key stakeholders frequently emerge as major obstacles to successful implementation (see for example Molete, 2020; Boyer-Chu, 2013). Leadership bodies without sufficient influence to effect change could hamper sustained intersectoral collaboration and weaken outcomes (Saito, 2014). When strategic plans lack clear delineation of roles or fail to engage all relevant stakeholders, implementation risks becoming fragmented and ineffective. Another significant barrier was inadequate communication between ministries, which can lead to misalignment of goals and resources. Without formal structures for collaboration, such as regular meetings or joint accountability frameworks, initiatives may become siloed within individual ministries, reducing their effectiveness and sustainability.

Based on successful enablers identified in the literature, ideal inter-ministerial collaboration should be built on engaged, strategic partnerships with common goals. This can be achieved through leadership models such as co-chairing arrangements (Perreault, 2013), joint task forces (Saito, 2014), or dedicated governing bodies (Seelam et al., 2021). These structures should be supported by clear legislative frameworks, as demonstrated by Japan's 150-year history of

Case Study: 05_Cote d'Ivoire MOE/MOH

structured SHS (Shizume, 2021). The optimal approach includes developing mutually beneficial strategic plans with ambitious goals set by each sector, including NGOs, to improve children's quality of life (Mohlabi et al., 2010). Practical examples of successful implementation can be seen in Thailand's joint management model, where regular meetings and shared objectives ensure coordinated planning and implementation, and Australia's clear MOUs between health

"We work in an environment that education is the focus not health services. Bringing it to the front of non-health administrators that we play a critical role in education because you must be healthy to be educated and educated to be healthy. It goes hand in hand."

and education sectors that explicitly define roles and responsibilities. At the local level, success is achieved when health officers and school staff work together to tailor interventions to community needs, supported by strong communication channels and clear accountability frameworks. Complementary budgets based on the goals is also helpful.

Policy Development

Rationale

Legislation specific to SHS is a significant enabler and contributes to sustainability of SHS. At the same time, the most common barrier to SHS was the lack of legislative requirements or mandates for services, inconsistent alignment of policy components across governmental sectors, and changing governing priorities over time. The literature notes the most common barriers against ensuring policy and institutional anchoring was the critical political support

provided through policy creation and alignment, and specific resource allocation; high level priority changes and political support encountered over time also inhibit ongoing institutional anchoring. This political support also affects funding or financing elements that are essential for comprehensive implementation.

UNESCO reviewed multiple global data sets and found that the most common national policies focused on school nutrition (91%) WHO, 2022b, sexuality education (85%) UNESCO, UNAIDS et al., 2021, school feeding (80%) WFP, 2020, physical education (79%) UNESCO, 2023. Only 50% of national documents mentioned SHS and 40% of them indicated a need for school level policies. Interestingly, low-income countries were more likely to focus on schools as the setting for SHS, when compared to middle- or high-income countries (UNESCO, 2023)

Intent

Clear national and local policies can help guide the evidence-base and strength of SHS. They provide the vision, buy in, and financial resources needed to implement and sustain SHS. Key policy and legislation documents are most helpful when SHS is clearly explained and not just included as part of HPS. Many policymakers do not understand that SHS is specific and different from health education. It is imperitive to also provide clear definitions with identified roles that contain specific responsibilities; and distinct mission statements and health goals.

Having a national commitment to school and/or student health, however, is not enough to ensure creation, expansion, and sustainability of SHS. Policies need to be clearly written and have the financial backing to support the resources need. Additionally, when crafting policies, resources should be included to promote policy awareness, either through wide-spread distribution and specific training or effective policy translation to practice, otherwise, ineffective stakeholder support and institutional anchoring will occur (Acosta Price, 2017; Ademokun, 2014). Successful policies and laws also include funding mechanisms tied to specific program outcomes and frameworks that allow flexibility without jeopardizing standardization. Funding may also allow for scaling of the project.

Sustainable programs utilize theoretical frameworks (i.e. Whole School, Whole Child, Whole Community) and evidence-based guidelines. To create such policies, leaders should also consider stakeholder characteristics, incorporation of a common or shared vision, the structure of policy enforcement, and leveraging existing policies. For example, the new School Mental Health Service in the state of South Australia uses existing mechanisms from the Australian Commission on Safety and Quality in Healthcare (and related) to develop a comprehensive framework to guide their work. Liberia created a Neglected Tropical Diseases (NTD) Master Plan 2023-2027 with technical support from WHO, Sightsavers, American Leprosy Mission, and other stakeholders has a section on integration of NTD services in the School Health Program at the Ministry of Education.

India Case Study #2

India (or Japan

Local level

Policy and institutional anchoring of SHS is crucial for successful SHS implementation. Institutional anchoring of SHS refers to the ability of the local health or education agency to commit staff and prioritize resources for SHS. This commitment is often done through local policies and strategic alignment of the organization's priorities and SHS (Samdal & Rowling (2011) as adapted in WHO (2022). This also means that national policy is clearly written or additional guidance provided so that local implementation is done with fidelity (Watson-Jones, 2016). Funding to assist local education agencies and school is also needed to be outlined in the policy. Schools should then align SHS to meet their priorities and needs to create a unified, comprehensive approach to student needs. Stakeholder engagement and organizational buy-in are enhanced when partners have an explicit understanding of how new program implementation will be deemed successful, whether through state mandates, program outcome reporting, or partner accountability (Glow, 2003; Howland, 2018).

"The implementation of any local projects requires, first of all, adequate financing. Only this can provide a sufficient number of personnel who work with their hands"

"There seems to be disconnect between policies and the people who should implement."

With SHS often being a bridge of health and education, the differing groups may interpret policy through different lenses of priority and miss the original intention of the law or policy. The implementation process should also include an evaluation to promote accountability of each partnership involved. Implementation frameworks may assist in implementing SHS policy systematically, with clear protocols, procedures, and monitoring mechanisms, enhancing efficiency, quality, and accountability. This will also help maintain fidelity to the intended model or intervention over time, even in the face of organizational or personnel changes. Training and continual communication can assist in the implementation process (Ademokun et al., 2014). Transparency in communication of new policies and the purposes of SHS to the public is also key in obtain buy in for policy efforts.

"We need to make student health services a priority."

400_Togo

Supportive supervision, innovation, package

Resources for SHS implementation

Just as purposeful business planning is essential for SHS implementation, continued focus on the processes which provide the foundation for the implementation must remain, because once primary funding, such as grants, ends, maintenance and sustainability is difficult. Other resources such as time, intellectual capacity, and innovation should not be overlooked. Yet, financing SHS is one of the greatest barrier to implementing and sustaining SHS.

The economic value of SHS is not often presented in a way which those tasked with financial and resource oversight regard SHS as an investment in prevention.B Grants can often be used to implement new SHS and purchase initial equipment. However, once the grant funding ends, maintenance and sustainability is difficult. Other resources such as time, intellectual capacity, and innovation should not be overlooked. Planning must include how to secure the resources needed for staffing, equipment, supplies, data management, and maintenance.

Legislative or policy regulations that include a steady funding source to cover SHS can provide sustainability and has been very successful

The funding could be earmarked specifically for SHS to ensure it is not used for other school initiative(see the Case study from Togo).

"Many school buildings are old and outdated, and often the space for school health services is not equipped to adequately serve the students in the most beneficial way. School nurses are often also working with the bare minimum supplies, and if they are lucky, PTA funds help supplement. Often this is not equitable to other schools in a district because PTA funds are typically allocated per school site. So, one school may have more resources than another school in the same district"

400_Togo

The "School Assur" program is a Togolese state health insurance program intended to cover schoolchildren and students in public schools throughout the country, which started at the beginning of the 2017-2018 school year.

In total, 2,204,138 students from primary to high school are insured throughout the country, while more than 6000 public schools are affected.

The program continues to be functional during the holidays.

-To be further developed-

Some countries fund SHS as part of the general healthcare fund (i.e. Finland, Estonia, Iceland) (Euro Commission, 2020).

Another funding model could be based on HPV vaccination programs which estimate the cost per child when looking for funding, as well as framing the cost as a return on investment for the health sector. For example, if the HPV vaccine is less than $US25, it is considered a good investment, if more than that, it is not (Akumbom, Lee, Reynolds, Thayer, Wang,Slade, 2022).

Utilizing cross sector cost sharing may also assist in funding SHS. Starting small with key programs and then expanding to additional programs would help LMIC balance expenditures with return on investment. Another strategy is to work with NGOs and private funders who have, in the past, funded other aspects of school health such as nutrition or specific health education modules and make the economic case for SHS. The economic value of SHS is not often presented in a way that policy makers and NGOs see SHS as an investment in prevention.

The Children's Trust, in England utilized a pooled budget approach by having cross-sector partnerships pool funds together to financially support children's health services in England (AH-HA, pg

"I think the most important thing to present is the economic value of a functioning SHS, it costs more to take care of the sick than for healthy young people to grow up

Case Study: *126_Costa Rica*

Costa Rican Social Security Fund (CRSSF) mandated to by the MOH to provide care in educational setting

With the reform of the Health Sector, in 1995 the Ministry of Health mandated the Costa Rican Social Security Fund (CRSSF) to provide care to people at all levels of care and settings, including the educational.

By 2002, the 90 health areas of the 7 regions of the Costa Rican Social Security Fund signed the commitment to apply a basic package of services in the educational setting to children in the first and third grades and sixth grade.

At that time, the offer included: classification of nutritional status, screening of visual acuity and hearing acuity, review of the vaccine schedule, complete schedule with booster vaccines (MMR-TD), oral health, complete blood count for surveillance of anemia and administration of prophylaxis with antiparasitic. Under this offer through the collaboration between the Ministry of Health and the Ministry of Education by 2006, 90% coverage was achieved for the above mentioned grades. An analysis conducted in 2019, and then repeated in 2021 based on the statistical data collection form for services in educational institutions allowed a national analysis of these services, their impact, limitations and scope. Based on the analysis this, a revision was made in 2022 in order to ensure that the actions carried out respond to the current epidemiological profile of the child population. The renewed package includes:

1. Measurement of visual acuity with the Modified Snellen Chart and interpretation of the results according to established assessments.

2. Measurement of hearing acuity with Card Primer and interpretation of the results according to established valuations.

3. Growth measurement (weight and height measurement) and status interpretation according to the corresponding graph.

4. Whole blood sample collection for complete blood count analysis: for detection of iron deficiency anemia according to hemoglobin levels and alterations in other cell lines (leukocytes or platelets).

5. Assessment of oral health according to the established method and interpretation of the Results according to identified risk levels.

6. Physical assessment of body changes according to defined guide.

In addition to screenings, services include health promotion strategies, prevention (primary and secondary) including vaccinations and prophylaxis with antiparasitic, inspection for lies and treatment, referral and follow up. Annual vaccination services include identification of vaccination status and catch up vaccinations according to age: second dose of Measles, Rubella, Mumps (MMR), the 10-year-old diphtheria and tetanus booster, the vaccine of Papilloma to 10-year-old girls and other vaccines that are introduced according to with the epidemiological profile of the population.

The CRSSF also covers training of personnel and the following topics:

development and learning (screenings), design and attention to referals, registration of

information, comprehensive educational diagnosis, promotion of neurodevelopment,

learning and health, as well as prevention of situations of social risk, biological, educational, psychological, among others.

SOurce:

131). In the United States some healthcare systems and local ministries of health split the cost with education to provide SHS.

Diverse partners who share a common commitment to child health. can provide innovative funding solutions and resources to help sustain SHS (Adams, 2000). For example, private donors, local health systems, pharmacies, faith-based organizations, and community providers have provided resources and supplies needed for SHS programs (Behmerer). Red Cross/Crescent organizations have assisted with training. University and academic/practice partnership can also help share the cost of SHS in resource poor areas.

Another strategy is to work with intersectoral agencies, NGOs, and private funders who have, in the past, funded other aspects of school health such as nutrition, children with disabilities, or specific health education modules and make the economic case for SHS. This may be especially helpful in LMIC countries, where many NGOs focus their attention. Working with NGOs to focus on capacity building or to blend their funding together would allow for increased funding for infrastructure.

Equitable Compensation and Access

Regulatory hurdles, such as heavy caseloads and salaries of publicly funded personnel can impede SHS sustainability. Salaries of SHS workers (i.e. nurses and physicians) are the lowest among health care providers. This creates a sense of inferiority among their health peers that must be addressed by providing equitable pay and benefits for SHS health workers. This is particularly true in rural and low resourced areas. Civil servant salaries are often set and may be difficult to negotiate, although using data to show low comparisons have been used to obtain salary increases. Incentives, recognition, and ability to advance is limited in SHS.

"Insufficient compensation/ salary! I have been an RN for 17 years and I am the lowest paid professional with a professional license in my building!"

Developing a career structure for SHS personnel could be beneficial as career progression and enriched careers paths are an important strategy to enable workers to maximize their health, economic and social impact (WHO 2022; WHO 2021). Other benefits such as weekday business hours (no shift work) are attractive for SHS workers. Individual local education agencies have found creative ways to incentivize SHS workers such as offering tuition reimbursement or reduced rates for community memberships for being employees or the organization.

Another barrier to sustainability related to the shortage of nurses and medical doctors (Mohlabi, 2009), the lack of trained school nursing staff (Shaibu, 2010; Shung-King, 2013), and the erosion of consensus that SHS are built upon nurses, ideally with bachelor's degrees (Lear, 2002). Innovative training programs could be developed that would allow prelicensure nursing programs to teach nurses interested in working in SHS.

Models of SHS provision and their key organizational aspects

There is a great diversity in how school health services are organized around the globe. A model of school health services is characterized by many characteristics such as

- *governance* (who is the lead agency responsible for financing, implementation, employment of personnel, training of personnel, M&E)
- *type of providers* - whether or not the service is provided by dedicated cadre (e.g. school nurse, school doctor) or other health-care professionals (e.g. general practitioners)
- *Place of provision* – school based or off-site
- *Type of services* – scheduled or opportunistic or both
- *The intensity of provision* – characterised by the frequency of check-up visits, provider to student ratio, proportion of time when the provider is available on-site (e.g. full time or part time)

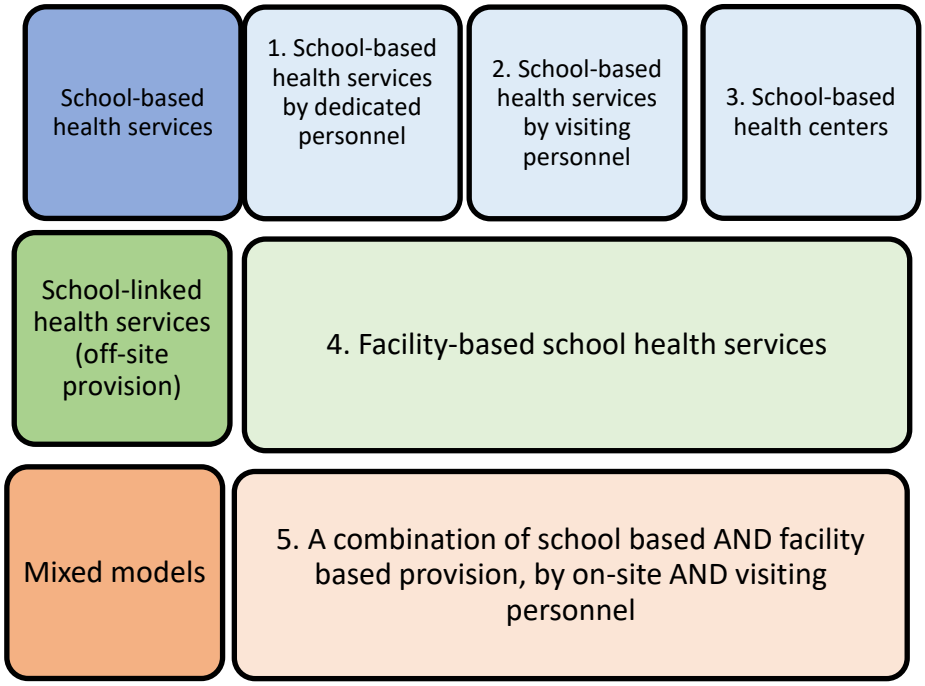
Aligned with the principle of progressive realization (see section XZY), as new resources become available, the existing models can be improved and expanded to include new features, for example:

- Revising the frequency of well-child visits, and the spectrum of interventions during visits
- Adding on demand services to existing scheduled visit
- Consider full time school-based personnel in school over a certain number of students

When planning to establish, or improve school health services all those aspects should be considered.

Depending on the site of service provision (school premises or off-site), and the type of personnel (dedicated or not), five models could be identified (see Figure XYZ).

Figure 1: Organizational models of school health services



School-based models are the most common predominant (Baltag & Saewyc 2017).

Table XZY provides illustrative examples for each model.

Table XYZ. Examples from countries of various models of SHS organization

Model	**Example**
1. School-based health services by dedicated personnel	This model is characterized by the availability of school health professionals that are permanently or at least based in the school part-time, and is very common in many European countries, but also found elsewhere (Baltag & Levi, 2013). In Korea, for instance, school health services to students are provided by a school nurse and psychologist who are based in school full time; usually, in each school there is a special room for consultations (Baltag & Saewyc)
2. School-based health services by visiting personnel	The visiting personnel may be dedicated school health personnel (UK and Netherlands), or primary care providers from the circumscribed facilities (Republic of Srpska, Bosnia and Herzegovina). They visit schools according to a schedule for regular health screenings in predefined grades of students. A variation of this model is when services are provided by visiting (mobile) teams. In Singapore, as an example, mobile health teams called school health services field teams, travel to the schools to conduct health screening and immunization for students. The mobile team consists of a doctor, registered nurses, and enrolled nurses. The team spends an average of eight days per year in each school, depending on student enrollment
3. School-based health centers	This model is common in the United States and parts of Canada. These are health clinics located inside the school building or on the school campus. Students receive care in school-based health centers from a multidisciplinary team of professionals. Typically, a medical assistant, supports a nurse practitioner, or physician assistant. More than half of the centers provide mental health services, most frequently through a master's level social worker, psychologist, or substance abuse counselor. A part-time pediatrician or family physician may also be part of the staff. A center may have access to other part-time professionals, including nutritionists, health educators, social services case managers, dentists, dental hygienists, substance abuse counselors; and others, depending on the needs of the students and the resources available in the community. This model of school-based health care is resource-intensive.
4. Facility-based school health services	In this model, students are invited for health screenings to local health care facilities or school health offices which are not based in schools. In the Netherlands, school health personnel can either visit periodically students in the school premises, or students are invited to visit the public health service depending on local preferences. In the United Kingdom and some communities in Denmark, school nurses are performing regular visits to schools but students can also 'drop-in' at the nurse' office which is off-site when they feel the need.
5. School based AND facility based provision, on-site AND visiting personnel	Many countries or individual schools will have a combination of school-based and facility-based provision of health services by both on site and visiting personnel. In Singapore, in addition to visiting mobile teams that provide screening and immunization, there are 11 registered nurses that provide on-site services to 12 secondary schools and two post-

	secondary schools. They conduct counseling and administer intervention programs such as weight management and smoking cessation programs for students. In New Zealand, about half of schools employ both visiting health personnel and an on-site nurse. In the European region, many countries (i.e., Tajikistan and Albania) have on-site nursing services, and there are also visits by health care providers from the circumscribed facilities (WHO Regional Office for Europe, 2010a).

SHS may be overseen by the ministry of health or the ministry of education at the national or local level. In Europe and Africa, ministries of health provide SHS, and over supervise the services (Baltag & Levi, 2013; European Commission, 2020; Baltag & Saewyc, 2017; Danielle & Jansen et al.). In the Philippines, Spain, and Hong Kong, the ministries of education oversee SHS. These models can differ within country and location. SHS can be delivered predominately by one health worker-often a school nurse or school doctor or a multi-disciplinary team of nurses, doctors, mental health specialists, and others should be considered (WHO/Euro, 2022). A health aide triaging care for a licensed nurse or physician has also been found to be cost effective (Bezem et al, 2017). In the United States and in Hong Kong the majority of SHS is conducted by school nurses who are employed by local ministries of education. In France, school doctors oversee the care. Although in the United States, some areas employ school nursing through the local health department or even the local children's hospital. Telehealth and telemedicine are also influencing the delivery and models of SHS (Marganon, 2023).

The model of SHS impacts staffing of workers. Staffing and workload are not systematically tracked globally making it difficult to know the staffing in countries. Where workload is tracked, such as in Europe, health care worker-to-student ratios are often employed and even mandated. A ratio provides and quick and simplistic comparison across countries and regions of staffing. However, ratios can be misleading. They are often an average of the population and do not account for differences in specific groups or areas in an ara. Ratios do not account for different acuity needs of student, and thus could perpetuate inequities. There is also no evidence as to what is the 'correct' or evidence-based ratio.

Table. Sample Mandated SHS Ratios

Country	Nurse to Student Ratio	Doctor to Student Ratio	Other
Armenia	1:350		
Israel	1:1500	1:6000	
Kazakhstan	1:600	1:2000	
Liethuania			1 specialist every 1000 pupils
Malta	1:2300	1:6300	
Niger (ref- 317_Niger)			recommends nursing office in schools with at least 1000 students

South Africa	1:2000		
Sweden			40 weekly hours/400 pupils; 40 weekly hours per 10 pupils
Tajikistan			1:4000 unspecified
Columbia**			1:1344** (doesn't specify type)
Jamaica*			1:8474 Primary; 1:131 Secondary (doesn't specify type)

(Table 12. Models of School Health Appraisal, 2018; South Africa, n.dl Wellbin, 2022*; Wellbin, 2022**); *not mandated-reports from surveys

The National Association of School Nurses in the United States stopped using ratios in 2012 for the concerns listed above. Instead, it recommends the use of a staffing or workload formulas that is based on the health acuity of students (including students with intellectual disabilities at varying levels), roles/responsibilities of SHS workers, and social drivers that impact health of the population (i.e. socioeconomic level, second language learners), and resources of the community. The expertise and experience of the SHS worker should also be taken into account (Jameson et al). Local ministries of education and health should develop evidence-based formulas to assist them when determining appropriate staffing models. The downside is it does not make an easy comparison across regions or countries and various stakeholders are investigating if a universal poverty index that could be allow for comparisons across locations could be used instead of a complicate formula.

Management practices

A flourishing SHS requires not only technical but also management capacities. These are needed to translate political will and decisions into effective implementation (WHO 2016). Just as capable school health professionals are needed, so are capable professional school health managers. In federal countries, or those with a decentralized health workforce administration, competency, human capital and institutional mechanisms need to be built at the subnational and local levels, including the training of personnel in management positions.

SHS organization management depends on if SHS is housed in education or health. Often local frontline SHS personnel are supervised by a manager or regional coordinator who provides guidance and expertise. No matter the model, professional standards indicate that the supervisor of the SHS personnel should hold the same or similar professional health licensure as the frontline workers to accurately assess competency of professional skill. However, multiple findings indicate this is not often the case (Willgerodt et al, 2023; WHO/Euro, 2022).

SHS may also be managed by the local education board who may not understand the role of SHS, the laws connected to SHS, or be pressured by political or cultural views especially related to topics such as sexual health (McCann, Moore, Barr & Wilson, 2021). These challenges are often beyond the control of SHS. However, developing policies so that SHS

personnel are evaluated and supervised by experts in their field and decision pathways are developed to provide direction and objectivity related to SHS may help enable evidence-based SHS programs.

Healthy organizations also support a shared decision-making model where nurses and health professionals have input and are valued for their expertise. COVID-19 illustrated this point where some local education agencies valued and relied upon the expertise of school nurses and physicians, while others made decisions without the input of these professionals. Developing organizational infrastructure that supports SHS expertise builds trust and creates a culture of health. Educational training can assist develop this culture.

Case Study: 238_Morocco The overall process (here or at beginning of section)

Progressive Realization

Progressive realization of SHS is the goal and ability to strengthen and expand SHS until comprehensive SHS are being provided. Starting with one or two key activities, such as providing first aid or having the local health clinic come to provide screenings may be a good beginning point. Over time, scaling up can be done by adding additional services. This guidance document is meant to help countries, sub-regions, and local education agencies to identify where they are and to build and strengthen SHS over time. Progression is based on the resources available and requires careful business planning over time.

1. Identify what services you are currently providing
2. Identify what services are needed using the prioritization needs gap
3. Develop a plan to strengthen or expand SHS

Case Study: 274 Myanmar 4 basic levels

Operational guidance for district and local level

In federalized countries, or those with a decentralized health workforce administration, competency, human capital, and institutional mechanisms should be built at the subnational and local levels. This includes training of personnel in management positions (WHO). For example, in some countries SHS and Nutrition Supervisors are appointed at the Basic Health Unit level to provide districts support. In Belize, each district has a District Education Center (DEC) responsible for the management of schools in a specific geographic area. The DEC works closely with the government and denominational schools. The ministry has a website with all

documentation available e.g. curriculum by grade, education statistics, school year calendar of activities. In China, documents and directions are sent from higher authorities to the schools who implement the programs as directed.

Sometimes operational guidance for SHS can be complex when states are responsible for education, but cities are responsible for health services. For example, in Brazil the state is responsible for secondary (high) school education, but most community health services are the responsibility of local municipalities/cities. This makes it challenging when determining communications and accountability. MOUs and inter-sectoral collaborations are crucial to overcome such challenges.

Implementation Strategies for planning and preparing for SHS

- Convene a diverse, multidisciplinary SHS planning team to oversee the entire process.
- Create a realistic timeline to complete all steps of the process.
- Conduct a needs assessment and landscape analysis to determine goals and priorities.
- Create a plan that will align national, subregion, and local SHS policies.
- Develop a business and program plan for SHS that includes competetive salaries and appropriate resources for sustaining services.
- As appropriate craft legislation that is specific for mandating and funding SHS.
- Determine the appropriate model of operations and management of SHS.
- Create policies and procedures that are written in simple, clear language to facilitate implementation fidelity.
- Pilot programs before expanding policies nationally
- Develop compliance checklists to assist in implementation of policies with fidelity and to better track compliance.
- Develop policies that account for differing contexts, cultures, and resourced areas.
- Establish clear referral processes and other procedures within schools and external to partners so school, community health, and SHS are clear and aligned.
- Develop a staffing model or equation based on model of operation, population acuity and vulnerability, and resources available.

Checklist

☐ Did you organize a diverse group of supporters including families and caregivers, students, and community members to serve as the planning group? Are they included in each stage of implementation?

☐ Are health and education co-leaders in the efforts?

☐ Did you develop an appropriate timeline for implementation/strengthening?

☐ Did your planning include business planning of adequate and sustainable resources and funding?

☐ Did you conduct a needs assessment and landscape assessment of your current situation?

☐ Did you identify policies or laws that need to be enacted or revised in order to support SHS? Is SHS explicitly stated in the policy or law?

☐ Did you develop implementation checklists and a dissemination plan at the various levels (national, subnational, local), including a communication plan, for the policy changes?

☐ Does your implementation plan include adequate training and accountability measures?

☐ Did you appropriately account for vulnerable populations who may need additional support or resources?

☐ Did you have an objective staffing formula or model for determining appropriate staffing?

☐ Is an MOU or other inter-ministerial infrastructure in place between health and education that includes clear expectations, roles and responsibilities, and accountability measures?

- Did you involve target population in planning and discussions?

Chapter 3. Developing SHS workforce

Rationale

The theme of training and capacity building was one of the most crucial enablers or barriers to the success and sustainability of SHS. With the various professionals who can be SHS workers, it is difficult to outline the prerequisite education level for each profession. However, generally speaking nurses and health workers should generally have at least a baccalaureate degree from a qualified university and pass any national examinations or licensure requirements. Physicians and advanced healthcare professionals should have the appropriate advanced degrees needed to work in healthcare settings. They should then receive additional training and certification in SHS.

The recognition and responsibilities of SHS providers should be identified by the existence of a clearly defined and written job description that is based on SHS high quality standards (19). In more than half of the countries (n=21/28) SHS providers have such a job description (Table 3.5). (OCH report)

Intent

Developing the SHS workforce increases the ability to provide successful SHS to the community. Safe and effective SHS practices will increase the health of the community and ensure that the SHS workers are practicing to the fullest ability to provide these services to the community.

"#1 is an important issue to have the support of administration to even begin to have SHS then the next important issue to have your SHS professional trained appropriately.

Who are the SHS workforce

There is a hierarchy among regulatory mechanisms and nonregulatory options to ensure entry level competencies for health care professionals, such as certification, registration, licensing and accreditation (WHO, 2024) The SHS workforce consists of many different licensed health professionals including nurses, physicians, psychologists, dentists, and social workers. As mentioned earlier, different countries use different models of SHS. However, nurses are the most often licensed health professionals used in SHS. In addition to frontline workers, SHS also consists of district coordinators or supervisors who oversee the quality and quantity of services. No matter the profession, SHS workforce experts have key roles, which include communicator, collaborator, manager, health advocate, scholar, professional (link to European Framework for competencies; WHO, 2014).

Professional education and training

[Put in a box: Implementing effective regulations for improved workforce competency, quality and efficiency, and ensuring continuous professional development opportunities and career pathways tailored to gender-specific needs in order to enhance both capacity and motivation for improved performance is one of the recommendations of the Global strategy on human resources for health: workforce 2030 (ref. WHO 2016).]

"Professional development is completely overlooked by school organisations. Maybe incorporating paid protected professional development days for SHS. In the hospital system in Australia, health services offer 5 days paid leave for professional development. Whereas in schools, it is expected this is to be done in non-paid personal time."

Training included multiple levels. First was training of the SHS workers themselves into the specialty of SHS, and then keeping current over time. Often pre licensure programs were not specific to SHS, which often include processes and activities that are different from other health care settings, along with specific roles and responsibilities of a SHS worker. For example, better understanding of the education setting, the competencies listed above (i.e. collaborator, communicator), student-friendly care in a non-clinical setting, vaccination policies, working across community-school settings, and care coordination were listed as common topics to provide. Investing in the capacity of health professional training institutions to deliver the requisite training is important. The education and training institutions should be oriented and strengthened, in terms of quantity, quality and skill-mix necessary for SHS (WHO).

Next, all new SHS workers should receive an orientation regarding SHS and the school for which they will be working. This orientation may cover some of the materials regarding rules and responsibilities of the worker, along with laws and policies, but within the context of expectation of that school/organization. School or local policies and procedures should also be discussed, along with organizational supervision and expectations.

Case Study: France

School doctors have been the backbone of SHS in France since 1991. The last revision of training rules occurred in 2007. In order to become a civil servant, specific training for a year is provided in the EHESP French school of Public Health in coordination with the Ministry of Education. The training includes 8 to 16 weeks of training (individualized) of 10 specific competencies of school doctors. The competencies include health promotion, using data, collaboration, medical care for student success, risk assessment, training school staff, evaluating actions, and advising individuals and population health. Training also includes clinical experience supervised by a medical doctor.

Finally, ongoing needs and changes in the school setting necessitated additional training in emerging topics and concerns. Current examples include the increase in mental health concerns, substance use, menstrual, comprehensive reproductive health, and COVID-19. In addition to training, several authors spoke to the need of continuous coaching to navigate the unique role of SHS. Post graduate University bestowed certificates that specialized in SHS were suggested to provide incentive, standards and recognition for professional education. However, other programs such as recertification every 3-5 is needed to keep SHS personnel current and relevant to their practice.

"School health programme is covered by primary health care workers who are overburdened and not adequately trained in SHS."

Some countries and subregions do include exam-based certifications for specific SHS personnel. For example, in the United States there is a national exam that practicing school nurses can take after having practiced for 3 years. Certain states such as Illinois and New Jersey have state-specific certifications that are required for school nurses practicing in those states. No school nurse leader certification could be found, however. Other states which require a university-based certification also allow nurses to begin working under an emergency waiver but then must complete training within a certain time period (usually 2 years).

School personnel such as teachers and administrators also need training. Their pre licensure training focused on education and often did not include material regarding the role of SHS. Even teachers specializing in children with special health care needs and those with intellectual disabilities get minimal training on the role of SHS in supporting the student or local/national laws that related to SHS. The lack of understanding by teachers and administrators led to much frustration, lack of buy-in and confusion. Training of the staff also helped support the learning and management aspect. Scientists found that when staff received the needed training and technical assistance to do their part in SHS, programs were more successful and sustainable (Flaspohler et al., 2012).

Advocating for pre-licensure training of all teachers and administrators to reflect the current whole child approach to education is needed. Furthermore, ongoing training and coaching educational officers and teachers would allow for the dynamic nature of SHS to be understood and practiced. A systematized supervision and tracking system to assure all are kept up to date on training is needed as well and could be part of a larger HPS certification that may incentivize schools to cultivate a culture of health and well-being.

Training should also have continuing education units attached to the courses appropriate for the different personnel obtaining the training. In many HICs countries, continuing professional development (CPD) can be mandatory for health practitioners to maintain registration or licensure (WHO 2024). If any training is mandated, the wording should explicitly include funding to cover the cost of the training, so it is not a burden on the individual worker or school. In Costa Rica, for example, the National Health Insurance fund covers school health providers training (see the case study XZY from Cost Rica). Online modules that can be less resource heavy and be more sustainable may be other options for helping defray the cost of training. Available evidence supports the use of outcome-focused CPD models that use multiple education techniques, which are based on the needs of practitioners and relevant to the environment in which they work (WHO 2024).

Learning and Management Practices

Learning and management practices refers to both the formal and informal curriculum and associated activities that help students strengthen their own skills and knowledge regarding health and leadership (Samdal & Rowling (2011) as adapted in WHO (2022). In addition to knowledge and skills specific to SHS, it is crucial that SHS workers obtain training and leadership skills needed to excel in their work, both on the frontline, but also advancing to management and leadership roles. Leadership skills help SHS personnel build motivation, become competent leaders, build the capacity of other core staff, and work from a visionary, innovative, quality improvement mindset. These skills are crucial in SHS where health, evidence, and circumstances are always changing. Leadership skills are also needed to build ownership and leadership in the school community and understand how to anchor SHS within policies and priorities of education and be open to change and feedback from others.

Leaders in school health should provide an environment that outlines clear expectations of SHS workers. In a study performed in Lao PDR, it was noted that management skills of school principals strongly influenced the NSHP implementation at schools (Saito et al., 2015). Which was a similar finding to a study performed in India which also noted that SHP were more successful when overseen by school administration (Seelam et al., 2021). Yearly evaluations and professional goals should be developed jointly by the SHS and the supervisor. The supervisor with the same professional background should evaluate the specific competencies for that profession (i.e. a nursing supervisor not a school administrator should evaluate the nursing competencies of a school nurse).

It is also the role of the SHS leaders to implement practices that enhance the motivation of the SHS workers. Many SHS workers are in environments where they are the only ones providing services to many students and finding ways to support workers and prevent burnout is crucial to

maintaining a healthy work environment. Some ways this can be achieved is by leaders ensuring a manageable workload for the SHS worker. Providing ancillary staff to assist with certain duties that can be delegated would be a strategy to support this initiative. Supportive leadership that is open to new workflow and creating budgetary allowances for more support to the SHS workers will provide a positive work environment in which these services will thrive.

Implementation Strategies

- Encourage pre licensure teacher and school leader standards to include SHS training.
- Create expectations that teachers receive SHS training at the beginning of each school year.
- Develop certification programs for SHS workers that must be renewed every 3-5 years.
- Implement mechanisms to assure continuing competence, based on outcome-focused CPD models that use multiple education techniques, which are based on the needs of practitioners and relevant to the environment in which they work.
- Create a HPS designation program for schools that includes requirements for teacher and SHS worker training.
- Include funding for SHS capacity building in government agencies and NGOs grants that address SHS subjects: immunization, emergency preparedness, sexual & reproductive health, mental health, substance use, nutrition, etc.
- SHS Supervisors train teachers and develop a tracking system of training.
- School Nurse and other SHS health workers obtain capacity building specifically to the role of school health, as well as how to lead teams and non-health workers.
- Develop a curriculum regarding the role of SHS that can be used by school staff, families and caregivers and others to understand the role of SHS and how it fits into education.
- Work with institutions of higher education to incorporate the pre-diploma, post-diploma, and inservice programs to train health workers in the skills and competencies of SHS.
- Develop decision support tools to assist in supporting protocols and guidelines that include teach engagement in SHS initiatives.
- Make use of technologies such as e-learning, massive open online courses, webcasts, podcasts, high-fidelity simulation, to enhance SHS workers access to CPD (WHO, 2016)
- Partner with NGOs to develop teaching aids, with clear concise language.
- Develop health-care professional associations to support effective relationships with health workers within the school system (WHO, 2016).

Checklist

☐ Are the SHS working in my school area fully trained?

☐ Are training programs available?

☐ Is there a tracking system to monitor training needs and when re-training is needed?

☐ Is there a mechanism to obtain feedback to identify gaps in understanding of the training?

☐ Are leaders and potential leaders given the opportunity for training related to leadership and management skills?

☐ Do we foster a culture of continuous education and lifelong learning?

☐ Do we have a yearly job performance and professional goal document process for evaluating SHS personnel that is specific to SHS (and not education)?

- Do we have strategies in place to motivate and support SHS workers?

Chapter 4. Ensuring School Physical Environment supports SHS

Rationale

The physical environment refers not just to the school building but the equipment in and around the school, as well as the grounds and surrounding environment. It includes basic maintenance of buildings, the building design, safe water, clean air, and safety (Samdal & Rowling (2011) as adapted in WHO (2022).

A global data analysis by UNESCO (2023) indicates that many schools are lacking basic needs: one in three schools does not have safe drinking water; one in three does not have adequate sanitation, and almost half have no handwashing facilities with water and soap. Over half (60%) of national documents did refer to school physical environments. Lower-income countries' national documents were more likely to refer to the need for clean water, sanitation and safe buildings. It should be noted that few countries addressed building accessibility. Children and adolescents in low-income countries are the least likely to attend schools that have these basic services.

The school physical environment is an important aspect of implementing and sustaining SHS. Services such as sexual health counseling require a separate confidential space from the other SHS and this is a challenge noted in the literature. Often SHS were given rooms to 'make do' (Hayer et al, 2012). Challenges such as poor road infrastructure and unavailability of transport limit access to hard-to-reach schools, affecting the delivery of SHS. In Burman et al. (2021) it was noted that not only was space at the school important to help facilitate the success of SHS but also where services were located within school grounds to eliminate the need for transportation off property and decrease student time away from class.

Although having space was an enabler, the lack of healthy space (safe drinking water, proper waste recycling, handwashing facilities, and appropriate toilets, and privacy) was a major barrier in sustaining a program. The lack of toilet facilities, piped water, and environmentally unfriendly conditions also point to inadequate infrastructure for maintaining basic hygiene standards. Maintenance issues, absence of policies, cost constraints, and lack of staff support collectively contribute to barriers in maintenance.

Intent

The need for an appropriate physical environment for SHS allows for the services to be effective If the school has the space for the service and the ability to store supplies (including correct temperature for oxygen or vaccines), there is a noted improvement in the uptake and sustainability of the SHS. When the planning new school buildings, including sufficient and appropriate space for SHS is vital to the sustainability of programs.

Privacy is necessary when conducting SHS and space is needed to attain this goal. Privacy-enhancing features such as partitions and noise cancellation machines create comfortable and confidential environments for health consultations.

Space for the equipment and procedures to be carried out is also important and this space should be separate from where educational school functions occur so as not to interfere with this process. Cleanliness of the space also allows for SHS to be provided that will not lead to infection or impede the SHS provided. If mobile vans or clinics are used, they should also be clean and be to the appropriate standards for electricity, running water, internet, and private space.

"School health policies should address physical safety issues such as ensuring that the school has adequate water and sanitation facilities as well as a safe environment to protect students and teachers from abuse, sexual harassment, discrimination, and bullying."

Conducting physical needs assessments ensures that facilities meet the requirements for providing quality health services. If telehealth will be used, sufficient internet wiring will also be needed in the clinic space, along with any safe guards to address internet security. Building structure as it relates to violence or getting support to SHS in the school setting can be disruptive to SHS.

Link to UNESCO; The Physical School Environment

Implementation Strategies

- Develop national standards of school buildings that include dedicated offices space for SHS. Avoid open concept building plans, which do not allow quiet and private SHS. Include appropriate colors and design that create a conducive learning environment. In the SHS space include:
    - space for privacy
    - running potable water for drinking, handwashing, and menstrual health facilities.
    - adequate storage for supplies and electricity for temperature-controlled items
    - communication mechanism with the main office/head teacher and outside community emergency response (in case of emergency or safety threat)
    - internet or data connection to receive referrals and telehealth
- Develop national standards of school buildings for SHS related to sanitary facilities, safe infrastructure, location of schools within the community and related to SHS (if off campus).
- Conduct a physical needs assessment of the building and grounds before implementing or expanding SHS.
- Include in the school budget sufficient resources for maintenance of buildings and grounds.

Checklist

☐ Have you completed a physical needs assessment of the building and grounds to identify areas of concern?

☐ Does your school have a dedicated location for SHS that meet national standards?

☐ How will students receive SHS while minimizing time out of class or off campus?

☐ In case of an emergency, is there a way SHS can communicate with the lead teacher/principal? Outside emergency personnel?

☐ Is there sufficient budget and resource allocations for proper maintenance of buildings and grounds?

Chapter 5. Quality of care

Rationale

The WHO SHS guidelines outline a comprehensive package of SHS to be provided at the local level. Local SHS activities should be decided based on the context and need of the student population. A data-driven school-based needs assessment that incorporates input from a variety of stakeholders should be used when developing the SHS program. The program should be based on respectful, equitable care for all and follow the WHO standards for privacy and safety. A comprehensive SHS should use effective performance management and incentive systems to help guide practice.

Yet, data on the quality of SHS is lacking. Data from UNESCO indicate 4 of 5 countries make referrals for sexual and reproductive health services and over 85% of secondary schools in Latin America could access individual counselling on issues related to sexual and reproductive health (UNESCO, UNAIDS et al., 2021). Yet, schools with a school feeding program indicated only one in four countries provide eye and hearing tests (GCNF, 2021). Oral health services have traditionally only been included in high income countries, although this trend is changing. Schools provided treatment for 82% of children who were dewormed (WHO, 2020). And 82% who provided vaccinations at school did so as part of a more comprehensive school health program (Feldstein, Fox, et al, 2020). Differences in vaccination rates exist between high- and low-income countries, as do what services are provided.

Intent

A quality comprehensive SHS program utilizes technology, innovation, communication, and collaboration in order to meet the dynamic needs of their community. Quality standards such as the Global Adolescent Care Standards (2015) should be incorporated as appropriate.

Quality care includes the development of infrastructure and climate for generating knowledge and sharing of quality services. This may include using innovate practices such as telehealth to increase access to rural areas. For example, in rural areas of North Dakota where school nurses cover multiple schools, on days the nurse is not present, the schools use telehealth equipment to contact a central office hub, which is manned by a school nurse.

Quality of care includes using technology such as tablets to facilitate work and documentation. For example, in India tele-mental health is available to help increase access to low resourced areas (Sagar & Singh, 2022). Digital health could imbed artificial intelligence to help screen and identify students at risk or in need of further follow up. Tablets could use alerts if screenings fall beyond acceptable limits of age and gender to facilitate referrals and generate a referral form to be sent. Electronic health records could embed evidence-based clinical guidelines to provide SHS workers reminders as to best practice standards and protocols. Quality care may also include utilizing monitors equipped with transmitting blood glucose readings directly to families and caregivers, health care providers, or other SHS workers. Digital health could also allow for improved communication between SHS workers and students or SHS workers and other health care providers (UNICEF, 2020).

[Resource bank: WHO SHS Guidelines; Ah-ha Guidance; European Framework for School Health]

A component of quality care is working with teachers, and others within the school, while also often working with other sectors of the health field outside of the school. The levels of interaction and communication range from sharing information to coordinating programs or treatment plans for specific students or populations. Communication is crucial. As outlined earlier, SHS must understand the vision, mission and culture of educators and speak their language and

collaborate with all members of the school team. For example, school psychologists in a school with a school-based health centre served as a liaison between a school-based health centre and teachers to translate information and obtain information about students' educational and social history (Trivette & Thompson-Drew, 2023).

A lack of effective collaboration between SHS and school staff created resistance that was detrimental to implementing SHS. The resistance was due to perceived disruption to the school day or lack of buy-in from influential figures, or different expectations of what SHS were or the activities that would take place. For example, in Shaibu and Phaladze (2010), the "…teachers claimed that they had a lot of work to do while others maintained that it was the 'nurses' duty' to record immunizations on the students' records" (p.201).

Increased communication to community health care providers is also crucial so that the same evidence-based messages given at school are reinforced in the community. In countries where chronic condition management is part of the role of SHS, the SHS workers and students' personal providers must be on the same team related to the medical plan and individual health care plan. This may require obtaining permission from carers and students in order to share information between providers and SHS. Electronic health records can facilitate communication between providers.

"I do not have an issue with collaborating with other services to overcome the silo mentality BUT not at the expense of loss of privacy and confidentiality of the students."

Beyond just the health care providers in the community, SHS often works with other community members such as food banks, housing, and other social services. Community buy-in of SHS is crucial for SHS to be successful (Mohlabi et al., 2010; Emond, 2023). Political and social factors within the community can impede the implementation of SHS. This was identified especially in regards to topics such as sexual health services where having community dialogue and conducting listening sessions are crucial to allow the community to better understand changes. Every attempt needs to be made to understand road blacks to change as well as those who "silently withhold support" (Daley, 2011). Community members needed to be involved from the very beginning (Hayter et al., 2021).

SHS also need to understand that cultural differences between health professionals and the local community may clash, impeding the uptake of SHS. One study in Australia reported that some native Aboriginal families perceived offering opportunities that when ". . . delivering services only to Aboriginal students towards servicing the whole school community . . .some stake-holders felt disenfranchised. 'How are we going to reconcile through our children and families, as Aboriginal people, if we ask for segregation ourselves?'

Moreover, community diversity poses significant challenges, particularly language barriers hindering effective communication and service provision, compounded by difficulties in maintaining community ownership during expansion efforts and the absence of essential referral services. Joint community/SHS taskforces, healthy community committees and events that bring community and health together can build trust and align priorities and goals. SHS should not be siloed from other community health campaigns. Overcoming these barriers requires strategic interventions such as regulatory flexibility, evidence-based evaluation, and targeted efforts to

address community diversity, ensuring equitable and sustainable school health services. Perreault (2013) noted: “the community knows what it wants and does not want, and leadership is wise to listen to what they have to say.” Other authors expressed similar sentiments and remarked that members of the community often identified which local health problems were a priority. In some instances, this led to highly creative intersectoral partnerships initiated by the community. Clear communication and trust between SHS and the community also is needed to overcome misunderstanding and traditional views regarding the role of SHS. These communication efforts may include media campaigns, town halls, and awareness activities so that community members understand the role of SHS.

Case Study:

A mass media campaign for weekly iron supplementation- was undertaken and bill-boards were displayed widely in Metros/ autos and newspapers.

In pulse polo programme all religious heads were called for meeting and then religious public gathering were addressed personally to allay their apprehensions huge rallies were taken out with school students to create awareness

Implementation Strategies

- Provide training to teachers, community agencies, and others regarding the role of SHS.
- Identify funding streams that could help leverage technology to share data and communicate appropriately across sectors.
- Develop policy frameworks and community priorities that include and align with SHS.
- Employ traditional news media, social media, and arts to help communities understand the link of health and education, role of schools and SHS and demystify misconceptions. Highlight how SHS contributes to the overall health and wellbeing of the community, including the economic cost savings to the community. Include students in the campaigns, as appropriate
- Create a public awareness campaign/community facing media campaigns that explain the role of SHS in education and health care. This may include the discussion of education taking a holistic view of student success.
- Establish regular feedback loops from stakeholders, students, and families and caregivers regarding SHS.
- Explore ways to link SHS to other local and national priorities (to increase buy in).

Checklist

☐Does the community include SHS in health-related events? Does SHS include community organizations on school health advisory task forces?

☐Is there a community champion of SHS?

☐Do media outlets provide positive stories of the role of SHS on students’ and overall community health?

☐Do SHS have a feedback loop to obtain suggestions from the community, students, and families and caregivers regarding SHS?

☐ Do SHS activities align with other community priorities?

☐ Does SHS share aggregate data and information that could assist other community events?

☐ Does the community and SHS leverage technology to improve communication at both an aggregate and individual level?

☐ Are SHS workers included on individual student health teams?

Chapter 6. Students and carers' participation

Rationale

Student and carer participation includes the involvement of students and carers in all aspects of implementation of SHS. A review of national and subnational documents indicate that carer and community involvement was the most frequently mentioned topic mentioned across all country income groups (UNESCO, 2023). Student participation was not mentioned in the review. While it is often seen as best practice to systematically collect feedback from students to assess needs or evaluate their experience to inform the provision of health services and initiatives of the SHS (Hayter et al,. 2021; Jain et al, 2022), student input is infrequently sought. When students are involved locally in some aspect of planning, implementation and evaluation of SHS, students are typically not involved in higher levels of administration of the services, such as in legislation or monitoring (Adams & Scheuring, 2000; Boyer-Chu, 2013; Jain et al., 2022), and, when consistent and sustained systems for student input are not in place, student input has been found to diminish over time. Lack of supportive infrastructure and heavy workloads for both educational staff and healthcare providers was cited as precluding the ability to actively engage students in this manner (Hayter et al., 2021). Thus, most often, the planning, implementation and evaluation of SHS was carried out with extensive planning "for" the students, rather than "with" the students (Mohlabi et al., 2010).

Careers are a great support for SHS, but also some of the most vocal deterrents. Parental dominance in conversations with young children can impede student input and engagement. Parental disagreement or confusion about the outcomes of sexual health services can deter the implementation of these services (Hayter, 2021). In Scotland, carers and families were often unaware they could have taken part in the offered services at a school-based health center (Doi, L, et al. 2018).

Intent

Student feedback and input at all stages of SHS planning and implementation is important. Student feedback should be part of the culture of schools. Carers' feedback is also important for the sustainability of SHS. SHS are for the benefit of students and their carers. Student and carers involvement can help strengthen commitment and support for SHS and empowers students to value their own health (Samdal & Rowling (2011) as adapted in WHO (2022). A key standard for SHS workers is to collaborate with students and parents (WHO, 2014). Carers have been strong advocates for implementing and expanding SHS. Feedback by students and carers increase buy in and identify areas of concern earlier.

"We are finding that parents and learners welcomed a school health promotion programme that involves parents. Community involvement in setting priorities is important for reinforcing and supporting clinic linkage and onward care for learners. Students participation is key in that they are able to identify the services that are important for them and their needs."

Feedback can be obtained in a variety of ways such as health clubs, digital platforms, hotlines, chatgroups, or surveys. In Ghana and Uganda, School Health clubs empower students to voice their opinions on health topics. The clubs meet regularly so students can discuss concerns and suggest improvements related to SHS. In Ghana the students lead celebrations and ask for student feedback during those events. In Kenya, students and parents are provided with forms to submit feedback on the effectiveness and areas of improvement for health services. The feedback is used to make necessary adjustments to health programs, ensuring they are aligned with community needs. The feedback also is used to develop new initiatives. In France some schools use digital platforms where students and parents can provide real-time feedback on health services. These tools allow for continuous input, making it easier to identify and address issues as they arise. In Ethiopia there is a ministry of health hotline that students and carers can call into with suggestions and advice. In Gloucester England, the National Health Trust has created ChatHealth, which allows secondary students to ask school nurses questions regarding health. The texting has been a successful tool to improve communication between

In **Indonesia**, high school students were trained by medical doctors and medical students to be peer educators in their schools to discuss non-communicable diseases such as obesity and smoking. Several of the high school students also assisted in developing the training that was developed for the youth. One high school peer educator oversaw 5 other students. During the sessions the students shared health knowledge and support. Students indicated they liked not only learning from their peers but gaining support from each other. This was part of a large community initiative (POSBINDU) that also conducted vital signs (blood pressure, pulse, temperature), body mass screenings, and collected blood for nutrition evaluation.

References:

Claramita et al. (2021), Empowering adolescents as peer-educators for early prevention of non-communicable diseases: Through existing 'POSBINDU' program in Indonesia. DOI: 10.4103/jfmpc.jfmpc_2613_20

Ardela et al. (2024), Effectiveness of Health Education Using Peer Education and Audio Visual Methods on the Level of Knowledge of Teenage Girls About HIV/AIDS. DOI: https://doi.org/10.30994/sjik.v13i1.1105

nurses and students. The concept of texting could be expanded to allow for students to provide feedback and answer polls regarding SHS. In India, question boxes are used to gain student feedback. These are embedded in adolescent friendly interactive approaches to health promotion such as peer counselors, comic books, role plays, folk dances, painting competitions and creative writing (Jain, 2022). In the US, teen parents have participated in a community-based teen pregnancy prevention task force, providing input on reproductive health services to adolescents and support services for teen parents (Daley, 2011). Citing excellent data management programs in one school district in the US, satisfaction questionnaires are completed by students and family members receiving mental health services (Jennings, 2000).

If parents are to be involved as full or part time carers, communication with the schools is essential to addressing public health priorities. In countries which have good relationships between schools and home, and/or may have an active Parent Teacher Associations (PTA), there may be support for school health including contributions of parents to implement school health programs. Telehealth may provide opportunities to include carers in student care. Many of the same examples outlined above include opportunities for carers to provide input, such as Ethiopia's ministry of health hotline and France's digital platform. In Ghana, parent teacher associations are used to engage parents and solicit feedback and support for health related initiatives. In Japan, yogo teachers regularly send out newsletters with information as well as opportunities for students and carers to provide feedback and suggestions. In Australia, embedding health services within schools that make efforts to provide culturally safe spaces for Aboriginal families enhances trust, establishing a foundation for meaningful carer input into needed services (Burman, 2023).

Both students and carers should be included on SHS councils. Proactive messaging to all carers and the community has been was also found to be helpful in building carer capacity to understand SHS. Partnering with interfaith and other community groups may help obtain feedback from carers and students who do not feel comfortable participating in a school-sponsored event where there may be a lack of trust to share concerns.

Implementation Strategies:

- Include students and carers on SHS councils, advisory groups and taskforces at the school and higher education level.
- Create student health clubs to foster student ownership and commitment to SHS.
- Regularly hold open SHS councils, surveys or town halls to allow all students and carers a chance to voice their concerns.
- Create a regular feedback mechanism for carers' and students to provide input regarding SHS. These can be based on customer service feedback surveys that many health systems now employ. Leverage the use of technology such as texting, apps, and websites to allow for anonymous, convenient, ongoing feedback.
- Work with community groups (including faith-based groups) to ensure voices of students and carers who may feel silenced within the school setting are heard
- Work with carers and students to create public awareness campaigns regarding SHS-what it is and what it is not.
- Train SHS and other school staff on key skills for building trust and developing student friendly services (based on adolescent friendly resources).

- Address staffing and workload issues that may preclude the time and attention needed to set up and maintain mechanisms of collecting and analysing input from students and carers.

Checklist

☐ Are SHS personnel student friendly in their approach and policies?
☐ Are students and carers included on not only planning but ongoing councils and advisory groups for SHS?
☐ Do we have a mechanism to obtain anonymous feedback from all carers and students related to SHS?
☐ Do we share what we have learned from students and carers and explained how the information was used to improve programs or develop new initiatives?
☐ Do we regularly push out materials in newsletters or other messages that proactively explain SHS and provide opportunity for feedback and suggestions?

Chapter 7. Data management systems, M&E, research

Rationale: The underlying reason for including SHS in schools is to improve the academic and health outcomes of students. Obtaining desired outcomes is part of the WHO's Quality of Care Framework. It is through data that we are able to determine if SHS are of quality and meeting the desired outcomes. Yet SHS is one of the least reported components of school health (UNICEF, 2023). A major barrier to collecting data is a lack of capacity of SHS workers and the lack of electronic management systems or apps that would facilitate data collection. Data can be collected by paper, but it is time consuming and increases the level of error tremendously. In locations where there is an electronic data system, data is not only collected regularly but saves a health worker's time because the data were used to identify greatest needs and where to focus time and attention. Time collecting the data has often been identified as a barrier.

Intent: Regular data collection at the school level, as part of a monitoring and evaluation plan is crucial SHS, especially for long term sustainability. SHS has been described as a 'hidden healthcare system' (Lear, 2007) due to the fact that many outside of schools do not realize what

is happening. Sharing data is how SHS becomes visible and understood by educators, the

Synthesized Data Points: G-SHPPS SHS

SHS for students

- Administering routine health check-ups
  - Tracking compliance of school required physicals
- Administration of recommended immunizations (HPV, diphtheria, tetanus, measles, rubella)
  - Tracking compliance of school required immunizations
- Administration of micronutrient supplements (iron, zinc, Vitamin A)
- **Screenings** (eye/vision, ear/hearing, oral, nutrition-anaemia/obesity)
  - Referrals of screening results and to whom

Health Promotion Activities

- Healthy behaviors (i.e. personal hygiene, oral health, nutrition, activity, sleep, electronic devices)

General/crosscutting & Unintentional Injury

- First aid, management of pain, non-specific symptoms
  - Administration of medication
- Management of injuries (i.e. fractures, wounds, burns, drownings)

Positive health development

- Identification of disabilities or difficulties
- Counselling related to physical and psychosocial development

Violence

- Counselling related preventing violence
- Supporting victims of violence

Sexual & Reproductive Health, including HIV

- Contraceptive counselling
- Counselling on preventing, testing, and/or management of HIV or sexually transmitted infections

Communicable Disease

- Management of common infections (ear, eye, throat) and uncommon diseases (malaria, cholera)

Noncommunicable Disease, physical disability, and nutrition

- Management of anaemia, obesity, asthma, other chronic conditions and other services for disabled children.

Mental health, substance use, and self-harm

- Assessment of risk factors and health behaviors
- Counselling on tobacco, alcohol and other substance use
- Short-term counselling or crisis intervention on mental health
- Management of common behavioral disorders (i.e. adhd)
- Management of emotional, anxiety and depressive disorders; self-harm/suicide risk; somatoform, and psychotic disorders
- Management of harmful use of, dependence on, or withdrawal from substance us

larger health system, and community.

Monitoring and Evaluation Plan

Each local education agency should have a monitoring and evaluation plan for their SHS. This plan may be based on a national or sub-national plan. This plan begins by collecting baseline data of SHS including structural (i.e. staffing, resources),

"We need data for the work, some time for the whole year no money for data which makes the work difficult for us.

process (i.e. activities performed), and desired outcomes (i.e. improved health, improved attendance).

UNESCO, WHO, UNICEF, and World Food Programme developed a global platform to monitor school health. This platform includes a global school health policy and procedures survey (G-SHPPS), which has a SHS section that countries and local regions may utilize and adapt to determine collect data. The G-SHPPS focus on process outcome.

Each country or sub-region may need to adapt the data points to meet their needs and activities. Some countries, such as Sweden, have developed key performance indicators in SHS that are used across the country, with some variation depending on school needs.

Using the process outlined earlier, a landscape assessment including interviews may be collected to obtain additional context and understanding. Then, a group including SHS personnel, educators, families and caregivers, students, and other interested parties should identify gaps and needs, create measurable goals and a plan for obtaining those goals. The SHS plan could be part of a larger comprehensive school health plan and could be part of a larger sub-region or national plan for school health or SHS. ns. Hayter suggests that an independent evaluation of SHS be conducted that may go beyond quantitative data and include qualitative interviews provide a more insight and observation of events.

In addition to the process and outcome data points outlined by G-SHPPS, the Global School Nurse Research Consortium conducted several systematic reviews and landscape assessment and identified the following potential outcome indicators for SHS to collect:

- Students returning to class (instead of having to go home)
- Quality of life
- Improved attendance
- Added time for teachers to teach (and not address health concerns)
- Decreased hospitalizations
- Increased knowledge, skills, and attitudes
- Change in behaviors
- Improved academic performance
- Improved school engagement
- Cost effectiveness and cost savings

Once the data is collected, data reports should be provided at least yearly to local educators in order for them to understand the role and contributions of SHS workers in the school. When sharing data SHS personnel should remember who their audience is and explain how data impacts the goals and priorities of education and the community. For example, when sharing the number of students who were screened and referred for visual impairment, they should include how obtaining glasses helped the children improve their ability to pay attention in class or read their homework, which improved their grades and classroom behaviors. The data can also be used as part of a more comprehensive school health plan to identify areas of needs and

concerns. The data can be used locally for programs, such as in India and Liberia (see case studies).

Case Study: India

In India, a weekly iron and folic acid supplementation programme was implemented. First, input was poor compliance to the intake of tablet and supplies issues. Parent-Teacher meetings were held in all schools in the morning to bring families and caregivers on the same platform and media was also involved. Supplies were improved. The programme was re-launched. Prevalence of anemia in adolescents as per WHO criteria was about 50% at start of the programme, and data is now being collected to see the improvement. The barriers in the implementation of the programme were also documented and published in an indexed journal.

Case Study: Liberia

Data mapping, was done in 2013-2015 provided information indicating 10 districts out of 15 that were found endemic for Soil transmitted helminths infection and need deworming and those are the one that are targeted. They completed two rounds of mass deworming, one in February and other in August to address the issue.

Data Management. As highlighted above an electronic data system also allows for interoperability with other data sources such as hospitals or local ministries of health so that SHS have a more comprehensive picture of their student population's needs. This data is often de-identified and population-based data. For example, in parts of Sweden they are also able to connect with regional databases in order to collect data on students' health and estimated living condition A memorandum of agreement or other previously agreed upon understanding should be in place so that all parties understand what and how data will be shared and used.

"Ideally, the software should be unique for all school health services, because to date in the schools where we are working, each one has different software."

Although EHRs can also allow for data exchange with primary care providers or even capture data from glucose monitors and asthma inhalers so that all members of the healthcare team are receiving the most updated information. A data management system should meet the confidentiality and privacy requirements of other health and education data systems.

Research

Several outcome data points such as quality of life and student engagement often require a validated tool to be administered to students, making it difficult to regularly collect data on students. Many of these outcome measures are also influenced by other factors such as teachers, educators, and school culture. The complexity of identifying SHS sensitive outcome

indicators, plus the lack of progression in this area calls for targeted SHS research. Once more research is done to strengthen the research base of SHS outcomes, artificial intelligence and predictive modeling can be developed to create formulas to assist SHS in identifying students earlier who may be at risk for certain vulnerabilities.

[Include Link or table of WHO SHS Implementation guidelines suggestions of research needed: Section 6.3]

I believe that research in this field is basic to scientifically justify the decisions that are made to solve detected needs.

SHS personnel should participate in such research, but as a partner with trained researchers who have the skills and expertise to navigate human subject boards, protect privacy (especially if including students in the research), and design a rigorously designed research study. Often University researchers are looking for practice locations, so networking with local University faculty, or groups like the Global School Nurse Research Consortium to identify potential research partnerships is crucial. The capacity of SHS personnel to fully participate in research requires additional training in how to be an equal partner in a research study and negotiate being an author on a publication. School nurse researchers came together from the University of Washington and partnered with local and state school districts. They wrote for funding together. The projects began first by discussing the needs on both sides and developing a plan that met the needs of all involved. The research group has presented and published together on their work.

In addition to conducting research, SHS personnel need to develop the capacity to implement research conducted by others into practice. Training and classes on the subject exist in many doctoral programs and could be adapted specific for SHS. In order to implement research, however, SHS must have access to the latest research, which is most likely found in peer reviewed journals. Partnering with Universities in order to have access to their libraries has proven a successful method for accessing current research. Universities are often looking for clinical practice sites for students, and so SHS could negotiate as part of an agreement to precept students, if they can obtain access to University library databases.

Crucial to research is the funding and resources required. Advocacy efforts to NGOs and government to fund SHS research is crucial. SHS does not often fit traditional research design and funding specific to SHS has been limited. Yet, with the majority of youth attending school, it is crucial that dedicated research funding be allotted to study SHS.

Implementation Strategies

- Obtain the resources needed to have an electronic health record.
- Create school nurse research training to empower SHS workers to participate in research as well as know how to implement research into practice.
- Create national SHS key performance indicators that can be translated and applied at the sub-regional and local level. This means including clear definitions for each data

point and (ideally) having an electronic mechanism to aggregate data from local to national level.
- Advocate for NGOs and national governments to allocate funding specific for SHS research.
- Find appropriate ways for SHS workers and adolescents to participate in research.

Checklist

☐ Is adequate funding allotted for the purchase and maintenance of an electronic data management system?
☐ Is there a SHS research consortium where researchers work with SHS personnel to build capacity on conducting and implementing research?
☐ Is there a SHS monitoring and evaluation plan that includes baseline assessment, clear goals, and a plan for reaching those goals. The local plan aligns with sub-regional or national plans, if in existence?
☐ Do SHS personnel have a clear understanding of the data points to collect, including the definition of each data point?
☐ Do SHS personnel have the resources (ideally an electronic health record) to document activities, record outcomes, and present reports?
☐ Do SHS personnel have a regularly scheduled time to share their data with educators, community members and other appropriate audiences?

Chapter 8. SHS contribution to other components of school health

The HPS framework includes SHS as just one component for schools (WHO). For the most effective program, multiple components of school health should work together for the betterment of children. A framework such as ASCD's and the Centre for Disease Control and Preventions (CDC) Whole School, Whole Child, Whole Community Framework may help illustrate how components overlap across components of a HPS. Here are some examples of how SHS contributes to other seven components of school health:

- **ACTION-ORIENTED EDUCATION:** SHS workers are trusted by students and community and can provide appropriate, evidence-based health education in classrooms, as well as to families and caregivers and teachers. They can advocate and be part of the FRESH (Focusing Resources on Effective School Health) Framework that was developed by UNESCO, UNICEF, WHO, and the World Bank, which advocates for health education, SHS, and health policies. Working as a unified, coordinated front helps other see that health education and SHS are not isolated from other school health initiatives.

- **STUDENT'S CONCEPT OF WELL-BEING:** SHS workers can serve as advisors to health promotion activities, student health clubs, and task forces which promote the overall well-being of students during schools. They can designate students as health champions in each class to promote health activities. SHS workers can also provide data

from their activities that may be helpful in identifying priority areas to address in the school population. They can also advocate for specific student groups who may be more at risk for health concerns such as students who identify as LGBTQ+ or racial/ethnic minority, and students who lack food or housing security.

- **HEALTHY SCHOOL POLICIES:** SHS workers have the expertise to help write or review policies to ensure they are accurate and up to date. They can also help reinforce policies such as including access to healthy meals, anti-bullying, or medication on school property.

- **PHYSICAL ENVIRONMENT**: SHS workers must advocate for school structures that are safe. This includes physical activity equipment, appropriate toilets and latrines so that girls can attend school while menstruating, and addressing bullying, or other forms of violence.

- **SOCIAL ENVIRONMENT:** SHS must be sensitive to the social and cultural beliefs of the school and community as it relates to health and beyond. For example, in Australia this includes flying Aboriginal flags and choosing Aboriginal names for health centers. SHS can also assist in developing a culture of health in the schools.

- **LIFE COMPETENCIES & HEALTH LITERACY:** SHS workers can help promote health literacy with individual students and their families. They can also participate in school wide health promotion events that help teach life competencies and strengthen health literacy skills. For example, school wide assemblies by medical providers could raise awareness about dengue, sanitary issues, and polio. Another example could be school nurses organizing health support clubs on topics of interest and need in the school to help students develop their own health literacy. The groups could be about medication, chronic conditions, substance abuse, screen addiction, interpersonal relationships, or any other health topic of concern.

Implementation Strategies

- Along with the Health Promoting Schools Framework, utilize a whole child framework such as FRESH or Whole School, Whole Child, Whole Community Framework when developing SHS competencies and responsibilities.
- Create interdisciplinary school health teams with members representing all aspects of school health.
- Include in SHS worker contracts or MOUs time for policy development or to participate in school health team activities.

Checklist

☐ Did you utilize a whole child framework when developing SHS competencies that lends itself to other components of school health?

☐Do you have representation from all components of school health represented on your school health team?

☐Do SHS worker contracts or MOUs include time for policy development or interdisciplinary team activities?

315_Niger Case Study #1 (HPS and SHS within it)