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MONITORING COMPLIANCE FRAMEWORKS FOR SCHOOL FOOD STANDARDS

Technical report

Version 1.0

Mae'r ddogfen yma ar gael yn y Gymraeg/This document is available in Welsh

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List of abbreviations

BC	Behaviour Change
BMI	Body Mass Index
CMP	Child Measurement Programme
EPIC	Enhancing Policy in sSchool food
Estyn	Education and Training Inspectorate for Wales
FSA	Food Standards Agency
FUEL	Food provision, cULTure, and Environment in secondary schools
GENIUS	Generating Excellent Nutrition In UK Schools
GOO	Global Obesity Observatory
HWHW	Healthy Weight Healthy Wales
LA	Local Authority
LACA	Local Authority Catering Association
NQA	National Quality Award
OHID	Office for Health Improvement and Disparities
PHW	Public Health Wales
PICOS	Population, Intervention, Comparator, Outcome, Study Design
SACN	Scientific Advisory Committee on Nutrition
SFS	School Food Standards
RRSA	Rights Respecting Schools Award
UPFSM	Universal Primary Free School Meals
WFGA	Well-being of Future Generations Act
WFP	World Food Programme
WG	Welsh Government
WHO	World Health Organization
WLGA	Welsh Local Government Association
WNHSS	Welsh Network of Healthy Schools Schemes

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Abstract

Background

The school age years are a crucial period of rapid growth and development (1–3) of which diet is a principal requirement (2–6). Owing to the time spent in school during childhood and the meal occasions provided during this time, school food contributes significantly to a child’s dietary intake. It therefore poses a significant influence on the dietary intake of children and presents opportunities within school food programme delivery for population health improvement. For further reading on school food and child health outcomes please see [‘Opportunities for improving-childrens-health-in-wales-the-potential-of-school-food’](#) (7).

School food is a core element in the Welsh Government (WG) National Strategy; Healthy Weight, Healthy Wales (HWHW) Moving Ahead in 2022-2024; Priority Area 4 (8). This includes a review and update of Wales’ current Food and Nutrient Based Standards and Requirements for Schools (9,10), and the implementation of free school meals for all pupils in Wales by 2024 (11).

Purpose of report

There is currently no monitoring framework for school food and nutrient standards and as a result compliance, and its enablers and barriers, in schools throughout Wales is unknown.

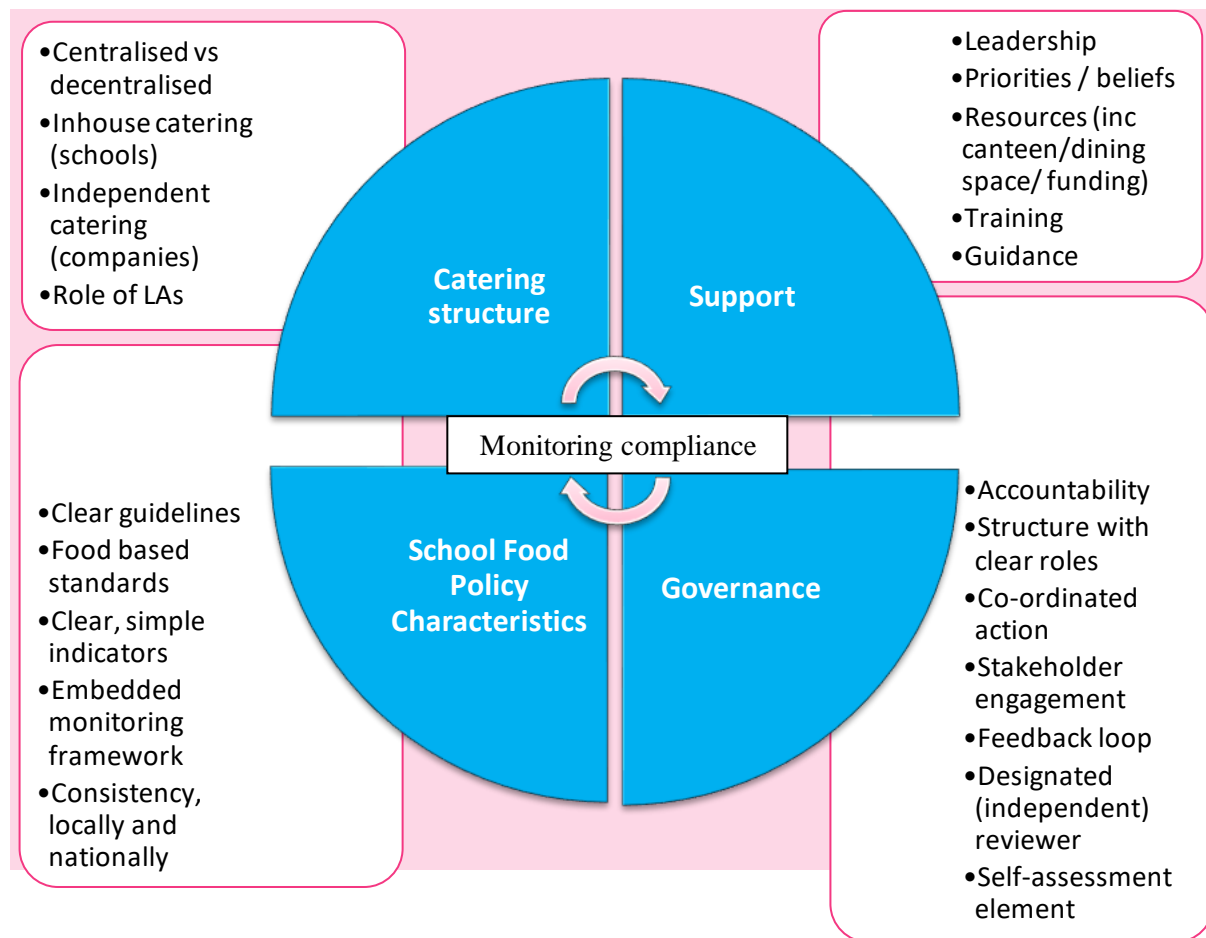
Examining the evidence base for compliance with School Food Standards (SFS), and monitoring frameworks, is an important and timely issue supporting national priority areas in Wales.

This report focusses on exploring the evidence base for the implementation of, and compliance with, SFS and their monitoring processes, to identify ways to support the delivery of quality school food and compliance with the national standards.

Findings

Four core themes were identified in the literature: catering structure, policy characteristics, governance structures and support. The themes and the key issues within are illustrated below.

Key influences for monitoring the compliance of SFS:



Recommendations

1. **Collaboration and engagement;** include multi-sector actors to establish clear monitoring and compliance goals, outcomes and actions required.
2. **Governance;** establish clear structure with accountability and feedback loop.
3. **Indicators with measurable outcomes;** adopt consistent, national indicators, with consideration of local variations. Consider embedding into existing frameworks.
4. **Support provision;** provide clear guidance and training opportunities about the standards, the links between school food and child health and relevance to individuals' roles and responsibilities.
5. **Piloting;** pilot approach before wider rollout, include pupils / school community.

Section 1: The National Context

Section one outlines national public health policy in Wales and the frameworks within which school food is set. It then outlines the role of monitoring frameworks for school food standards and provides an overview of Wales' current monitoring processes for compliance with SFS.

Guided by the Wellbeing of Future Generations Act (WFGA) principles (Figure 1) the HWHW National strategy (8,12,13) is the WGs long term plan to reduce and prevent obesity. The delivery plan prioritises schools within its healthy settings theme, healthy growth and development within the healthy people theme, healthier foods purchased and eaten outside of the home in the healthy environments theme and a systems-based approach enabling local action in the leadership and enabling change theme.

Figure 1: WFGA National Wellbeing Goals (14)



Within the healthy settings theme the strategy outlines educational settings as a key modifiable place of intervention. It acknowledges the impact of educational settings on health and wellbeing and establishing healthy behaviours, and the impact of good health on learning and future outcomes for young people (8).

In addition, within the WG commitments to support the population with the

rising cost of living, and as part of the approach to ease the pressure on families and reduce health inequalities by tackling child poverty, the Universal Primary Free School Meals (UPFSM) policy was established (11). The policy sets out the aim of providing free school meals for all Primary school children in Wales by 2024, to ensure no child goes hungry at school.

The UPFSM is an important consideration because it is likely to lead to an increased uptake in school meals. More children will rely on school dinners to provide the quality food and nutrition that is required for health, growth and development, and the learning and establishment of healthier dietary patterns.

School Food Standards

Across the UK, all four nations have national school food standards. In Wales, school food provisions are set out in the Healthy Eating in Schools (Wales) Measure 2009 (10) and The Healthy Eating in Schools (Nutritional Standards and Requirements) (Wales) Regulations 2013 (9). In June 2014 the WG published 'Healthy eating in maintained schools; statutory guidance for local authorities and governing bodies' to aid compliance (15).

The standards and guidance do not include a monitoring framework. Monitoring is generally undertaken through a self-regulatory approach (Figure 2). On the whole adherence to SFS across Wales is unknown in an official capacity, and it is not possible to evaluate the impact of SFS on children's health and wellbeing outcomes. Consideration of monitoring and compliance of SFS is important to ensure schools are appropriately supported in meeting achievable standards.

Monitoring frameworks

A monitoring framework is an approach to manage and monitor school food policy implementation and compliance with SFS. It can outline a tailored set of structured guidelines that are required to guide, measure, and meet specific compliance requirements, as outlined in the UK Governments Green Book; monitoring and evaluation of interventions (16). Without such a framework there is little order or method, making it difficult to ascertain whether schools are meeting the expected standards, whether the policy objective of school food provision is being achieved, and identify barriers and opportunities for improvement of compliance.

Thus, successful implementation of a structured monitoring framework should aid compliance and be an essential part of any school food policy

(17). Estyn acknowledge that when a framework is used to develop good practice it helps schools to progress (18).

Details for ensuring the standards and requirements are met are set out in The Healthy Eating in Schools (Wales) Measure 2009 (10) (See Appendix 1). The measure specifies Local Authorities (LAs) and governing bodies are required to take the guidance into account as part of their roles and duties. LAs have a duty to support schools to meet the standards, and schools' actions to meet the requirements should be included in governing bodies' annual reports. As part of the wider monitoring approach, the Welsh school inspectorate Estyn report on any actions taken by schools to 'promote' healthy eating and drinking (10).

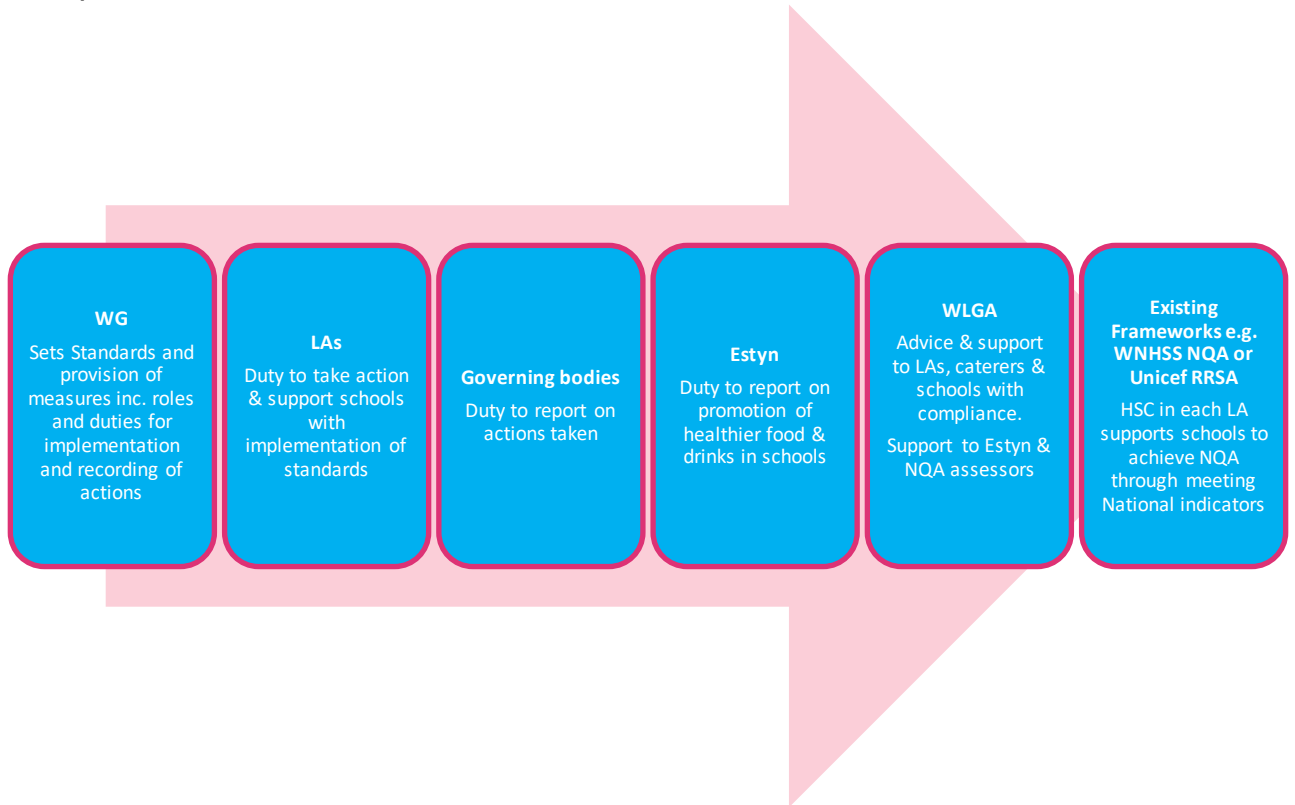
In addition, the Welsh Local Government Association (WLGA) offer LA catering and schools support with their duties to implement the guidance through a voluntary Certificate of Compliance process, which includes nutritional analysis software training. This process has been established by WLGA to fill the gap in the absence of an official framework. Certificates of Compliance (19) awarded by the WLGA can be used as evidence during Estyn inspections and the Welsh Network of Healthy School Schemes (WNHSS) National Quality Award (NQA) assessments (20).

The WLGA provide a suite of resources including a nutritional analysis guide (21), evidence guide and toolkit (22), posters (23) and briefing for school heads and governors (24). The WLGA has also created a supporting document to aid Estyn and NQA assessors in their inspection process. This document outlines the identification of good practices, consistency of messaging and clear breaches (25).

Pupil health and wellbeing assessments that include school food elements have been previously embedded within broader school food policies such as the WNHSS and its NQA assessments which formed part of a wider national school health and wellbeing framework (26) and the Unicef RRSA (18).

Figure 2 illustrates Wales' current governance structure for monitoring compliance with the Food and Nutrient Based Standards for Schools in Wales.

Figure 2: Summary of Wales' governance structure for monitoring compliance with SFS, and actors involved



Summary

Evidence-based SFS ensure children are provided with healthy, balanced food and drink options on school sites during school hours.



Monitoring of, and compliance with, SFS are an important consideration to ensure schools are appropriately supported in meeting SFS.

This can make it easier and more likely for schools to achieve quality standards for the food provided to children.



No official monitoring framework for the compliance with SFS is currently available in Wales.



A review of monitoring and compliance for SFS is timely and important due to the WG priority work areas for 2022-2024, including the review and update of Wales' current SFS.

Section 2: Aims and Objectives

Principal aim

Learn from existing, or research about, compliance and monitoring frameworks for SFS.

Objectives

1. Evaluate the enablers and barriers to the implementation and compliance of school food standards.
2. Evaluate the influences on the development and implementation of monitoring frameworks for school food standards.
3. Identify examples of frameworks, through national and international case studies, for the monitoring of school food standards.

Research Questions

To meet these objectives, three research questions were set:

1. What are the enablers and barriers to the implementation and compliance of school food standards?
2. What factors influence the development and implementation of monitoring frameworks for school food standards?
3. What monitoring frameworks for school food standards exist nationally and internationally?

Section 3: Methodology

Section three sets out the methodology for undertaking a scoping search of the evidence base about compliance with, and monitoring of, SFS including the UK and comparable international literature.

Search Strategy

To meet the objectives the search had two phases:

- Phase one: literature search of peer-reviewed academic journals
- Phase two: grey literature search and direct contacts with professionals working in the field

Phase 1: Literature Search

A search for peer-reviewed studies was undertaken on OVID Medline. Two concurrent searches were undertaken 1) focused on the enablers and barriers to SFS compliance, and 2) focused on SFS monitoring frameworks.

The study used a PICO format and search terms included those listed in Tables 1 and 2. A scoping search of these terms was used to trial and refine (terms in bold) to produce the final searches (Appendix 2). The search was conducted in the English language and included papers from 2013 onwards. Appendix 3 outlines the full rationale of final search terms.

Table 1: MeSH and free text search terms objective one

Population	School* / Primary school* / Secondary school* / Comprehensive school* / Education*
Intervention	Enabl* / Facilitat* / Support
Comparator	Barrier* / Obstacle* / Difficult*
Outcome	<i>school food / school meal* / school lunch* / school nutrit* / school dinner* / School drink* / School beverage* / school diet / healthy school food</i>
Study Design	standard* / regulation* / programme* / criteri* / polic* / Strateg* / guideline* Any

Table 2: MeSH and free text search terms objective two

Population	School* / Primary school* / Secondary school* / Comprehensive school* / Education*
Intervention	Monitor* / Inspecti* / Assess* / Compliance / Adherence
Comparator	No Monitoring Framework
Outcome	<i>school food</i> / <i>school meal*</i> / <i>school lunch*</i> / <i>school nutrit*</i> / <i>school dinner*</i> / <i>School drink*</i> / <i>School beverage*</i> / <i>school diet</i> / healthy school food
Study Design	standard* / regulation* / programme* / criteri* / polic* / Strateg* / guideline* Any

Inclusion/ Exclusion Criteria

Inclusion

- Research specifically including or related to SFS, or any alternative terminology used that encompass SFS.
- Research specifically including or related to SFS monitoring, or any alternative terminology used that encompass SFS and monitoring.
- Mainstream school settings; Primary and/or Secondary Schools
- Countries where the culture, social norms and education system are similar to Wales
- Papers 2013 onwards
- English only papers

Exclusion

This public health report is specifically related to school food and nutrient standards and not the wider whole school approach to health and wellbeing. Therefore, exemptions to the search included:

- Papers that focus on wider whole school approaches to health and wellbeing *only*, such as:
 - Food and nutrition in the curriculum
 - Food and drink provision outside of school gates

- Activities under exclusions set out in the Regulations e.g., extra-curricular activities, fundraising events, lunch boxes.
- Studies which did not specifically include SFS (or their alternative terminology).
- Studies within educational settings that are outside the scope of the SFS such as private schools, universities, colleges, nurseries.
- Studies outside of educational settings as this is not directly related to SFS.
- Countries where the culture, social norms and education system differs significantly from the UK, because these studies would not provide comparable data or findings.
- Studies published pre-2013. The SFS in Wales were published in 2013 and are due to be updated. Thus, studies up to 10 years prior would include the latest evidence base, and enable a more specific, feasible search.

Phase 2: Grey literature searches

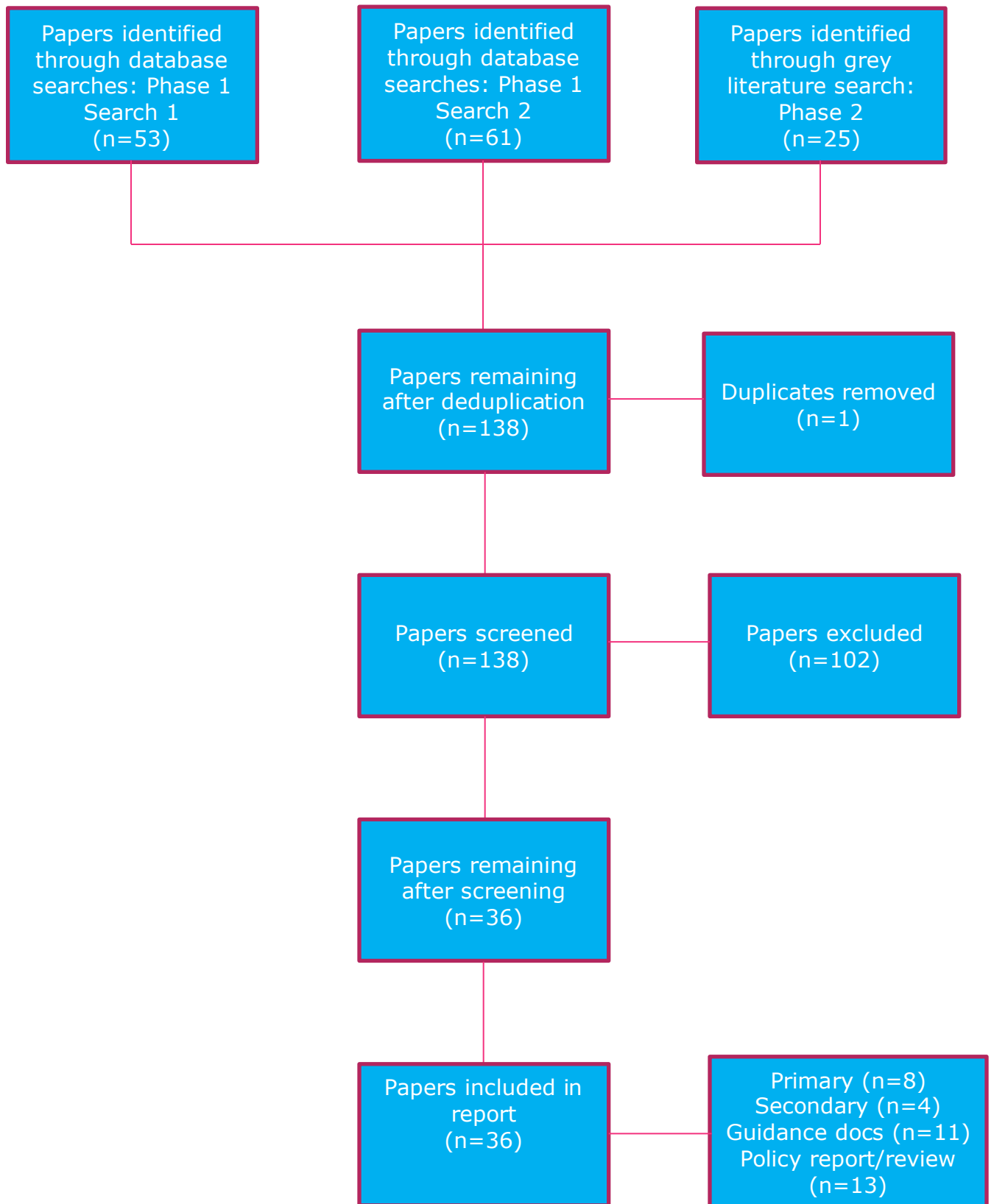
Due to the policy based subject matter and likelihood of relevant evidence being found outside of journals further searches were undertaken to capture information from key actors with an influence and focus on school food. This included searches of government and voluntary organisations reports and reviews, of which a grey literature search is most likely to detect (27). The search included all actors known through PHW's school food programme. A broad internet and social media search was also undertaken to identify any actors involved in school food that may not have been known through PHW (Appendix 6).

Direct contacts

Via the FSA SFS Compliance pilot team, who were contacted regarding their newly launched compliance pilot in England, several areas across the UK were highlighted as potential case studies for monitoring approaches. This included Lincolnshire, the Scottish school food inspectorate, and Southwark Borough (London). These areas were contacted directly about their school food policies via email. Virtual meetings were undertaken with each respective area, and information provided about their monitoring frameworks for SFS. This information was added to the data extraction table, along with a case study for Wales identified through the grey literature searches (Appendix 4).

Search Results

Figure 3: PRISMA Diagram



Phase 1 results

Academic database search results

Searches were carried out on OVID Medline in June 2023 and resulted in 50 studies for enablers and barriers to SFS implementation and compliance, and 57 studies for monitoring and compliance of SFS. A further 2 papers were identified through google scholar. The same searches were run on APA PsycInfo and EMBASE databases in June 2023, however no additional papers of relevance were detected.

A two-stage screening process was undertaken; title and abstract screening using inclusion and exclusion criteria, followed by a full-text review. Of those included in the final searches, 7 were shortlisted from the barriers and enablers search and 4 from the monitoring compliance search for the full text review. After removing duplicates, a total of 11 studies were shortlisted.

Forward and backward citation

5 additional studies were identified through forward and backward citation of the most relevant shortlisted papers. Additionally, 3 international case studies Sweden (28), Finland (29) and Australia (30) were identified through papers and information about these case studies were obtained from their respective websites.

Final papers

A total of 16 final papers were retained following title, abstract and full-text screening (see PRISMA; Figure 3). A full data extraction table was created detailing the shortlisted studies, to enable comparison and systematic recording of key findings (Appendix 4). Table 3 provides a summary of the selected papers. Strengths and limitations of the phase one search are provided in Appendix 5.

Table 3: Summary table of phase 1 included papers

Full title / Author	Year	Geographical area covered	Category	Aims
<p>Understanding school food systems to support the development and implementation of food-based policies and interventions Bryant, M et al</p>	2023	England/UK Primary Schools	Qualitative	Develop a school food systems map using a systems thinking approach to help identify the key factors influencing primary school children’s dietary choice and policy implementation.
<p>Impact of primary school nutrition policy on the school food environment: a systematic review Lily Grigsby-Duffy et al</p>	2022	Worldwide, Mainly US Primary Schools	Systematic Review	Factors influencing policy implementation. Synthesize the international literature to determine the impact (overall and by socioeconomic position [SEP]) of primary school nutrition policies on the availability of foods and beverages in schools
<p>Understanding Enablers and Barriers to the Implementation of Nutrition Standards in Publicly Funded Institutions in Victoria Rosewarne et al</p>	2022	Australia Schools	Qualitative	Understand stakeholder perspectives on the implementation of government nutrition standards in publicly funded institutions in the Australian state of Victoria, as well as to determine enablers and barriers to successful implementation
<p>Implementing Food Environment Policies at Scale: What Helps? What Hinders? Nguyen et al</p>	2021	North America & Australia Schools	Systematic Review	Examine the evidence for barriers and enablers to successful implementation of healthy food and drink policies (in schools), delivered at scale.
<p>Frontiers What Do Secondary Schools Need to Create Healthier Canteens? The Development of an Implementation Plan Evenhuis et al</p>	2021	Holland Secondary Schools	PH Report. Qualitative	Describes the development of an implementation plan to facilitate implementation of Guidelines for Healthier Canteens in Dutch secondary schools.

Enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies Ronto et al	2020	Worldwide Schools	Systematic Review	Explore the enablers and barriers to effective implementation of and compliance with school-based food and beverage policies.
Understanding System-Level Intervention Points to Support School Food and Nutrition Policy Implementation in Nova Scotia, Canada McIsaac et al	2019	Canada Schools	Qualitative	Examine the system-level intervention points within a school food system using a complex systems framework which support implementation of school food and nutrition policy.
Effectiveness of a multicomponent intervention to enhance implementation of a healthy canteen policy in Australian primary schools Nathan et al	2016	Australia Primary schools	Randomised controlled trial.	Examine whether a theoretically designed, multi-strategy intervention was effective in increasing the implementation of a healthy canteen policy in Australian primary schools.
Monitoring foods and beverages provided and sold in public sector settings L'Abbe et al	2013	Worldwide Schools	Policy review	Propose a global framework for monitoring foods and beverages provided or sold in public sector settings (inc. schools) that can be used to compare and evaluate the nutritional quality of the foods.
An accountability framework to promote healthy food environments Public Health Nutrition Cambridge Core Kraak et al	2014	Worldwide	Policy review	Review the available literature on accountability frameworks to construct a framework that is relevant to voluntary partnerships between government and food industry stakeholders.

Validity of four measures in assessing school canteen menu compliance with state-based healthy canteen policy Reilly et al	2016	Australia	Cross-sectional study	To assess the validity and direct cost of four methods to assess policy compliance: 1) principal and 2) canteen manager self-report via a computer-assisted telephone interview; and 3) comprehensive and 4) quick menu audits by dietitians, compared with observations.
School Food and Nutrition in Europe: policies, interventions and their impact Storcksdieck gennant Bonsmann S et al	2014	Europe Schools	Policy report	To provide up to date findings on policy development and related evidence from across Europe and to discuss examples of best practices, knowledge gaps and ways forward for school food policies.
Variations in schools' commitment to health and implementation of health improvement activities: a cross-sectional study of secondary schools in Wales Moore GF et al	2016	Wales Secondary Schools	Cross-sectional study	Examines variability in delivery of health improvement actions among secondary schools in Wales, and whether variability is linked to organisational commitment to health, socioeconomic status and school size.
Factors Influencing the Implementation of Nutrition Policies in Schools McIsaac, J.D et al	2019	International	A scoping review	The purpose of this review is to determine what is known about the influence of broad and local system factors on the implementation of SNPs internationally.
Preschool and School Meal Policies: An Overview of What We Know about Regulation, Implementation, and Impact on Diet in the UK, Sweden, and Australia Lucas et al	2017	UK, Sweden and Australia	Policy review	Compare the school meal policies, and their implementation and impact, in preschool and primary educational settings in three high-income country contexts: UK, Australia, and Sweden.

Design, testing and validation of an innovative web-based instrument to evaluate school meal quality Patterson, E et al	2013	Sweden	Validation study	To develop a feasible, valid, reliable web-based instrument to objectively evaluate school meal quality in Swedish primary schools. Evaluate the predictive criterion validity of relevant nutrient-specific food-based criteria that can assess the nutritional adequacy of a school's food provision
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Phase 2 results

A search of these organisations websites resulted in the selection of 11 UK SFS guidance documents, 7 reports about SFS and a further 2 studies related to SFS compliance (see PRISMA; Figure 8). In addition, 3 ongoing studies were found but results were not available at the time of writing (Food Standards Agency FSA school food compliance pilot study, Birmingham University EPIC and FUEL studies).

The grey literature findings were added to the full data extraction table, to enable comparison and systematic recording of key findings (Appendix 4). Table 4 presents a summary of the selected grey literature. Strengths and limitations of the phase two search are provided in Appendix 7.

Table 4: Summary table of phase 2 included papers

Full title / Author	Year	Geographical area covered	Category	Aims
Healthy eating in maintained schools: statutory guidance GOV.WALES	2014	Wales	Guidance doc	Statutory guidance for local authorities and governing bodies to support implementation of Wales' school food standards.
Healthy Eating in Schools - WLGA	2023	Wales	Guidance docs	Services to help schools implement school food standards and achieve compliance.
Healthy and happy – school impact on pupils’ health and wellbeing Estyn (gov.wales)	2019	Wales	Qualitative Report	The report evaluates how well primary and secondary schools in Wales support the health and wellbeing of pupils.
Thematic survey report (gov.wales)	2023	Wales	Qualitative Report	This report focuses on important aspects of the work of governing bodies in schools across Wales. Information from a range of different school types and sizes, including interviews with headteachers and governors and an online survey for governors. Inspection evidence across the maintained schools’ sectors and published research. Interviewed key partners from organisations that work with governing bodies.
Nutritional standards for school lunches: a guide for implementation HSC Public Health Agency (hscni.net) http://www.publichealth.hscni.net/publications/school-food-essential-guide	2009	Northern Ireland	Guidance doc	Nutritional standards for school lunches: A guide for implementation and poster which summarises the nutritional standards for school lunches that all grant-aided schools must adhere to.
Healthy Food for Healthy Outcomes English Version.indd (education-ni.gov.uk)	2013	Northern Ireland	Guidance doc	This document articulates the Departments’ policy in relation to all food in schools.
School food standards: resources for schools -	2023	England	Resources	Resources to support school food standards implementation.

GOV.UK (www.gov.uk)				
Standards for school food in England - GOV.UK (www.gov.uk)	2023	England	Guidance doc	Guidance on the standards for planning and providing food in schools.
Healthy eating in schools: guidance 2020 - gov.scot (www.gov.scot)	2020	Scotland	Guidance doc	Statutory guidance supporting the implementation of the Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020.
Food in schools across Scotland: A self-evaluation resource Resources National Improvement Hub (education.gov.scot)	2015	Scotland	Guidance doc	A report to support self-evaluation and self-improvement across Scottish Education. Supports school leadership to monitor and evaluate performance.
Food in Schools across Scotland – Education Scotland – Supporting improvement – a self-evaluation framework (glowscotland.org.uk)	2023	Scotland	Digital framework	A digital framework designed to support self-evaluation and improvement in food in schools has been developed to help schools improve food in schools and compliance with national standards.
Food and Nutrient Based Standards for Schools in Wales: A rapid review. PHW	2023	Wales	Report	Rapid review investigating updates required in the SFS by assessment against current scientific evidence base.
'What Works Well' Recipe Hub (schoolfoodplan.com)	2015	England	Guidance	Public Health England has supported the School Food Plan to develop the 'What Works Well' Recipe Hub. The Hub brings together over 100 recipes for pupils' favourite meals and snacks. These tried and tested recipes have been created by school cooks and caterers and cover food served across the whole day: breakfast clubs, mid-morning break, lunch, and after-school clubs.
Bulletin 3 Adherence and attitudes to nutritional standards and healthy eating policies in schools.pdf (hscni.net)	2016	Northern Ireland	Qualitative Report	Report into adherence and attitudes to nutritional standards and healthy eating policies in schools.

Establishing a whole school food policy.pdf (hscni.net)	2009	Northern Ireland	Guidance	This guide has been written to schools develop, write and implement a whole school food policy. It is designed to be easy to follow and based firmly in the context of real school life.
The impact of, and views on, school food intervention and policy in young people aged 11–18 years in Europe: A mixed methods systematic review (oclc.org)	2021	England	Systematic Review	Explore the effectiveness of school nutrition interventions and the perceptions of young people experiencing a nutrition-focused intervention or change in school food policy.
Meeting school food standards – students’ food choice and free school meals Public Health Nutrition Cambridge Core (oclc.org)	2013	England	Cross-sectional analysis	Examine students’ school food choice in relation to school food standards and entitlement to free school meals (FSM).
Spill the Beans school report Subbed-Digital_FINAL.pdf (biteback2030.com)	2021	England	Qualitative report	Students voices on school food standards.
Implementing school food and nutrition policies: a review of contextual factors (who.int)	2021	Worldwide	Policy Review	A review of contextual factors influencing implementation of school food and nutrition policies.
Ready to learn and thrive: school health and nutrition around the world - UNESCO Digital Library	2023	Worldwide	Report	Brings together multiple data sources to provide a global overview of school health and nutrition policies and programmes.

Quality assessment (QA) of studies

All shortlisted evidence was run through a QA process (Appendix 8). Taken together, the main limitations included:

- Risk of bias for self-reporting measures of qualitative studies.
- Selection bias in recruitment.
- Heterogeneity of outcome measures.
- Heterogeneity for the study population impacting generalisability and reliability for Wales' school population.
- Reliance on narrative synthesis which limited statistical pooling due to heterogeneity.
- Possible reporting bias which can be a particular weakness of narrative approaches (31).
- Lack of formal QA process for policy reports.

Summary

A broad search was undertaken that captured a wide range of evidence to reflect on influences, barriers and enablers for the monitoring and compliance of SFS.



A two-stage approach was applied



Phase 1: Peer-reviewed literature search

Phase 2: Grey literature search and personal contacts



Screening was undertaken to shortlist papers utilising inclusion / exclusion criteria



A data extraction table was generated to systematically document shortlisted papers



All shortlisted evidence went through a QA process

Section 4: Evidence Synthesis

Section four provides an evidence synthesis for compliance with and monitoring of SFS. It reflects on enablers and barriers for the implementation and compliance of SFS in part a, key influences for monitoring compliance with SFS in part b, and learning from existing monitoring frameworks through international and national case studies in part c.

A thematic analysis process was undertaken, using Braun and Clarke's 6-phase process (32), to systematically identify patterns and themes for enablers and barriers of compliance, and features and influences for monitoring compliance. Study characteristics and key findings were identified, categorised and tabulated (Appendix 9).

A narrative analysis approach was taken to critique the data due to its strength in exploring human experiences, which was appropriate due to most studies coming from qualitative data with narrative analysis. (33).

Part A: Enablers and barriers to the implementation and compliance of SFS

Compliance with and monitoring of SFS are influenced by a complex system of interacting components. Fundamentally, school food must be eaten for children to benefit. Therefore, SFS must be achievable, accessible, and acceptable in the first place. Consequently, understanding the national and local context, and the barriers and enablers to implementation and compliance is important.

There was a wider evidence base regarding enablers and barriers to SFS implementation and compliance compared to evidence reporting specifically on monitoring frameworks. The literature was weaker in detail for compliance with eight papers explicitly referring to compliance (34–41), however WHO state compliance is interlinked to themes that hinder or enable implementation (34).

Key Findings

Taken together the evidence in this section widens understanding about the potential influences on a school's ability to apply SFS and consequently the role of monitoring.

The literature identified common issues that have been categorised into four overarching themes:

- Leadership and Support
- Resources
- The Standards and Policy Enforcement
- Priorities and Beliefs.

Thematic analysis

Leadership and Support

Leadership at multiple levels was a common theme across the literature, including the support provided by head teachers and senior leaders in schools (35–37,42–46). Poor organisation and communication within school leadership teams, and a lack of clear management structures and clear roles involved with SFS were reported as key barriers (37,44,45). Conversely, when school food was a priority of the senior leadership team there was better implementation and compliance of SFS (38), and clear

guidance on roles and responsibilities within these structures was vital (5,34,39).

Lack of support for improving the skills of school and catering staff (and other stakeholders) was reported as having an impact on success (43,46). Multiple studies supported the view that training provision was an important part of successful implementation and compliance (34,35,42,44–47). A lack of training was reported as a barrier. One qualitative study relayed the impact of training on attitude and motivation, reporting a lack of training hindered positive attitudes whereas training provision led to improved knowledge and positive attitudes to SFS implementation (47). One systematic review also reported the support of a nutrition specialist resulted in an improvement in implementation (48).

The presence of a top down only approach involving high level management (49) was reported as a barrier (45). A lack of bottom-up approaches (49) such as lack of parent support (34,47), less positive attitudes of governors (47), and lack of pupil engagement (34,41,50) were all outlined as barriers to successful implementation. Parent, pupil and governor support was identified as an enabler in these studies. One qualitative study revealed that principals were more likely to implement SFS if they thought parents were supportive and were three times more likely if they felt they had governors support (47). Another paper reported the involvement of policy champions was an influential approach (44). Moreover, the presence of a task force committee or school food-based committee were reported as enablers (43,44).

A lack of macro and micro level support within schools and across stakeholders, and resistance and tensions from stakeholders outside of the school (particularly food companies or outside catering) were reported as key barriers in four papers, including two systematic reviews (38,43–45). Conversely, high level direction and coordinated action within multiple system levels was reported as an enabler for implementation (37). Multiple studies highlighted streamlined, well-resourced support systems and good infrastructure (37,43,44,46), as well as collaborative approaches with positive stakeholder relationships, including cross-governmental departments, school community, and suppliers were reported as enablers (5,35,37,43,45). Consequently, a synthesised approach, underpinning high level direction by utilising bottom-up processes may be a balanced approach, which is advocated as good practice in health policy implementation (49,51,52).

Two global reports by WHO and WFP specifically recommended that strong collaboration was required between health and education departments (5,34). WHO reported most SFS policy had been implemented through education sectors rather than health sectors, thus integration of health with education and social indicators was often lacking (34). However other studies in this review did not address this issue.

One study also reported that the voices of young people were often overlooked and not consulted (38) and another UK report suggested student behaviour must be considered (41). Additionally, a study revealed that students value autonomy and involvement in decision-making regarding food policy (49), highlighting the importance of supporting and listening to pupils' input.

Overall, successful implementation has been associated with clear leadership, co-ordination across government level departments and the engagement and input of stakeholders across multiple sectors and policy levels.

Resources

There was a clear theme regarding the impact of resources, including financial and staff, across the literature. The most common issue was the availability of funds and cost of the food policy for schools or catering companies (35,42–45,48), profitability for food service providers and a knock-on effect of reduced capacity of canteen staff (43–46). Capacity such as insufficient staffing and kitchen facilities was seen as a core issue for both schools and catering companies (18,34,43–45). However, results should be interpreted with caution as studies across different countries may not be comparable for costs. Countries where free school meals are not available or where food costs are higher may report a higher impact of costs and funding than those with more support. Thus, generalisability for the Welsh population may be limited. However, this does not negate the fact that cost and profitability are key issues for consideration. The UK youth group BiteBack reported pupil views that healthier options were prohibitively more expensive (53).

Policy characteristics and Policy Enforcement

A common theme across the literature was the type and detail of the SFS policy. Barriers included having a lack of implementation framework as part of the policy (45), long, complex guidelines (43), difficulty or availability of

accessing foods that complied with the policy (35,43,48), and three studies (including two systematic reviews) reported policy misconceptions or lack of understanding of the policy hindered successful implementation (43–45). Enablers included strong guidelines (43,45) and a clear, well-communicated policy (45,48). As covered in the leadership theme, strong collaboration between education and health sectors as part of policy development was also reported as essential (5,34).

The type of standards also featured as a factor, specifically whether the policy had food or nutrient-based standards. A cross-sectional study reported 76% compliance with nutrient-based standards (NBS) for LA catering provision and 90% for food-based standards (FBS). There was also a difference between LA catering and non-LA catering provisions, with non-LA catering having poorer compliance (64% and 80% respectively) (41). Overall FBS produced better compliance, however it is not possible to draw on systematic studies on this issue, thus this research area is limited.

Alongside the details of the standards was the issue of policy enforcement. Specifically, a lack of enforcement (34,38,40,42,45), lack of monitoring (35,36,38,40,42,43,45,46,48,54) and having no external body to ensure schools adhered to standards (47), unclear boundaries (34) complex data collection for monitoring (40), and lack of adherence from food companies (43) were reported as barriers. Conversely, good policy governance and accountability measures including having clear, defined roles and consistency nationally were reported as enablers (34,36,38–40,43,45,54). Putting guideline compliance into food company contracts (43), incentives for compliance such as budget or performance indicators (40), and feedback (46), were supportive influences.

Monitoring was mentioned as a key part of enabling schools to achieve compliance with SFS (35,36,38,40,42,43,45,46,48,54). Furthermore, one study that investigated SFS regulation in the UK, Sweden and Australia reported that light touch monitoring approaches, utilising existing inspection mechanisms with low effort required from key actors such as schools and catering companies enabled better compliance (40). However, these studies would have been more useful if they had included the effect of monitoring as a measure.

Beliefs and Priorities

The beliefs and priorities of those involved in school food systems, influenced by standards, formed the fourth theme. Stakeholders perceived

the burden and risk to child health and the challenge of implementing the standards differently (42). Disagreement about the purpose of the guidelines among stakeholders was a barrier (41,44). Attitudes toward the policy (46) and ambiguity in policy interpretation were also identified as barriers (34,44). Conversely, high motivation (34) and positive attitudes among key actors (44) were seen as facilitators. Additionally, senior leadership's beliefs about others' attitudes, such as parents and governors, played a significant role (46). Training provision was credited with improving attitudes (46).

These beliefs influenced stakeholders' priorities and level of engagement (5,34,35,37,38,42,44–46), as well as their external motivation to achieve guidelines (40,43,45). Aspects which are crucial for the success or failure of SFS implementation and compliance. Another barrier included the possible tension between beliefs about government, organisational and personal responsibility (38,43) which is consistent with findings from a systematic review highlighting a top-down approach as a barrier (45). Furthermore, the WHO report outlined 'responsibility conflict' when stakeholders were uncertain about their responsibilities for ensuring pupils are provided with healthier diets (34). Establishing a common goal, collective and coordinated actions was reported as enablers (35,37,38,42,44), with one study specifically emphasising the importance of buy-in from LAs (42).

The included studies and reports could be more helpful if they had incorporated behaviour change theory, for example utilising the COM-B approach to better identify strengths and weaknesses of stakeholder's capabilities, opportunities, and motivation (55,56) owing to their central role in the success of SFS compliance.

Other themes

Other themes that were present included access to less healthy food outlets surrounding schools (35,47,48), the school environment including foods outside of the standards remit (47), and timings of the school day (18). Indicating that the wider school environment is likely to be a significant influence and must be considered in relevant policies and whole system approaches. These wider themes were outside the scope of this report and are therefore not discussed in detail.

Summary

The literature revealed *four themes* that influence implementation of and compliance with SFS:

Leadership and support

Resources

The standards and policy enforcement

Priorities and beliefs



Factors that act as barriers in their absence and enablers in their presence include:

Priorities and support of senior leaders

Training provision

Available resources/ funds

Stakeholders' priorities and engagement

Common goals and collaboration

Clear policy governance

Accountability measures

Monitoring

Part B: Monitoring frameworks for SFS compliance

Most studies in the previous section acknowledged monitoring as an important part of SFS compliance but highlighted weak or absent mechanisms for monitoring. However, the systematic search yielded several studies specifically addressing monitoring frameworks and associated barriers and enablers.

Key Findings

The literature identified several common approaches that have been categorised in to four overarching themes:

- Policy Characteristics
- Governance
- Support
- Catering structures

Thematic analysis

Policy Characteristics

Monitoring of compliance is strongly influenced by the type of policy in place (57). Several policy characteristics were reported as enablers for monitoring, including clear, standardised indicators, consistent unified frameworks, and mandatory participation (5,45,54,57). Whereas one systematic review and two policy reports highlighted inconsistent frameworks and lack of consistent standardisations were barriers to monitoring compliance (34,45,54).

Ease of monitoring was evident when looking at the validity of measures in assessing compliance to school food policy. The evidence demonstrated that a quick menu audit approach using an audit tool based on SFS core principles was most supportive for monitoring compliance (58). The EU and WFP reviews reported simple, and few indicators were most successful (5,54).

One study explored the type of indicators in more detail, reporting that Food Based Standards (FBS) were linked to simpler, easier monitoring compared to Nutrient Based Standards (NBS) (57). A few studies reported the potential manipulation and blurring of healthy schools' ethos by food companies using nutrient-based indicators (43,57). For example, through inclusion of nutrient poor foods low in fat/sugar, or the addition of

ingredients such as wholemeal flour into cakes. Conversely some literature suggested standards should include both food and nutrient-based measures for optimal monitoring compliance, synthesising key elements of both (57). This approach was to primarily mitigate issues with having NBS alone, due to reported concerns about manipulation and the complexity of NBS. This supports the evidence base for enablers and barriers to implementation and compliance in the previous section, which outlined differences in compliance between food and nutrient based standards (41).

One study comparing compliance of two different FBS found that following FBS alone did not always lead to achieving nutrient recommendations. However, combining FBS and NBS led to better outcomes, including greater dietary variety and lower fat and salt intake. Not having any standards resulted in worse outcomes (59). Thus, while FBS might enable better compliance and monitoring, the inclusion of NBS is equally important to ensure SFS deliver the dietary quality necessary for children's healthy growth and development. Further work may be required to understand the impact of having FBS with or without NBS on the intended outcomes of ensuring children received adequate nutrition throughout the school day.

Limited available literature indicates that consideration and planning of monitoring should be embedded into a SFS policy from the outset. Doing so will enable development of consistent, clear indicators for monitoring. Research suggests the key elements of creating a standardised stepwise monitoring framework include consideration of the policy content, the type of standards (food and/or nutrient based), the key indicators to monitor and their benchmarks. A drawback in the evidence is the absence of clear stepwise framework examples for comparison and assessment. Nonetheless, such steps are recommended in a standards process outlined in a review of monitoring public sector settings (56).

Governance

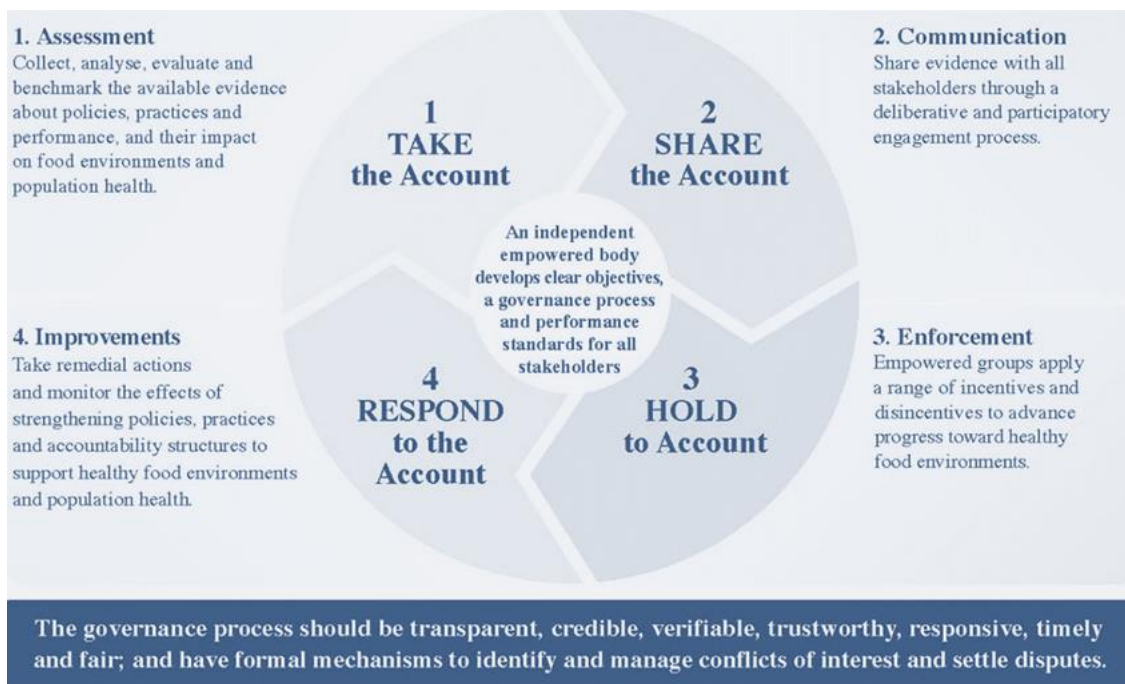
In relation to governance barriers to monitoring included unclear responsibilities (39,45,54), mutual accountability and shared governance (60), self-reporting measures (58) and non-responsiveness (because of unclear responsibilities and lack of accountability) (54). Multi-system co-ordination was highlighted as a core competence to foster successful school food environments (37). Revealing governance as a key theme.

Enablers included the presence of a unified monitoring framework (5,61), engagement and co-ordination with stakeholders including canteen

managers and suppliers, in the development of the framework with clear expectations (5,39,58), capacity building (43), streamlined governance structure with clear roles and a feedback loop (5,39,60). Also highlighted as enablers were, an independent reviewer to carry out monitoring responsibilities (57) and external auditing (54,57) due to reduced compliance being reported for those using self-reported monitoring systems (57). This may be due to the risk of recall bias in self-reporting measures (31,62,63). In contrast WHO reported self-monitoring approaches were a strong way to engage stakeholders and guide self-learning (64), however this report did not specifically address SFS monitoring and compliance.

A framework to promote healthy food environments also demonstrated the need for a neutral actor (60). This framework identified a four-step approach for establishing an enforcement structure (Figure 4).

Figure 4: Four step process to enforcement (60)



The framework suggests the need for clear, measurable indicators, the establishment of a feedback loop with a clear governance process and an independent reviewer with the authority and capacity to carry out a monitoring remit. This framework was not specifically targeted at SFS however, it offers a set of principles that are transferable to any food policy that requires systematic governance procedures. The framework additionally concluded that mutual accountability for monitoring results in an absence of appropriate enforcement structures (60). When considered

as a whole, the impact of independent versus self-monitoring is inconsistent across the evidence synthesised within this review.

The EU and WFP report recommended identifying appropriate data sources and embedding school food-specific questions into existing local national or international surveys to strengthen governance (5,54). WHO supports this approach, stating that monitoring frameworks should not be created in parallel to existing ones that are used for assessing school performance (64). Building on the evidence reported in the previous section this supports the need and rationale to utilise existing resources and networks to minimise expenditures (time and resources) (57).

Support

Like factors influencing implementation and compliance, support was identified as a clear barrier and enabler to monitoring. Barriers included insufficient training, awareness, guidance and resources (45,54), with resources encompassing inadequate data and provisions for monitoring children's uptake. Conversely, enablers included the presence of training, guidance, resources (45,54) and input from nutrition experts (58).

An Estyn report highlighted a successful case study in Wales which demonstrated that in-person support in schools, with focused school visits by governors, offered opportunities to build relationships with the school community and direct support for compliance as well as provide opportunities for monitoring (39). Moreover, the literature in the previous section indicated training not only improved knowledge but led to more positive attitudes (47). This highlights the value of providing regular, direct support to schools.

Support and competing priorities of organisations such as school and catering management, and their capacity can impact monitoring abilities (57). One systematic review highlighted the importance of a collaborative approach amongst stakeholders across the monitoring and compliance process including decision making on policy content and monitoring approaches (45). It also highlighted the importance of including parents and pupils in this process as their participation can influence compliance due to their demands and preferences (45).

The synthesised evidence identified a further barrier in that some school leaders prioritise academic performance over the importance of monitoring and compliance with SFS (45). Perhaps in addition to demonstrating the

pressure school leaders have to achieve multiple targets, this highlights a gap in knowledge and understanding of the link between dietary health, school food and educational attainment. Two papers proposed potential ways to mitigate against this barrier through engagement in policy development and additional training to improve both knowledge and attitudes (45)(47). The available evidence does provide a clear indication of whether lack of prioritisation by senior leaders is directly related to the lack of existing monitoring frameworks, governance structures and clearly defined roles.

Catering Structures

The way school catering systems are organised, such as whether they are centralised or decentralised (54), whether food is prepared on-site or by an external catering company, and who is responsible for procurement like schools or LAs, impacts monitoring success. One review (57) found that when food was not centrally provided by schools, caterers needed additional monitoring. The literature also noted that stakeholders, such as external catering companies were barriers to providing information (45,54). Additionally, research by the GENIUS network showed poorer compliance for non-LA catering provision in secondary schools (41). Overall, the literature reveals the complexity of catering arrangements and the challenges in establishing a consistent, unified monitoring compliance across different school catering structures within the same country.

Summary

Four themes that influence monitoring compliance of SFS:

Policy characteristics

Governance

Support

Catering structures



Monitoring was highlighted as an important part of improving and supporting schools' compliance with SFS.



Despite the evidence highlighting the importance of embedding monitoring within SFS this is rarely utilised in reality.



The existing studies demonstrate the need for better monitoring strategies including:

Better governance with clear structures

Accountability with designated roles and responsibilities

Engagement, collaboration and unified goals amongst stakeholders

Measurable unified indicators

Utilisation of existing frameworks and mechanisms

Guidance and support including training opportunities

Strengths and limitations of included papers

The generalisability of the published research may be a limitation due to the predominant use of qualitative methods (65). Different countries have different infrastructures in terms of their school food systems, funded vs unfunded, voluntary vs mandatory regulations and centralised vs decentralised. Moreover, the population of interest varied across the literature between primary and secondary schools which have very different school food structures, and the characteristics of the policy such as food or nutrient based standards and the level of detail varied greatly. This infrastructure variance within the UK, and internationally, challenges the comparability and generalisability of the evidence base. Nonetheless, although the varying infrastructures may limit generalisability, the concepts and themes across the studies (including UK based) were consistent and could be adaptable for the Welsh context.

The thematic analysis allowed a deeper understanding of the views, feelings, and experiences of those involved or affected by school food policy, which provided unique insight into behaviours, beliefs and their effect on decision making (66). This enabled the assessment of 'why' interventions succeeded or failed, leading to consideration of behaviour change theory which is a key element of monitoring compliance of SFS (67,68). Moreover, although some of the included qualitative studies were smaller in scale, a number of these studies were UK or Wales based which provided better generalisability for the target population.

There is a paucity of data about existing frameworks, particularly related to compliance with SFS, and as such further research in this area would be important. Much of the literature has not fully explained or critiqued the actual development and implementation of a monitoring framework. Furthermore, there was a lack of controlled and large-scale study designs which may limit the strength of the evidence base (69). Strategies based on the existing evidence base should be piloted to expand learning from theory to real-life practice (70).

Pupil voice was considered briefly in a few studies; however, it was largely omitted across the literature. One review recommended both quantitative and qualitative components should be incorporated into assessment (57) which could include pupils amongst stakeholder feedback, whilst another raised the issue of assessing compliance without public opinion (54). Pupil contribution to monitoring compliance is therefore a gap in the evidence base.

Achieving compliance is one thing however maintaining it is another, and the lack of longer-term evaluations is an area the literature is weak. Additionally, many studies included self-selected participants which may not be representative of the whole school population. Bonita et al (71) suggests for child health where co-operation is required (e.g., by a carer) selection bias can often occur. Studies did not investigate schools that are less likely to self-select, therefore little is known about these schools.

Moreover, reporting compliance is different to achieving compliance, and it is difficult to establish whether self-monitoring approaches involved bias. Studies investigating frameworks have failed to follow up on the accuracy of self-monitoring, thus the validity of results may be affected by measurement error or social desirability bias (63). As such, there is a gap in research regarding the validity of monitoring measures. Conversely self-reporting data enables a wider assessment of participant's experiences which is a strength of the literature (63).

The literature does not fully explain the effects of follow-up or the consequences of non-compliance. Although accountability was reported as an important element, reported consequences and solutions to non-compliance were lacking. Therefore, the literature would have been more useful if the research had included comparative case studies to better determine what works best, and if mandated monitoring, tools for enforcement, solutions to non-compliance had been explored. However, the lack of mandatory approaches means real-life data may not be available. Non-compliance is generally dealt with in the form of extra support and guidance, but evidence is lacking as to whether this is an effective approach.

Observed differences in monitoring frameworks between Primary and Secondary schools would have also provided wider learning, and more research is required in Secondary schools overall.

Part C: Case Studies

The literature highlighted different monitoring strategies used internationally in countries like Australia, Sweden, USA, Estonia and Finland. These strategies varied in approach with the USA, Estonia and Finland conducting periodic large-scale surveys, but no national monitoring system (61). Sweden has a centralised approach focusing on self-monitoring using a national auditing tool (40), and Australia conducts auditing alongside training, workshops, and providing tools and resources (43) and guidelines in all States but no national unified system (40). While other countries have school food policies, information about their monitoring approaches was scarce in the searches.

International Case studies



Source: School Food Sweden (28)

Overall, international approaches align with themes found in the evidence synthesis. For instance, Sweden focuses on key indicators and a unified audit system, while Finland emphasises stakeholder engagement and pupil involvement, whilst Australia relies on independent auditing providers. Both Finland and Australia have input from health and education government departments.

However, due to limited evidence for monitoring, it is challenging to assess

the impact of these different strategies, such as the benefits of using a unified monitoring system or a tailored approach. Some evidence suggests that a tailored approach to implementation may better support policy success (35). However, none of the case studies tailored their approach for Secondary schools, which was a concern raised in the evidence synthesis.

International Case Studies Summaries

Sweden

Each school has responsibility for the implementation and monitoring of SFS.

Half of Primary Schools use a commercially independent audit tool run by the Center for Epidemiology and Community Medicine (CES), in collaboration with government and public health organisations in Sweden (72).

Key features:

- Systematic web-based tool
- Self-assessment
- Six domains to review whether the schools meet all the components aligned to national guidelines.
- Free, voluntary
- 10-30 minutes to complete
- Automatic feedback provided to schools outlining performance reports, strengths, weaknesses, encouragement, and tips to help with action planning.
- Two optional questionnaires for completion by pupils and staff.

The auditing is self-reported and completed by the school's head of catering with school management support (73,74). Evaluations of the tool show small significant improvements in school meal compliance and repeated use is recommended to improve school meal quality (28,73,74). Feedback provision was reported as a strong predictor of meeting standards (74).

Finland

Nutritional quality monitoring is undertaken by school catering services with the support from Education Finland including access to monitoring tools and support for how to collaborate with stakeholders (75).

Key Features:

- Voluntary
- Self-assessment
- Monitoring undertaken by catering service during menu planning and implementation, supported by nutrition analysis software and suppliers' recipes
- Feedback from pupils collated via electronic or paper forms
- National and local surveys undertaken with oversight from the Ministry of Health (75).
- Education Finland provide a list of stakeholders who offer support, including the University of Finland who offer nutrition expertise related to school meals (29). It was unclear whether these were paid for services.

Finland places a strong emphasis on the right of children making decisions regarding their own health and welfare (75). Finnish guidelines state that centralised areas with a unified framework are easier to monitor (75).

Australia

Nationally, there is no standardised classification system in place. All states have their own school food strategies, and only New South Wales (NSW) and Western Australia (WA) governments have a monitoring and reporting system.

NSW

NSW have a free menu check audit service to assess whether it meets the NSW healthy school canteen strategy. Local government provides support and audits are undertaken by an independent assessor from the Healthy Food Information Service within NSW Education.

Key Features (76):

- Free, Voluntary
- External assessor
- In-school visits, monitoring and support
- Great choice badge for compliance
- Certificate valid for three years, however new providers or menus require new audits.

Schools choose between three menu check options:

1. School run services
2. Schools with service providers
3. Schools to complete supporting 'service providers' audit form

It is reported that NSW schools have 94.6% compliance success rate since the strategy was launched in 2017.

WA

Western Australia has support from the School Canteen Association to implement and monitor their policy, funded by the Department of Health. Self-monitoring is carried out via a school principal survey, reporting to the Department for Education.

Key features (30):

- Free, Voluntary
- Self-assessment
- Online survey
- Completed by school leadership

The most recent report in 2021 shows there was a 79% response rate (77).

UK case studies



Image source: Llanelli Herald

Across the UK, different resources are available to support schools in meeting SFS. These resources include guidance documents, checklists, promotional posters to training courses, workshops, and certification (see Appendix 4). This section highlights several UK case studies identified via contacts at PHW. These case studies were selected for inclusion because they provide examples of established monitoring frameworks that go beyond the support of central guidance documentation. These real-world examples offer feasible monitoring frameworks, which were missing in a large proportion of the published research included in this report.

Across the UK, nation's national monitoring approaches comprise voluntary self-monitoring with data being collated internally by school staff such as governors, head teachers or most often catering staff. In Wales and England training is also available to support implementation of SFS.

In England, positive outcomes have been reported in those local case studies utilising in-person auditing processes and pupil engagement. In Lincolnshire and Switham school staff are offered a range of training options. Additionally, in person audits provide an opportunity for engagement between school and catering staff, pupils, and parents. These successful strategies are consistent with the literature as being enablers for compliance and monitoring. It is unclear however whether these types of bespoke training service would be feasible on a national scale. As identified in the literature, resources, differences in catering system structures and governance structures could hinder a national rollout.

Like the international case studies, UK case studies also lack evaluation data for monitoring. This includes longer term evaluations that assess validity and feasibility assessments.

Southwark, England

A designated policy officer visits schools to speak directly with teachers, catering staff and pupils, experience the food environment, provide support, and undertake an audit checklist. If non-compliance is found, support is provided by the policy officer, and an improvement plan is provided.

Southwark have a school food transformation programme. Key features include:

- Free, voluntary
- Primary only
- Led by a designated policy officer for school food
- Funding available via public health grant offer. Conditions of the grant includes compliance with national SFS
- Strong council commitment
- Numerous contracts to manage and a fragmented system (no LA caterer)
- Direct contact with schools
- In-school visits
- Training services
- Auditing services

The programme offers a training course, comprising 6 modules, to upskill school leadership teams in managing contracts. Training sets expectations of schools' duties; outlines school food policy and provides support with developing an action plan.

Catering contractors do not report on compliance thus oversight is required from school leadership. It was noted that in-house provision was much easier to support, having greater flexibility and control for the school. On the other hand, governance for multi-contracts was complex and a clear structure necessary.

Annually across all schools in the LA a survey is disseminated covering school food policy, action planning and data collection. Additionally, the environmental inspection team embed five questions about school food in their assessments.

Lincolnshire, England

Lincolnshire have a traded service run by the council, involving a whole school approach, and designated independent assessors, to help schools better comply with standards.

There is an ethos of communication and building relationships with schools at ground level.

Key features include:

- Paid for, voluntary
- Primary and Secondary
- SFS certification scheme
- Year-long engagement/buy-in with a 12-month complete package
- Voluntary but the schools team actively promotes services.
- Direct contact with schools
- In-school visits
- Training services
- Auditing services

Compliance with national SFS is assessed across the whole school day. Standard and gold certificates valid for 3 months (termly menu cycles). Menus, product specification and recipe checks are all carried out by Lincolnshire Council schools' team, with an on-site assessment. Certification for private caterers is also available with a guidance checklist provided. Due to catering variations the team recommends compliance should be written into catering contracts, and evidence of compliance should be requested by schools.

The team offers bespoke support including training for school governors, senior leaders and midday supervisors. Training covers why it's important for children to eat well, what the standards are and compliance support. Additionally, the team offers parental engagement groups, and workshops are provided to pupils including how to establish pupil monitoring of school food.

To date there has been more uptake from Primary schools.

Scotland

Scotland have Health and Nutrition Inspectors who work within Education Scotland and join inspection teams across the country as they inspect primary, secondary and special school provision.

To support a self-evaluative approach the Health and Nutrition Inspectors created a framework 'Food in schools across Scotland'.

Key features include:

- Free, voluntary
- National monitoring framework
- Quality indicators set across 6 categories
- Self-evaluation (completed by school catering)
- Resources for schools and catering services to evidence implementation of the Nutritional Regulations, including:
 - Template for recording information to demonstrate meeting requirements.
 - Templates are not a requirement for inspection however the team have seen them used on every inspection since August 2022.

Engaging school staff was reported the biggest challenge to successful monitoring

Wales

Voluntary (free) certificate of compliance process (19) is provided by WLGA including: nutritional analysis training, certification granted for attendance and evidence of compliance checked by WLGA.

A range of support is available via WLGA (Appendix 6):

- Free, voluntary
- Guidance documents for a range of stakeholders
- Monitoring checklists
- Focus on nutrient based standards compliance

Additionally, LACA offer a paid menu checking service (78).

Schools that arrange their own catering are particularly encouraged as it is stated they are less likely to comply with the standards.

Carmarthenshire, Wales

Governor's engagement

The ESTYN report *School Governors: acting as critical friends and the impact of governor training* (39) features several case studies highlighting effective engagement between schools and governors.

For example, one school in Carmarthenshire, Wales established regular opportunities for governor's visits to help build relationships with staff, owing to a lack of engagement with school life.

Governors attended monitoring activities led by school leaders and the head teacher provided a range of prompts and questions to help them ask staff relevant questions. These prompts were removed once governors were more confident in their role.

Governors were also encouraged to regularly make focused visits to the school, to meet with members of staff to discuss school improvement priorities.

Following each visit, an evaluation form is completed by the governor outlining strengths and targets are discussed with the teachers before the next visit. Findings are also presented at governing body meetings.

The school state that this has become a regular positive process.

Overall ESTYN report that training for governors across Wales is available, including bespoke information presented by school staff and pupils (39). However, access to training (internal and external) varies and there is no official accredited training available.

The case study above offers useful practical insight into how the governor's role, which for example in Wales is central to monitoring as set out in the Measure (10), could be supported and enhanced

Evidence Summary

The evidence synthesis exposed gaps, particularly evaluative research, in this area worldwide



Nonetheless through a comprehensive literature search, accessing case studies and taking a thematic approach to analysis, the evidence synthesis revealed core considerations within *four main themes* that were considered most important for the development of a monitoring framework for compliance with SFS.



Policy characteristics

Governance

Support

Catering structures

Section 5: Considerations for Policy and Practice

Amalgamation of evidence synthesis

Figure 5 presents a synthesis of the evidence from Section Four, amalgamating the core themes identified in the literature along with key issues within these themes.

Figure 5: Key influences for monitoring the compliance of SFS

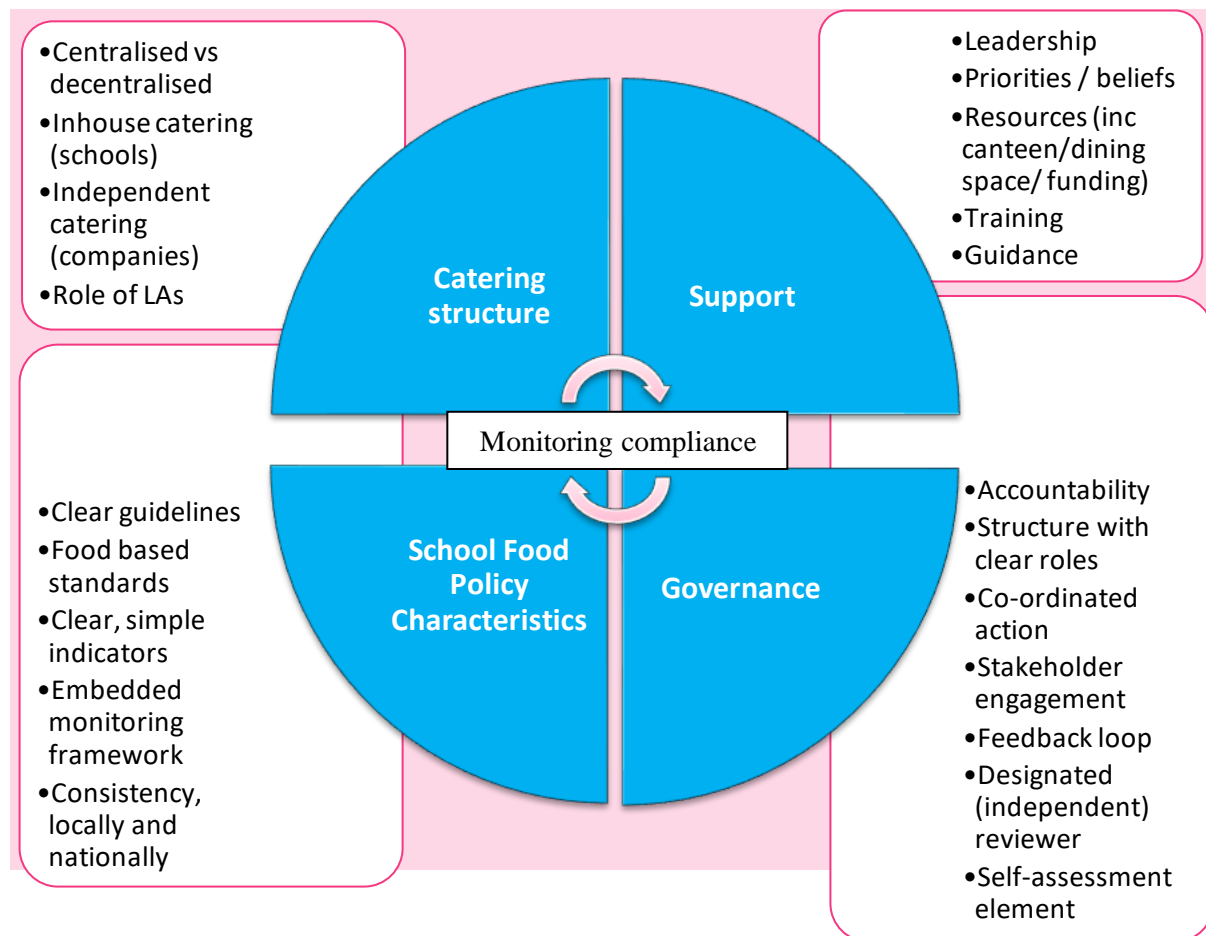


Figure 10 illustrates that the type of **catering structure** influences the roles and responsibilities, and the feasibility of a using national unified framework or localised approach. School food **policy characteristics** influence the types of indicators to be used and the feasibility of monitoring. **Governance structures** should consider clear roles, feedback loops, and accountability and shared goals. **Support** could include training, guidance and sufficient resources which may also influence stakeholders' prioritisation and beliefs.

Suite of recommendations

The evidence synthesis has contributed to the development of a set of recommendations and considerations aimed at supporting and enhancing the monitoring of, and compliance with, school food standards. These considerations are outlined below.

1. Collaboration and engagement

- Include multi-sector actors to establish clear goals, outcomes and actions required.
- Mobilise stakeholders through identification and inclusion of representatives across different interest groups, from school leadership, school community, LAs, catering contractors, education, and health sectors.
- Facilitate engagement, network building, cross-learning, trust and political equity.
- Bottom-up engagement of actors at local level including teachers, school cooks, pupils and parents for a synthesised approach.
- Gather perspectives of key actors including their views, beliefs, objections, preferred strategies, goals and motivations prior to the development of a framework to gain a better understanding of contextual factors.
- Establish mutual, agreed goals.
- Advocate for child health and wellbeing to remain at the centre of school food policy.

2. Governance structure

- Utilise a range of expertise.
- Establish a clear structure: Identify and agree which members form monitoring structure e.g., school leadership, school pupils, school cook, LA catering, catering contractor, independent body/ members with nutrition expertise.
- Accountability: Agree and specify clear roles and responsibilities across governance structure e.g., roles for compliance, collating, auditing, support, feedback, action.
- Establish a clear feedback loop.
- Ensure coordinated action via stakeholder engagement.
- Explore option of an independent reviewer with appropriate expertise to support self-assessments and perform in school 'audits' alongside training provision.

Consider local variations of catering structures:

- In-house catering managed by LAs: Agree and specify roles including monitoring of county menus, wholesaler compliance and school implementation.
- Independent catering for schools not managed by LAs: Inclusion of monitoring within external contracts / agree and specify whose role it is to monitor external contractor compliance (including menus/procurement).

Consider Secondary School variations:

- Mealtime opportunities (break and lunch); the practicality of auditing variations.

3. Indicators with measurable outcomes

- Define what is meant by success and establish clear, verifiable, and measurable indicators, including minimum thresholds to outline success and improve chances of policy success (79).
- Consider short term goals as well as long-term indicators to enable pilot evaluation.
- Assess opportunities to adapt and improve the framework prior to National rollout (16).
- Consider SFS characteristics – Food Based Standards simpler for monitoring purposes/ Nutrient Based Standards important for nutritional quality of school food.
- Adopt consistent, national indicators, with consideration of local variations (e.g., consider catering structure to ensure indicators are utilised by appropriate people).
- Consider embedding indicators into SFS update.
- Explore opportunities to embed SFS monitoring within existing school monitoring frameworks.
- Consider qualitative measurable indicators including pupil and parent feedback.

Consider Secondary School variations:

- The feasibility of unified indicators for example across several mealtime opportunities (break and lunch).

4. Support provision

- Provide clear guidance for monitoring framework
- Provide training as part of 'auditing' package for a supportive monitoring system including:
 - The School Food Standards to improve awareness.
 - Understanding the links between school food & child health and wellbeing.
 - How these issues relate to individuals' roles and responsibilities.
 - Monitoring processes to positively influence/ motivate key actors' priorities and beliefs.
- Explore opportunities to embed SFS topics into existing training for key actors, such as training for school staff, catering staff or governors (80).
- Assess resource requirements and their barriers and enablers (including funding, staffing, capacity, facilities/ equipment).

5. Piloting

- Pilot the monitoring framework
- Involve pupils
- Include short term measures for pilot evaluation
- Take evaluative approach before wider rollout to establish what works, the barriers, and ways to adapt (16).

Section 6: Summary

This report has discussed school food and its standards in the context of child health, evaluating both the barriers and enablers to their implementation and compliance. It has also explored factors influencing monitoring frameworks and provided examples of existing monitoring frameworks through case studies. Furthermore, the report has summarised key considerations that may help school food systems achieve SFS more effectively.

By combining academic literature with real world experiences of implementing compliance and monitoring frameworks, this review offers a practical perspective on translating evidence into practice.

Differences in the infrastructure for providing school food across different countries limit the compatibility and generalisability of the evidence base. However, all countries have leadership and governance structures and provide school food alongside other competing resources.

It's important to note that while this report has focused on SFS, rather than the whole school food environment, concentrating on a single approach for an issue with multifaceted drivers rarely leads to long-term policy success (49,79). The impact of the wider school environment was not within the scope of this report, but was a theme raised in the literature. Therefore, monitoring and compliance with SFS should be considered as one element to complement and integrate within wider school food system strategies.

Future research

The evidence synthesis exposed several gaps in research. As such, future research could focus on the following areas:

- Secondary school context
- Monitoring approaches for SFS, including:
 - External auditor versus self-assessments
 - Longer term evaluations including validity and feasibility
- Non-compliance and enforcement strategies
- Mandatory versus voluntary approaches
- Pupil and parent contribution to monitoring

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Appendices

Appendix 1

The Healthy Eating in Schools (Wales) Measure 2009

The table below sets out the provisions of the Healthy Eating in Schools (Wales) Measure 2009 (10);

Section	Provision of the Measure
Section 1	Duty on a local authority and a governing body of a maintained school to take action to promote healthy eating and drinking among registered pupils.
Section 2	Duty on the governing body of a maintained school to include in their annual report information on the action taken to promote healthy eating and drinking by pupils of the school.
Section 3	Duty on the Chief Inspector of Education and Training in Wales (Estyn) to keep the Welsh Ministers informed about actions taken at maintained schools to promote healthy eating and drinking. Note: Estyn will report on the arrangements made to promote healthy eating and drinking. Estyn will not report on the quality of food provision.
Section 4	Gives the Welsh Ministers the power to make regulations about food and drink provided by local authorities or governing bodies to pupils of maintained schools, whether they are on school premises or not, and to other persons on school premises. <i>The Healthy Eating in Schools (Nutritional Standards and Requirements) (Wales) Regulations 2013</i> were made under this power and also came into force on 2 September 2013 (see Chapter 2 of this guidance document).
Section 5	Duty on a local authority to ensure that drinking water is available, free of charge, on the premises of any maintained school.
Section 6	Duty on a local authority, or the governing body of a maintained school which provides school meals or milk, to encourage the take up of school meals (particularly free school meals) or milk, and to take reasonable steps to ensure that every pupil who is entitled to receive free school lunches and free school milk receives them.
Section 7	Duty on a local authority or governing body to take reasonable steps to ensure that a pupil cannot be identified by any person, other than a person authorised under the legislation, as a pupil who receives a free school lunch or free school milk. Duty on a local authority or governing body to take reasonable steps to ensure that teachers/employees/volunteers at the school do not make disclosures, other than to a person authorised under the legislation, about the fact that a pupil receives free school lunches or free school milk.

Appendix 2

Final search strategies

Number	Search term	Results
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#1	Schools/	51088
#2	Enabl* ab,hw,ti	597298
#3	Facilitat* ab,hw,ti	688876
#4	Barrier* ab,hw,ti	407742
#5	Obstacle* ab,hw,ti	63250
#6	Difficult* ab,hw,ti	772817
#7	Food/	38331
#8	Diet, Healthy/	6764
#9	Nutrition Policy/	10670
#10	Standard* ab,hw,ti	1576832
#11	Regulation* ab,hw,ti	1688880
#12	Polic* ab,hw,ti	461693
#13	Guideline* ab,hw,ti	591229
#14	2 or 3	1240742
#15	4 or 5 or 6	1210891
#16	14 or 15	2333098
#17	7 or 8	44776
#18	9 or 10 or 11 or 12 or 13	4094864
#19	1 and 16 and 17 and 18	50

Number	Search term	Results
#1	Schools/	51088
#2	Food/	38331
#3	Diet, Healthy/	6764
#4	Nutrition Policy/	10670
#5	Standard* ab,hw,ti	1576832
#6	Regulation* ab,hw,ti	1688880
#7	Polic* ab,hw,ti	461693
#8	Guideline* ab,hw,ti	591229
#9	Monitor* ab,hw,ti	1170537
#10	Inspect* ab,hw,ti	59618
#11	Adherence ab,hw,ti	191686
#12	Compliance ab,hw,ti	187060
#13	2 or 3	44776
#14	4 or 5 or 6 or 7 or 8	4094864
#15	9 or 10	1225109
#16	11 or 12	346153
#17	15 or 16	1536395
#18	1 and 13 and 14 and 17	57

Database Search Key

MeSH terms

/ = MeSH

*.../ = Focussed

exp.../ = exploded

MeSH

MeSH

Basic search fields

ab= abstract

kw= keyword

ti= title

heading

TWP operators

*= truncation

#= wildcard

adj= proximity

Appendix 3

Choice of search terms

From the terms explored the following search terms were chosen.

Population

- The MeSH term 'Schools' was chosen to detect all papers referring to Primary, Secondary and Comprehensive schools as this was the target population. Free text terms were not needed as 'Schools' encompassed the wide range of variations required.
- The MeSH term 'Education' was removed as this led to the inclusion of education-based food and drink policies which was not the focus of the search.

Intervention

Enablers and Barriers:

- Free text terms 'enabl*' and facilitat* were chosen to detect papers discussing enablers / enable / enabling and facilitators / facilitate and facilitators to SFS.
- Removing the term 'support' reduced the search from 441 to 94 papers and eliminated less relevant topics, such as support in schools.
- Free text term barrier*, obstacle* and difficult* were used to detect papers discussing barrier/s, obstacle/s and difficulty/ies of SFS.

Monitoring and Compliance:

- The free text term 'monitor*' was chosen to detect papers discussing 'monitoring' of school food, ways to 'monitor' school food and variations.
- The free text terms 'inspecti*' and 'assess*' were chosen to detect papers discussing inspecting or inspection/s, assess, assessing or assessment of school food which increased the sensitivity of the search to capture variations in terms for the monitoring of SFS.
- The free text terms 'compliance' and 'adherence' were chosen to capture papers discussing the compliance and adherence of SFS which may include parameters to measure this.

Outcome

As the term for SFS vary from country to country, or area, inclusion of alternative terms such as diet and health, and regulations, policy, programme, criteria, guideline, strategy and their variations, were included.

- MeSH terms 'Food/' and 'Diet, Healthy/' and Nutrition policy, and free text terms standard*, regulation*, programme*, criteri*, polic*,

strateg* and guideline* were chosen to detect the varied terms related to SFS, such as food, dietary or healthy eating standards / guidelines / policies / programmes / criteria.

- 'Drinks', 'beverages', 'meal', 'lunch' and 'nutrition' search terms increased sensitivity and captured too many irrelevant papers including alcohol consumption, packed lunches and nutrition-based interventions in schools not related to SFS. Excluding these terms one by one increased specificity and reduced the search from over 1500 papers to 441 papers.

Excluded PICOS concepts

No relevant comparator was identified for the second search.

Study design concept was excluded due to no restrictions on study design. Inclusion increased the specificity of the search, reducing the number of papers found, potentially omitting useful research. Including mixed methods enabled detection of papers exploring how to improve outcomes as well as impact. Qualitative elements were important to measure human impact, how and why policies succeeded or not, and gaining an understanding of contextual factors.

Appendix 4

Data extraction table

Enablers and Barriers

Full title / Author	Year	Geographical area covered	Published	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
<p>CODE: 0.1</p> <p>Understanding school food systems to support the development and implementation of food based policies and interventions</p> <p>Bryant, M., Burton, W., O’Kane, N. et al</p>	2023	England/UK Primary Schools	Int J Behav Nutr Phys Act	Qualitative	Develop a school food systems map using a systems thinking approach to help identify the key factors influencing primary school children’s dietary choice	<ul style="list-style-type: none"> • Leadership - priority and support of head teachers and senior leaders. • Priorities of stakeholders - all stakeholders should be focused on same goals. • LA buy in, training provision, available funds/ resources. • Targeting factors together might provide an effective way of influencing the highly connected network. • Lack of implementation likely due to associated perceived burden and cost associated with lack of macro-level support and policy enforcement. • Opportunities for future research about school food systems in secondary schools 	<p>Understanding school food systems to support the development and implementation of food based policies and interventions International Journal of Behavioral Nutrition and Physical Activity Full Text (oclc.org)</p>	Y	Y
<p>CODE: 0.2</p> <p>Impact of primary school nutrition policy on the school food environment: a systematic review</p>	2022	Worldwide, Mainly US. Primary Schools	Health Promotion International Journal	Systematic Review	Factors influencing policy implementation. Synthesize the international literature to determine the impact (overall and by	<ul style="list-style-type: none"> • Food service managers reported a lack of financial resources as a barrier. • Resources included the availability of a dietitian/nutritionist, a full-service kitchen and nutrition education provision. • Difficulty accessing foods that comply with policies 	<p>Impact of primary school nutrition policy on the school food environment: a systematic review Health Promotion International Oxford Academic (oclc.org)</p>	Y	Y

Lily Grigsby-Duffy et al					socioeconomic position [SEP]) of primary school nutrition policies on the availability of foods and beverages in schools	<ul style="list-style-type: none"> • Easy access to unhealthy food outlets surrounding schools • Enablers included adequate funding, and clear, well-communicated school food policies. • Financial support from governments could enable policy implementation and compliance. 			
<p>CODE: 0.3</p> <p>Understanding Enablers and Barriers to the Implementation of Nutrition Standards in Publicly Funded Institutions in Victoria</p> <p>Rosewarne et al</p>	2022	Australia Schools	Nutrients Journal	Qualitative (Interviews)	Understand stakeholder perspectives on the implementation of government nutrition standards in publicly funded institutions in the Australian state of Victoria, as well as to determine enablers and barriers to successful implementation	<ul style="list-style-type: none"> • Effective statewide implementation depends on: • Streamlined, well-resourced support system • Improved policy governance and accountability • Action from private food companies • Addressing misconceptions about the guidelines. • Key support elements include: • Auditing • Workshops • Training, tools and resources for implementation. • Generating leadership support and guiding consensus processes. • Strengthening the guidelines and their governance • Accountability measures crucial for successful implementation of any nutrition policy. • Resistance from private food companies, stemming from perceived business risks, 	Nutrients Free Full-Text Understanding Enablers and Barriers to the Implementation of Nutrition Standards in Publicly Funded Institutions in Victoria (mdpi.com)	Y	Y

						<p>inadequate capacity and skills, and difficulties creating (or accessing) healthier foods, hindered implementation.</p> <ul style="list-style-type: none"> • All catering contracts should include a requirement for compliance with the guidelines. • Variety of misconceptions cited by stakeholders likely reflects a broader lack of understanding about the guidelines, their purpose and support services available. Personal beliefs and misconceptions. Contention around purpose of guidelines. Tension between government, organisational and personal responsibility. 			
<p>CODE: 0.4 Implementing Food Environment Policies at Scale: What Helps? What Hinders? A Systematic Review of Barriers and Enablers</p> <p>Nguyen et al</p>	2021	North America & Australia Schools	International Journal of Environmental Research and Public Health	Systematic Review	Examine the evidence for barriers and enablers to successful implementation of healthy food and drink policies, delivered at scale	<ul style="list-style-type: none"> • Barriers: Lack of stakeholder engagement or prioritisation of the policy; resistance to change from school stakeholders or customers; and concern over profitability, revenue and/or commercial viability. • Difficulty understanding the policy and the policy not aligning with stakeholders' views or demands (i.e., parents and students, consumers) in terms of foods and drinks offered were commonly reported as negative perceptions. • Management structures, and lack of information, guidance and/or training support from the policy level. • Resistance to change from students, their families and/or canteen staff in school settings 	<p>IJERPH Free Full-Text Implementing Food Environment Policies at Scale: What Helps? What Hinders? A Systematic Review of Barriers and Enablers (mdpi.com)</p>	Y	Y

						<ul style="list-style-type: none"> Negative perceptions of the policy, and concern over loss of profits, revenue and/or commercial viability as barriers. The enabling factors most commonly raised across overarching themes were: <ul style="list-style-type: none"> Stakeholder engagement, whole-school approach and/or prioritisation. Policy level or higher-level support in the form of information, guidance and/or training; and Leadership, school/policy champion, management commitment and/or organisational capacity Support materials, technical assistance, or training of canteen managers, from the policy level or higher-level support. 			
<p>CODE: 0.5</p> <p>What Do Secondary Schools Need to Create Healthier Canteens? The Development of an Implementation Plan</p> <p>Evenhuis et al</p>	2021	Holland Secondary Schools	Frontiers in Public Health	PH Report. Qualitative	Describes the development of an implementation plan to facilitate implementation of Guidelines for Healthier Canteens in Dutch secondary schools.	<ul style="list-style-type: none"> Tailored implementation plan aimed to support schools to adhere to school canteen policy. Use of behaviour change theory. Factors that can impede or facilitate implementation of healthier canteen guidelines: <ul style="list-style-type: none"> 1 individual determinants (e.g., positive motivation, attitude toward a healthier canteen); 2 commitment of and collaboration with involved stakeholders; 3 school conditions (e.g., support of management, monitoring the canteen); and 4 environmental conditions (e.g., collaboration with nearby food suppliers). 	<p>Frontiers What Do Secondary Schools Need to Create Healthier Canteens? The Development of an Implementation Plan</p> <p>(frontiersin.org)</p>	Y	Y

<p>CODE: 0.6</p> <p>Enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies: a systematic review and meta-synthesis</p> <p>Ronto et al</p>	2020	Worldwide Schools	Public Health Nutrition Journal	Systematic Review	Explore the enablers and barriers to effective implementation of and compliance with school-based food and beverage policies.	<p>Barriers</p> <ul style="list-style-type: none"> • Financial (cost of policy-compliant foods, decreased profit and revenue) • Physical (availability of policy-compliant foods, close geographical proximity to unhealthy food outlets) • Social (poor knowledge, understanding, and negative stakeholders’ attitudes towards policy, lack of policy implementation support and training for school staff, policy not being a priority) • No consequence on non-compliance <p>Enablers</p> <ul style="list-style-type: none"> • Sufficient funding, effective policy communication and management, and positive stakeholders’ attitudes. • Better communication strategies, financial and social support prior to school-based food policy implementation. • Support from school staff members and concerns for children’s health <p>Five key themes emerged regarding the enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies: (i) financial impact, (ii) physical food environments, (iii) characteristics of the policy, (iv) stakeholder engagement and (v) organisational priorities. iii consisted of four subthemes: (i) knowledge and understanding of the policy, (ii) policy communication and clarity, (iii) management of the policy and (iv) accountability.</p>	<p>Enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies: a systematic literature review and meta-synthesis Public Health Nutrition Cambridge Core (oclc.org)</p>	Y	Y
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CODE: 0.7 Understanding System-Level Intervention Points to Support School Food and Nutrition Policy Implementation in Nova Scotia, Canada McIsaac et al	2019	Canada. Schools	Int J Environ Res Public Health	Qualitative Study	Examine the system-level intervention points within a school food system using a complex systems framework	<p>Influences</p> <ul style="list-style-type: none"> Stakeholders at each level of the system had their own perceptions of who was responsible and who should be connecting with whom to make SFS compliance happen. Food service management contracts, and the influence they have on the school food environment and tensions that exists among some stakeholders. The voice of youth was highlighted as something missing from as a mechanism for feedback within the system from all stakeholder groups. Despite being the main reason for creating healthier food environments, other research in NS has affirmed that youth are often not consulted on decisions that will impact their immediate environments and food options in schools. 	Understanding System-Level Intervention Points to Support School Food and Nutrition Policy Implementation in Nova Scotia, Canada - PMC (oclc.org)	Y	Y
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Monitoring compliance

Full title / Author	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
Ronto et al (45)	Duplicate: See enablers and barriers tab							Y	Y

<p>CODE: 0.15 Effectiveness of a multicomponent intervention to enhance implementation of a healthy canteen policy in Australian primary schools: a randomised controlled trial</p> <p>Nathan et al</p>	2016	Australia Primary schools	Int J Behav Nutr Phys Act	Randomised controlled trial.	Examine whether a theoretically designed, multi-strategy intervention was effective in increasing the implementation of a healthy canteen policy in Australian primary schools.	<ul style="list-style-type: none"> • Barriers reported; insufficient school leadership support, a perceived lack of school community support, profitability concerns, limited nutrition knowledge and food classification skills of food service personnel. • Given the limited evidence base regarding strategies to increase school implementation of healthy eating policies, further research identifying such strategies that are effective in overcoming schools' barriers to implementation of nutrition policies that can reach geographically diverse schools in a timely and cost-effective manner is required. • The findings suggest that a multi-strategy intervention involving training, performance monitoring and feedback and support can improve schools' implementation of a healthy school canteen policy. 	Effectiveness of a multicomponent intervention to enhance implementation of a healthy canteen policy in Australian primary schools: a randomised controlled trial - PMC (oclc.org)	Y	Y
<p>CODE: 0.16 Monitoring foods and beverages provided and sold in public sector settings</p> <p>L'Abbe et al</p>	2013	Worldwide. Schools	Obesity Reviews	School food review	Propose a global framework for monitoring foods and beverages provided or sold in public sector settings that can be used to compare and evaluate the nutritional quality of the foods, compared with specific policies/programmes within and across jurisdictions and over time, in a consistent	<ul style="list-style-type: none"> • There is a paucity of data examining the nutritional quality of foods provided and sold in schools, particularly in relation to established nutrition standards. • The timing of monitoring compliance with nutrition standards is important. • Ideally, monitoring should be overseen by independent reviewers rather than relying on self-reported data. • The introduction of nutrient-based standards alone can inadvertently lead to the 	Monitoring foods and beverages provided and sold in public sector settings - L'Abbé - 2013 - Obesity Reviews - Wiley Online	N/A	Y

					fashion.	<p>introduction of replacement foods that are low in nutritional quality.</p> <ul style="list-style-type: none"> • Nutrition standards that incorporate both food and nutrient requirements may be required. • Monitoring is likely to be difficult in areas where food is not centrally provided by schools. 	Library (oclc.org)		
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Google Scholar

Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
<p>CODE: 0.8</p> <p>An accountability framework to promote healthy food environments</p> <p>Kraak et al</p>	2014	Worldwide	Public Health Nutrition	Policy review	<p>Review the available literature on accountability frameworks to construct a framework that is relevant to voluntary partnerships between government and food industry stakeholders.</p>	<ul style="list-style-type: none"> • Two shared governance frameworks supported the concept of ‘mutual accountability’ whereby two or more partners agree to be held responsible for voluntary commitments they make to each other. • However, mutual accountability arrangements lack enforcement structures, thereby requiring formal independent accountability mechanisms to address complex public health problems such as obesity and diet related NCD. • The Institute of Medicine has identified four accountability steps to promote population health that were central to informing a four-step framework <ol style="list-style-type: none"> 1. Establish a neutral and arms-length body with a clear charge to accomplish goals; 2. Ensure that the body has authority and capacity to undertake required activities; 3. Measure accomplishments against a clear charge given to the body; 4. Improve accountability effectiveness by establishing a feedback loop to make system-wide improvements. 	An accountability framework to promote healthy food environments Public Health Nutrition Cambridge Core	N/A	Y

CODE: 0.9 Validity of four measures in assessing school canteen menu compliance with state-based healthy canteen policy Reilly et al	2016	Australia	Health Promotion Journal of Australia	Cross-sectional study	To assess the validity and direct cost of four methods to assess policy compliance: 1) principal and 2) canteen manager self-report via a computer-assisted telephone interview; and 3) comprehensive and 4) quick menu audits by dietitians, compared with observations.	<ul style="list-style-type: none"> The quick menu audit represents a valid and potentially low-cost method of supporting policy implementation at scale. The comprehensive menu audit had lower agreement and sensitivity/specificity than the quick menu audit, despite significant investment to obtain additional information. As the comprehensive menu audit relies on additional reporting by canteen managers of nutritional information of products, this method may be limited by recall and social desirability bias associated with the reporting of such items. Findings from this study indicate that self-reported one-item measures, while feasible and lower cost to administer, do not provide an accurate representation of policy compliance due to social desirability bias associated with self-report. The quick menu audit represents an inexpensive, relative to a gold standard approach, and valid method that can be used to assess compliance on a large scale. The quick menu audit method was adapted from the comprehensive menu audit by a team of dietitians, using the following steps: <ol style="list-style-type: none"> 1 assessment of canteen products to develop a centralised database 2 engagement with key stakeholders 3 piloting of the quick menu audit tool 4 evidence-based application of policy/guidelines similar to the comprehensive menu audit. 	CSIRO PUBLISHING Health Promotion Journal of Australia	AXIS	Y
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Citation Searches

Full title /	Year	Geographical	Published	Category	Aims	Key Findings/ Extracts	URL	QA	Use in
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Author		area covered	by						study
<p>CODE: 0.10</p> <p>School Food and Nutrition in Europe: policies, interventions and their impact</p> <p>Storcksdieck gennant Bonsmann S, Breda J, Caldeira S, Nelson M, Wollgast J.</p>	2014	Europe. Schools	Unicef	Policy report	To provide up to date findings on policy development and related evidence from across Europe and to discuss examples of best practices, knowledge gaps and ways forward	<ul style="list-style-type: none"> Barriers to routinely collecting data: lack of training and awareness, lack of guidance. Different frameworks, lack of harmonisations, standardisations. Non-responsiveness, unclear responsibilities, lack of resources, respondent acting as barrier to quality of information, lack of data, centralisations vs decentralisation of the school system. Enablers: core harmonised indicators, simple/ few indicators, embed school food specific questions into local, national, or international surveys. Consistent monitoring also over long periods. Monitoring and evaluation of school food policies and their implementation and effects are essential. Clear indicators are required. 	School Food and Nutrition in Europe: policies, interventions and their impact UNICEF Global Development Commons	N/A	Y
<p>CODE: 0.11</p> <p>Variations in schools' commitment to health and implementation of health improvement activities: a cross-sectional study of secondary schools in Wales.</p> <p>Moore GF, Littlecott HJ, Fletcher A,</p>	2016	Wales. Secondary Schools	BMC Public Health	Cross-sectional study	Examines variability in delivery of health improvement actions among secondary schools in Wales, and whether variability is linked to organisational commitment to health, socioeconomic status and	<ul style="list-style-type: none"> This large-scale, quantitative analysis supports previous smaller scale, qualitative studies/process evaluations that suggest that senior management team commitment to delivering health improvement Formulating and reviewing progress against written action plans are important for facilitating the delivery of comprehensive interventions. 	<u>Variations in schools' commitment to health and implementation of health improvement activities: a cross-sectional study of secondary schools in Wales - PMC (nih.gov)</u>	AXIS	Y

Hewitt G, Murphy S.					school size.				
CODE: 0.12 Factors influencing the implementation of nutrition policies in schools McIsaac, J.D.; Spencer, R.; Chiasson, K.; Kontak, J.; Kirk, S.F.L.	2019	International	Health Educ. Behav	A scoping review	The purpose of this review is to determine what is known about the influence of broad and local system factors on the implementation of SNPs internationally	<ul style="list-style-type: none"> Enablers include providing high-level direction, resources, infrastructure, and administrative systems as well as coordinating actions related to procurement. Framing nutrition as a core priority Broader and systemic issues of poverty and food insecurity also need to be addressed. Factors exist at multiple levels of the system, intersect with one another and are interdependent, contributing to factors that obstruct and facilitate implementation. Coordination across multiple system levels will help foster the creation of supportive nutrition environments for children. 	Factors Influencing the Implementation of Nutrition Policies in Schools: A Scoping Review - Jessie-Lee D. McIsaac, Rebecca Spencer, Kaleigh Chiasson, Julia Kontak, Sara F. L. Kirk, 2019 (oclc.org)	N/A	Y
CODE: 0.13 Preschool and School Meal Policies: An Overview of What we Know about Regulation, Implementation, and Impact on Diet in the UK Sweden, and Australia Lucas et al	2017	UK, Sweden and Australia	Nutrients Journal	Policy review	Compare the school meal policies in preschool and primary educational settings in three high-income country contexts: UK, Australia, and Sweden.	<ul style="list-style-type: none"> Sweden has a centralised approach. National self-assessment audit tool available. Australian States and Territories all employ separate guidelines. No national guidelines. <p>Reported implications for school meal policies:</p> <ul style="list-style-type: none"> Enforcement of policy is necessary to see improvements Uptake of provided food is crucial to deliver benefits Monitoring is needed to demonstrate success. Overly burdensome data collection can hinder implementation Light touch regulation, using existing education inspection mechanisms, to monitor compliance recommended 	Nutrients Free Full-Text Preschool and School Meal Policies: An Overview of What We Know about Regulation, Implementation, and Impact on Diet in the UK, Sweden, and Australia (mdpi.com)	N/A	Y

						<ul style="list-style-type: none"> • Clear accountability required for compliance with standards, and strong incentives for compliance 			
CODE: 0.14	2013	Sweden	Public Health Nutr	Validation study	To develop a feasible, valid, reliable web-based instrument to objectively evaluate school meal quality in Swedish primary schools. Evaluate the predictive criterion validity of relevant nutrient-specific food-based criteria that can assess the nutritional adequacy of a school's food provision.	<ul style="list-style-type: none"> • An innovative web-based system to comprehensively monitor school meal quality across several domains, with validated questions in the nutritional domain. 	Design, testing and validation of an innovative web-based instrument to evaluate school meal quality - PMC (nih.gov)	N/A	Y
<p>Design, testing and validation of an innovative web-based instrument to evaluate school meal quality.</p> <p>Patterson, E.; Quetel, A.-K.; Lilja, K.; Simma, M.; Olsson, L.; Schäfer Elinder, L.</p>									

Local Authority Case Studies

Local Authority	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	Use in Study
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Lincolnshire	Food education - health and wellbeing	NA	Lincolnshire, England UK	Lincolnshire County Council	Case Study	Offer services to help schools achieve school food standards compliance	<p>Traded service run by Lincolnshire LA team. School food standards certification scheme. All voluntary but LA promotes services. More uptake from Primary schools. Only 3 Secondary.</p> <ul style="list-style-type: none"> • Offer guidance for caterers and other supportive documents. Whole school approach to help schools better comply with standards, with year-long engagement/buy-in -12-month complete package. • Some LA catering, some external contracts. Compliance should be written into catering contracts. Main caterers should be compliant, evidence of compliance should be requested by schools. Certification for private caterers available with guidance checklist. • Assess compliance with standards across whole schools' day. Standard and gold certificates valid for 3 months (termly menu cycles). • Free initial telephone about main areas of concern/priority. Menus, product specification and recipe checks all carried out by LA schools' team, on site assessment. • Also offer support in form of training and educating school governors and senior leaders, midday supervisors about standards, how to comply, support available, why it's important for children to eat well, what the standards are etc. Parental engagement groups. School food buddies - pupil voices with training support and pupil monitoring of school food. • Bespoke support: menu setting, catering team support, pupil voice and parental engagement (workshops). Checking and training as they go. Communication, building relationships and consistency is key. 	Food education - health and wellbeing - Lincolnshire County Council	Yes
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Southwark	School improvement advisory team	NA	Southwark, London UK	Southwark Council	Case Study	Offer services to help schools achieve school food standards compliance	<p>School food transformation programme. Primary only. Policy officer for school food. No LA caterer - lots of contracts. Some commission own food contracts - fragmented system. Strong council commitment with public health grant. Conditions of grant to follow national school food standards.</p> <ul style="list-style-type: none"> • Start with conversations with schools. Skills challenges for senior leadership managing contracts. • 6 modular training offer for school leadership (free). Sets expectation for what schools need to do; school food policy, school food action plan. • Schools monitor what is happening in kitchen. • School survey once a year about school food policy. • Environmental inspection team embedded five questions about school food in their assessments. • Essential contact is made with schools. Policy officer goes into schools to see things on the ground, speak to school and catering staff and pupils, look at the food environment, and support, and go through an audit checklist. • OFSTED have a similar role at ESTYN in terms of assessing school food standards (minimal focus). • Contractors do not report on compliance, oversight is required from school leadership. • If non-compliance is found, support is provided by the policy officer, an improvement plan is provided, and inhouse provision much easier to provide support - more flexible and greater control for the school. Governance for multi-contracts is complex and clear structure required. 	https://education.southwark.gov.uk/school-improvement-advisory-team/southwark-school-meals-system-transformation-programme	Yes
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WLGA	Healthy Eating in Schools Resources	NA	Wales, UK	WLGA	Case Study	Services to help schools implement school food standards and achieve compliance	Wide range of support guidance docs are available including briefing for headteachers, certificate of compliance process, information for parents and carers, evidence guide toolkit and nutritional analysis guide. <ul style="list-style-type: none"> Nutritional analysis training with certificate of compliance provided. Voluntary. Certificate of compliance provided for accurate compliance evidence, and submission checked by WLGA. Supporting docs provided to ESTYN and WNHSS NQA assessors addressing obvious breaches, inconsistent messages and good practices to help them better assess healthy eating in schools within their roles. WLGA state most councils and main caterer comply, however schools that arrange their own catering are particularly encouraged as they are less likely to comply with the standards. 	Healthy Eating in Schools - WLGA	Yes
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International Case Studies

Country	Monitoring Frameworks	Key Findings	Refs	Use in Study
Sweden	Systematic web-based tool Self-assessment. National standardised indicators	Evaluations of the tool show small significant improvements in school meal compliance and repeated use is recommended to improve school meal quality. Feedback provision was reported as a strong predictor of meeting standards.	(28,72–74)	Y
Finland	Self-assessment, voluntary Pupil input Collaboration with stakeholders	Finland places a strong emphasis on the right of children making decisions regarding their own health and welfare. Finnish guidelines state that centralised areas with a unified framework are easier to monitor.	(75)	Y
Australia	State implemented policies External assessors In school visits Vs	It is reported that NSW schools have 94.6% compliance success rate since the strategy was launched in 2017. The most recent report in 2021 shows there was a 79% response rate.	(30,76,77)	Y

	Self-assessment survey based on other areas.			
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UK Government Organisations

Govt Org	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
Welsh Government WG	Health eating in maintained schools: statutory guidance	2014	Wales	WG	Guidance doc	Statutory guidance for local authorities and governing bodies to support implementation of Wales' school food standards	NA	Healthy eating in maintained schools: statutory guidance GOV.WALES	N/A	Y
CODE: 1.7 ESTYN	Healthy and Happy - School Impact on Pupils' Health and Wellbeing	2019	Wales	ESTYN	Qualitative Report	The report evaluates how well primary and secondary schools in Wales support the health and wellbeing of pupils.	<ul style="list-style-type: none"> • Not all schools have enough space for pupils to sit and eat a meal at lunchtimes, including recently built schools. • Secondary schools have shortened the lunch break, and this also contributes to pupils choosing fast food, as well as limiting the social and emotional benefits of a good break. • Catering services run directly or commissioned by an LA provide food and drink to pupils in most schools, • A few secondary schools opt to make their own arrangements for catering services. In around half of these secondary schools, the governing body has not taken enough steps to assure themselves that their caterer complies with the legal nutritional standards. 	Healthy and happy – school impact on pupils' health and wellbeing Estyn (gov.wales)	Y	Y

CODE: 1.8	School Governors Acting as critical friends and the impact of governor training	2023	Wales	ESTYN	Qualitative Report	This report focuses on important aspects of the work of governing bodies in schools across Wales. We gathered information from a range of different school types and sizes, including interviews with headteachers and governors and an online survey for governors. We analysed inspection evidence across the maintained schools' sectors and considered published research. We also interviewed key partners from organisations that work with governing bodies.	<ul style="list-style-type: none"> • The role of governors in holding leaders to account is essentially about monitoring improvement. • This should involve establishing clear expectations, ensuring defined lines of responsibility, putting in place systems for monitoring appropriately and ensuring that evaluation leads to actions that secure improvement. • To help address monitoring one school arranged regular opportunities for governors to visit school to build relationships with staff and improve knowledge. • Governors were invited to attend monitoring activities led by school leaders and were provided with a range of prompts and questions to help them ask staff relevant questions. • This process has continued with governors regularly making focused visits to meet with staff to discuss school improvement priorities. • Following each visit, the governor completes an evaluation form outlining strengths and they discuss targets that the teacher wishes to address before the next visit. • Governors present their findings at governing body meetings. 	Thematic survey report (gov.wales)	Y	Y
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							<ul style="list-style-type: none"> Monitoring and evaluating a governing body's effectiveness is a key element of good governance. Governors should assess their effectiveness and efficiency and ensure ongoing compliance with their statutory and legal duties. 			
Education Northern Ireland	Food in schools resources	2009	Northern Ireland	Education NI	Guidance doc	Nutritional standards for school lunches: A guide for implementation and poster which summarises the nutritional standards for school lunches that all grant-aided schools must adhere to.	NA	Nutritional standards for school lunches: a guide for implementation HSC Public Health Agency (hscni.net) http://www.publichealth.hscni.net/publications/school-food-essential-guide	N/A	Y
Education NI	Food in schools policy	2013	Northern Ireland	Education NI	Guidance doc	This document articulates the Departments' policy in relation to all food in schools.	NA	Healthy Food for Healthy Outcomes English	N/A	Y

								Version.indd (education-ni.gov.uk)		
Department for Education (England)	School food standards : resources for schools	2023	England	UK Govt	Guidance docs / resources	Resources to support school food standards implementation	Practical guide. Checklist for headteachers. Guidance for governors. Guidance for preparing menus, checklists for other food areas such as school lunch, food other than lunch. Creating a culture and ethos of healthy eating. School food standards poster.	School food standards: resources for schools - GOV.UK (www.gov.uk)	N/A	Y
DfE	Standards for school food in England	2023	England	UK Govt	Guidance doc	Guidance on the standards for planning and providing food in schools.	It includes information on planning and provision of school food, the school food plan	Standards for school food in England - GOV.UK (www.gov.uk)	N/A	Y
Education Scotland (see email)	Healthy eating in schools: guidance 2020	2020	Scotland	Education Scotland	Guidance doc	Statutory guidance supporting the implementation of the Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020.	Statutory guidance supporting the implementation of the Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020.	Healthy eating in schools: guidance 2020 - gov.scot (www.gov.scot)	N/A	Y
Education Scotland	Food in schools across Scotland: A self-evaluation resource	2015	Scotland	Education Scotland	Guidance doc	A report to support self-evaluation and self-improvement across Scottish Education. Supports school leadership to monitor and evaluate performance.	<ul style="list-style-type: none"> Scotland have Health and Nutrition Inspectors who work within Education Scotland and join inspection teams across the country as they inspect primary, secondary, and special school provision. School inspections are based on the school's own self-evaluation of its provision and use How good is our 	Food in schools across Scotland: A self-evaluation resource Resources National	N/A	Y

	Resources National						<p>school? - HGIOS 4 Self-evaluation National Improvement Hub (education.gov.scot) with quality indicators set across 6 categories:</p> <ul style="list-style-type: none"> • The Health Promotion and Nutrition Act • Leadership and Management • Environment and Resource • Partnerships • Ethos and Culture • Curriculum, Learning and Teaching. 	Improvement Hub (education.gov.scot)		
Education Scotland	Food in Schools across Scotland. Educating Scotland, supporting improvement - a self-evaluation framework	2023	Scotland	Education Scotland	Digital Framework	<p>A digital framework designed to support self-evaluation and improvement in food in schools has been developed to help schools improve food in schools and compliance with national standards.</p>	<ul style="list-style-type: none"> • To support a self-evaluative approach to food in school the Health and Nutrition Inspectors created a framework - Food in schools across Scotland: A self-evaluation resource Self-evaluation National Improvement Hub (education.gov.scot). • Quality indicators set across 6 categories: The Health Promotion and Nutrition Act, Leadership and Management, Environment and Resources, Partnerships, Ethos and Culture, Curriculum, Learning and Teaching. • There are several resources within the framework that are used by schools and catering services to evidence implementation of the Nutritional Regulations. Including a template for recording information to demonstrate meeting requirements. 	Food in Schools across Scotland – Education Scotland – Supporting improvement – a self-evaluation framework (glowscotland.org.uk)	N/A	Y

							<ul style="list-style-type: none"> • The HPN templates are proving successful and although these are not a requirement for inspection, we have seen them used on every inspection since August 2022. • At the moment these are mostly being completed by school catering services. • The challenge is to engage school staff to ensure the whole school is reflected in evidence of compliance with the Nutritional Regulations. 			
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UK Nations Public Health Bodies

PH body	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
PHW	Rapid Review	2023	Wales	PHW	Report	Rapid review investigating updates required in the SFS by assessment against current scientific evidence base	A number of updates required to align with SACN guidance. Consideration required of feasibility of current standards including food vs nutrients-based standards.	phw.nhs.wales/publications/publications1/rapid-review-of-nutritional-and-food-based-standards-in-wales-a-technical-report/	N/A	Y

PHE	What works well recipe hub	2015	England UK	The School Food Plan	Guidance	Public Health England has supported the School Food Plan to develop the 'What Works Well' Recipe Hub. The Hub brings together over 100 recipes for pupils' favourite meals and snacks. These tried and tested recipes have been created by school cooks and caterers and cover food served across the whole day: breakfast clubs, mid-morning break, lunch, and after-school clubs.	NA	'What Works Well' Recipe Hub (schoolfoodplan.com)	N/A	Y
CODE : 1.1 Public Health Agency NI	Food in school evaluation	2016	Northern Ireland	PHA NI	Qualitative Report	Report into adherence and attitudes to nutritional standards and healthy eating policies in schools	<ul style="list-style-type: none"> • Different groups of stakeholders cited a range of barriers, including parental influences; external sources of food; the availability of non-compliant food in school; training issues; monitoring; and perceived attitudes towards the standards; a lack of parental support. • Principals and catering staff felt that parents undermined healthy eating efforts in schools. • Principals and caterers specifically mentioned the negative impact of children bringing in healthier types of foods from external sources. 	Bulletin 3 Adherence and attitudes to nutritional standards and healthy eating policies in schools.pdf (hscni.net)	Yes	Y

							<ul style="list-style-type: none"> • School catering staff described the training they had received in order to implement the standards. • They cited a two-fold benefit associated with training – knowledge of children’s’ nutrition and food preparation, and the training and on-going support resulted in staff adopting more positive attitudes towards healthy eating issues in schools, and encouraged ‘buy in’ to the programme. • Lack of training dissemination to other groups who worked within the school was highlighted as a barrier, hindering the development of more positive attitudes towards healthy eating. • A key theme was a lack of effective monitoring, with no external body responsible for ensuring schools adhered to the nutritional standards. • Principals were more likely to have implemented the standards if they thought parents were supportive of the policy. • Principals who felt their Board of Governors backed the standards were more than three times more likely to have implemented these in their schools than those who felt 			
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							they did not have school governors' support.			
	Establishing a whole school food policy	2009	Northern Ireland	PHA NI	Guidance	This guide has been written to schools develop, write and implement a whole school food policy. It is designed to be easy to follow and based firmly in the context of real school life	Step by step support for implementing school food policy. Includes audit check list.	Establishing a whole school food policy.pdf (hscni.net)	N/A	Y
FSA England, Wales, and NI	School Food Standards Compliance pilot underway in 18 local authorities across England				Press release	The Food Standards Agency (FSA) and Department for Education (DfE) have launched a School Food Standards Compliance pilot across 18 participating local authorities in England.	<ul style="list-style-type: none"> The pilot will involve adding nutrition-focused questions and observations to the routine inspections carried out by LA food safety officers, to promote compliance with SFS. This will give insight into what's happening in schools and identify whether SFS checks can drive positive change. LAs will work with schools to instigate supportive interventions to aid compliance with the standards. The pilot will run in line with the full academic year. 	School Food Standards compliance pilot underway in 18 local authorities across England Food Standards Agency	N/A	N

UK Educational Institutions

Institution	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
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University of Birmingham	EPIC	NA	West Midlands, England	University of Birmingham	Research	<p>The aim of the EPIC study is to share findings with different groups of people connected to schools.</p> <p>This will include school students, parents, and school staff. To think about their own experiences of school food. Find out what they think are the main problems with school food policy and possible solutions. The aim is then to engage with policy makers in government to identify ways to improve national school food policy.</p>	Not available yet - Ongoing	EPIC study - University of Birmingham	No	N
University of Birmingham	FUEL	NA	West Midlands, England	University of Birmingham	Research	<p>The FUEL study was an evaluation of the national School Food Standards and related national policy in secondary schools in the West Midlands area, funded by the National Institute for Health Research.</p>	Not available yet - Ongoing	Protocol: The Food provision, culture and Environment in secondary schools (FUEL) study: protocol of a mixed methods evaluation of national School Food Standards implementation in secondary schools and their impact on pupils' dietary intake and dental health - PMC (nih.gov)	No	N

CODE: 1.2 Teeside University Rose et al	The impact of, and views on, school food intervention and policy in young people aged 11-18 years in Europe: A mixed methods systematic review	2021	England	Obesity Reviews	Systematic Review	Explore the effectiveness of school nutrition interventions and the perceptions of young people experiencing a nutrition-focused intervention or change in school food policy.	<ul style="list-style-type: none"> Lived experience of healthy eating programmes including SFS. Included pupil autonomy, the need to be part of the decision, to have power and control over choices relevant to them. 	The impact of, and views on, school food intervention and policy in young people aged 11-18 years in Europe: A mixed methods systematic review (oclc.org)	Y	Y
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UK Nations Voluntary Organisations

Voluntary Org	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in Study
Chefs in Schools	Chefs in Schools	2022	England	Chefs in Schools	Guidance	The charity works hands-on in schools in London, Bournemouth and Sheffield – reaching tens of thousands of pupils each day. Target areas with high levels of socio-economic deprivation, aiming to reduce food poverty, child obesity and malnutrition. Training is designed for chefs, schools and caterers who are passionate about transforming school food, and who want to gain the knowledge and skills needed to create a positive food	<ul style="list-style-type: none"> Nutrition and School Food Standards module: covers SFS, learning about the requirements for a healthy, balanced meal and how to ensure menus meet standards. Also the role of nutrition in children’s health and well-being, and how to create menus. 	#GiveASausage - Chefs in Schools	N/A	N

						culture in their schools.				
	School Food Standards guidance	2022	England	Chefs in Schools	Guidance	Useful resources and practical tools for schools produced by the School Food Plan team on behalf of the Department for Education.	Tools and resources	Resources - Chefs in Schools	N/A	N
GENIUS School Food Network	Generating Excellent Nutrition in UK Schools	2023	UK	GENIUS School Food Network	Webpage intro	Funded by the UK Prevention Research Partnership to explore opportunities for intervention and innovation in the UK School Food System, the GENIUS network brings together key stakeholders with the aim of working towards a more health promoting food and nutrition system in UK schools. Membership includes academic researchers currently active in school food research across a range of disciplines, alongside major non-academic stakeholders in school food, as well as local government, policy development and public health bodies.	<ul style="list-style-type: none"> Includes research, collaboration, school food surveys about UK school food system and specific ones for catering and other stakeholders. Harness expertise and build community for health promoting school food systems 	About GENIUS The Genius Network (geniusschoolfoodnetwork.com)	N/A	N

CODE: 1.3	Meeting school food standards - students food choice and free school meals	2013	England	Public Health Nutrition Journal	Cross-sectional analysis	Examine students' school food choice in relation to school food standards and entitlement to free school meals (FSM).	<ul style="list-style-type: none"> Stringent standards for school food provision are being undermined by students' choice. Standards and legislation for school food should be reassessed to take into account students' food choice behaviour. Compliance with the standards within the secondary sector is inconsistent and should also be addressed. Compliance with the nutrient-based standards is currently reported to be 76 % for LA catering and 64 % for non-LA catering provision; for the food-based standards, it is 90 % and 80 %, respectively. 	Meeting school food standards – students' food choice and free school meals Public Health Nutrition Cambridge Core (oclc.org)	AXIS	Y
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UK Youth Groups

Youth Group	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings	URL	QA	Use in study
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Bite Back 2030	About Bite Back 2030	2022	England (Secondary pupils)	BiteBack 2030	Webpage Intro	Movement of young people across the UK who are campaigning for more opportunities to be healthy.	NA	Home - Bite Back (biteback2030.com)	N/A	Y
CODE: 1.4 BiteBack 2030	It's Time to Spill the Beans	2021	England (Secondary pupils)	BiteBack 2030	Qualitative Report	Students Voices on School food standards	<ul style="list-style-type: none"> • Conversations suggest SFS are routinely not being upheld. • Participants said healthier options are typically not available, pushed into the background or if they are available they typically cost more. 	Spill the Beans school report Subbed-Digital FINAL.pdf (contentfiles.net)	Y	Y

International Government Organisations

Govt Org	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in study
CODE: 1.5 WHO	Implementing school food and nutrition policies: a review of contextual factors	2021	Worldwide	WHO	Policy Review	A review of contextual factors influencing implementation of school food and nutrition policies.	<ul style="list-style-type: none"> • Poor monitoring and enforcement were reported as a reason for low compliance. Even in schools with policies in place, weak enforcement allowed competitive foods to be largely unregulated. • Having clear guidance on roles and responsibilities of implementing SFS was also an important consideration for feasibility. • Lack of clarity around the criteria to use for monitoring 	Implementing school food and nutrition policies: a review of contextual factors (who.int)	N/A	Y

						<ul style="list-style-type: none"> • Absence of training, monitoring and dissemination of materials to inform the school community of the regulation acted as a barrier to effective implementation of the regulation. • Unclear boundaries about who has responsibility for ensuring that students eat a healthy diet “responsibility conflict”. • Staffing concerns and competing priorities. • Stakeholder engagement • Role of parents / role of students. • Interventions that include elements such as leadership, consensus processes, education and training, resources, audit and feedback, and ongoing support improved implementation of school nutrition policies. <p>Case study showed that most drivers have come from departs of education rather than departs of health or welfare:</p> <ul style="list-style-type: none"> • There has been a notable lack of integration of assessment in relation to health, educational and social outcomes. • Policy evaluations might have yielded more insights and been 			
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							more cost-effective if they had been better coordinated across government departments and between countries, to capture more fully the impact of introducing school food standards on children's health, education and well-being			
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International Voluntary Organisations

Voluntary Org	Full title	Year	Geographical area covered	Published by	Category	Aims	Key Findings/ Extracts	URL	QA	Use in study
World Food Programme	1.6 Ready to learn and thrive: school health and nutrition around the world	2023	Worldwide	UNESDO C	Report	Brings together multiple data sources to provide a global overview of school health and nutrition policies and programmes	<ul style="list-style-type: none"> • Successful programmes depend on strong collaboration between education and health sectors and engagement of other partners. • The involvement of all stakeholders in the school community is required • Collaboration based on clear roles, responsibilities and structures tends to be more effective. • WHO review found monitoring and evaluation is addressed in national policies in around half of countries but only one in five included indicators. • Monitoring has received limited attention and support, including in research: there is little published on how 	<u>Ready to learn and thrive: School health and nutrition around the world UNESCO</u>	N/A	Y

countries operationally monitor.

- The multi-sectoral nature of SHN interventions means that monitoring requires careful planning and coordination between sectors and stakeholders at global and country levels.

The paper proposes key principles for the design of robust and effective monitoring systems.

Principles include:

- selection of indicators to adequately measure the intended final impact
- identification of appropriate data sources;
- simplicity and feasibility of data collection;
- integration of monitoring data into other sources of information;
- clarity at all stages of the data collection, reporting, analysis, referral and feedback process.

Appendix 5

Strengths and Limitations of Phase 1 Search

Strengths

A mix of study designs were considered for inclusion. While systematic reviews (SR's) represent the top of the hierarchy of evidence, followed by randomised controlled trials RCTs, they may not always be the most suitable choice for every research question (69). Therefore, it's important to consider the research question and study objectives when conducting literature searches. In this case, generalising results from systematic reviews that include multiple countries with different school food systems might be challenging due to the heterogeneity of studies. Moreover, there were limited SRs available. Therefore, well designed observational studies might offer a more representative perspective of the population at risk (school pupils) (81). Consequently, cross-sectional, and qualitative studies were also considered for inclusion.

Qualitative studies make a valuable contribution to this report. They have provided a unique insight into views, feelings and experiences of those involved or affected by school food policy, as well as their behaviours, beliefs and their effect on decision making (66). Qualitative studies can support our understanding of 'why' interventions succeed or fail, leading to consideration of behaviour change theory which is a key element of monitoring compliance of SFS (67,68). Moreover, a number of these studies were UK or Wales based which provided better generalisability for the target population despite their small scale.

All shortlisted papers were assessed through the appropriate critical appraisal skills programme (CASP) checklists (82) for systematic reviews (SRs) (83), RCTs (84) and qualitative studies (85) or AXIS (86,87) for cross-sectional studies, for suitability of inclusion (see Appendix 5). CASP was chosen because it has a validated Cochrane endorsed set of checklists most used to assess the validity of research evidence. AXIS was chosen because in the absence of a CASP checklist for cross-sectional studies AXIS provides a systematic tool for assessing the studies validity (86,87). See Appendix 5 quality assurance summary table (QA).

Limitations

Due to limitations in scope, this report could not review extensive volumes of papers. As a result, some related papers might have been missed, even

though clearly relevant ones were shortlisted. Additionally, it was challenging to specifically capture papers focusing on monitoring SFS specifically as part of the search criteria. Typically, monitoring of SFS was not the main objective or mentioned in the abstracts of journal papers. Instead, it was often integrated as part of discussions or solutions.

Only English language-only papers were included, which might have led to some relevant papers in other languages being overlooked. Additionally, limiting the search to 2013 onwards may have excluded relevant research. However, due to the scope and time limitations of the literature search, focusing on the most recent papers from the last decade, post-2013 when Wales' SFS were last updated was a practical and considered approach.

Appendix 6

Organisations identified for grey literature search

UK Case studies	UK Govt Orgs	UK Nations Public Health bodies	UK Educational Institutions	UK Nations Voluntary / Charity organisations	UK Youth groups	International government	International Voluntary	Social media
Lincolnshire	WG	PHW	LSHTM: Research Consortium for School Health & Nutrition	National Endowment for Science, Technology & Arts (NESTA)	UK Youth Parliament	World Health Organization (WHO)	School Meals Coalition (SMC)	Twitter
Blackpool	ESTYN	NHS	Cardiff University	Food Foundation	Bite Back 2030	Food & Agriculture Organization of the United Nations (FAO)	World Food Programme (WFP)	Blogs
Southwark	Education Northern Ireland (NI)	Office for Health Improvement & Disparities (OHID)	City, University of London	Chefs in Schools				Linked In

WLGA	Dept for Education England (DfE)	Public Health Agency Northern Ireland (PHA NI)	University of Birmingham (EPIC & FUEL studies)	Generating Excellent Nutrition In UK Schools (GENIUS) School Food Network
Local Authority Catering Association (LACA)	Dept of Health & Social Care	Public Health Scotland	Teeside University London	Association for public Health Excellence
	UK Govt	FSA England, Wales, NI		
	Dept for levelling up, housing & communities Education Scotland	FSA Scotland		

Appendix 7

Strengths and Limitations of Phase 2 Search

Strengths

Information in grey literature differs from research databases, and the inclusion of grey literature is helpful for public policy (27,88). Furthermore, when there is limited academic evidence context is integral (89). The grey literature search provided a more comprehensive search (90), detecting public health reviews which enabled wider learning regarding existing policy development and best practice examples. It also reduced the chance of publication bias (27,62).

All grey literature shortlisted were from reputable organisations with a remit in school food. These were added to the data extraction table (Appendix 4) and run through QA checklists where appropriate (Appendix 8). The validity of the shortlisted public health reports were also considered and recorded (Appendix 8).

Limitations

Although a thorough search for stakeholders was undertaken it is possible not all relevant actors were identified, particularly internationally which may be a weakness of the phase two searches. Unlike research papers, owing to the lack of a validated QA checklist for public health reports a checklist was not utilised.

Appendix 8

Quality Assurance for all papers included in the report

Author	Study Design	Relevance	Appraisal Summary	Checklist
Grigbsy-Duffy et al, 2022 (48)	SR	Y	Clear focused question & search strategy. PRISMA compliant. Restricted to Primary school settings. Risk of bias tool used. Heterogeneity of policies and type of outcome between studies. Thematic analysis with inclusion of risk of bias. Mostly low-quality studies. Limited generalisability due to differences in school food systems between countries (population, context, intervention). Mainly USA – limited transferability.	CASP (83)
Nguyen et al, 2021 (44)	SR	Y	PRISMA compliant. Clear search strategy. CASP used. Mostly high-quality studies. Primary and secondary school settings. Limited generalisability due to differences in school food systems between countries population, context, intervention). Mainly USA & Australia – limited transferability for Wales.	CASP (83)
Ronto et al, 2019 (45)	SR	Y	Clear search strategy and appraisal checklist used. Mostly good quality studies. TDF used to synthesis results. Meta-synthesis to address transferability limitation. Limited generalisability due to differences in school food systems population, context, intervention) between countries. Limited transferability.	CASP (83)
Rose et al, 2020 (50)	SR	Y	Clear search strategy. Restricted to Secondary school settings. PRISMA. Validity and risk of bias appraisal tool used. Most studies good quality. Heterogeneity between studies. Limited generalisability due to differences in school food systems (population, context, intervention) between countries. Limited transferability for Wales.	CASP (83)
Bryant et al,	Qualitative	Y	Clear aims and strategy. Small study sample. Systems mapping (systematic	CASP

2023 (42)				approach) to analysis. Clear thematic analysis. Researchers did not examine own role and potential bias. Respondent validation / bias not discussed. UK (England) – good generalisability and transferability for Wales.	(85)
Rosewarne et al, 2022 (43)	Qualitative	Y		Clear aims and strategy. Small study sample. Systems framework used. Recruitment bias addressed, may have issues with self-selection and non-responder bias. Systematic thematic approach to analysis. Researchers did not examine own role and potential bias, or desirability bias of respondent interviews. Limited transferability due to differences in school food systems (population, context, intervention) between Australia and Wales.	CASP (85)
Evenhuis et al, 2021 (35)	Qualitative	Y		Clear aims and strategy, guided by theory of change models. Small study sample. Possible recruitment bias. Researchers did not examine own role and potential bias. Respondent desirability bias not discussed. Systematic thematic approach to analysis. Limited transferability due to differences in school food systems (population, context, intervention) between Netherlands and Wales.	CASP (85)
McIsaac et al, 2019 (38)	Qualitative	Y		Clear aims and strategy, guided by Applied Intervention Level Framework. Possible recruitment bias. Systematic thematic approach to analysis. Desirability bias not discussed. Researchers examined own role and potential bias. Limited transferability due to differences in school food systems (population, context, intervention) between Canada and Wales.	CASP (85)
Gilmore G, 2016 (47)	Qualitative (Report)	Y		Government report: Sample structure and research methodology unavailable (report of results provided but could not access study details). Bias not discussed – potential responder bias. Narrative analysis with thematic approach taken. Northern Ireland setting- good generalisability and transferability for Wales.	N/A
Estyn, 2023	Qualitative	Y		Government report: Sample structure and research methodology unavailable	N/A

(39)	(Report)			(report of results provided but could not access study details). Bias not discussed – potential responder bias. Narrative analysis with thematic approach taken, and case studies. Set in Wales- good generalisability and transferability.	
Estyn, 2019 (18)	Qualitative Report	Y		Government report: Sample structure and research methodology unavailable (report of results provided but could not access study details). Bias not discussed – potential selection and responder bias and researchers own role and potential bias. Some retrospective data sourced. Narrative analysis with thematic approach taken, and case studies included across Welsh locations. Good generalisability and transferability.	N/A
BiteBack 2030 (53)	Qualitative Report	Y		Clear aims and objectives. Brief outline of methodology. Limited study methodology details. Small sample. Narrative analysis with thematic approach taken. Potential sample selection and responder bias and no discussion about researchers own role and potential bias. UK (England) – good generalisability and transferability for Wales.	CASP (85)
Nathan, 2016 (46)	RCT	Y		No PICO mentioned. Blinded outcome assessment. High study retention. Sample size power. TDF utilised to structure methodology and analysis. Descriptive statistical analysis (RR with 95% CI). Limited generalisability for study population. Limited transferability due to differences in school food systems (population, context, intervention) between Australia and Wales.	CASP (84)
Reilly, 2016 (58)	Cross-Sectional	Y		Clear aims and objectives. Small study sample. Sub sample of previous RCT, possible selection bias and difference between participants and non-responders/ those not previously involved with RCT. Validity and cost-effectiveness analysis. Percentage, Kappa, sensitivity and specificity of each method calculated. Self-report and independent data collection to reduce (and assess) responder bias. Limited transferability due to differences in	AXIS (86)

			school food systems (population, context, intervention) between Australia and Wales.	
Moore, 2016 (36)	Cross- Sectional	Y	Clear aims and outcome measures. Stratified, random sampling. Correlation coefficients used to test associations between variables. Large sample size representative of schools across Wales. Possible self-reporting bias. Good generalisability and transferability.	AXIS (86)
Ensaff, 2013 (41)	Cross- Sectional	Y	Possible selection bias (both schools held National Healthy Schools Status, using LA catering). Small study sample (2 schools). Could have improved selection with samples across different LA sales database (cashless payment system) accessed to measure student food transactions over more than 7 months (large dataset). Validity of dataset measures unclear. SPSS data analysis including multiple linear regression to analyse independent variables. UK (England) – good generalisability and transferability for Wales.	AXIS (86)
Patterson, 2013 (61)	Validation study	Y	Clear aims and objectives. Large sample size. Representative sample. Possible non-responder bias. Low response rate limiting validity, and small sample limiting reliability of results. Transferability limited for Wales (Sweden versus Wales population, context, intervention)	N/A
L'Abbe, 2013 (57)	Policy Review	Y	Clear aims and objectives. Clear outline of context. Systematic approach to evidence synthesis. Stepwise framework for narrative analysis. Heterogeneity across studies included in evidence synthesis. May limit generalisability of recommendations and transferability for Wales (population, context, intervention).	N/A
Kraak, 2014 (60)	Policy Review	Y	Clear aims and research questions. PICOS not utilised but set of search terms established. Systematic search of databases and grey literature. QA of frameworks. Clear, systematic narrative analysis. Heterogeneity across studies included in evidence synthesis. May limit generalisability of	N/A

recommendations and transferability for Wales (population, context, intervention).

Lucas, 2017 (40)	Policy Review	Y	Clear context and aims. Clear systematic search utilising grey literature. Heterogeneity across studies included in evidence synthesis. Narrative analysis. Heterogeneity may limit generalisability of recommendations and transferability for Wales. However, UK included in population sample.	N/A
Storcksdieck, 2014 (54)	Policy Report	Y	Clear context and aims. Systematic methodology and narrative analysis. Generalisable and transferable discussion points.	N/A
McIsaac, 2019 (37)	Scoping Review	Y	Clear context and aims. Clear systematic literature search and methodology. QA process (although limited). Thematic approach with narrative analysis. Heterogeneity across studies included may limit generalisability of recommendations and transferability for Wales. However, 3 UK studies included. Strengths and limitations of study considered.	N/A
WHO, (34)	Policy Review	Y	Clear context and aims. Comprehensive systematic literature search and methodology. Large literature review. Thematic approach with narrative analysis. Heterogeneity across studies included may limit generalisability of recommendations and transferability for Wales. However large number of UK studies included.	N/A
WFP, (5)	Public Health Report	Y	Clear context and aims. Narrative approach with clear indicators and data sources analysis. Heterogeneity across countries may limit generalisability of recommendations and transferability for Wales (population, context, intervention).	N/A

Appendix 9

Thematic coding table

Enablers and barriers to implementation and compliance key findings

Leadership	Support	Resources	The school food standards policy	Policy enforcement	Beliefs	Priorities	Wider environment	Gaps
0.1 / 0.3 / 0.4 / 0.5 / 0.6 / 0.11 / 0.12 / 0.15 / 1.5 Priority and support of headteachers and senior leaders.	0.1 / 0.4 / 0.6 / 0.13 Lack of macro and micro-level support	0.1 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 Available funds/ cost 0.3 / 0.4 / 0.6 / 0.15 Profitability	0.2 / 0.3 / 0.5 Difficulty or availability of accessing foods that comply with policy	0.1 / 0.6 / 0.7 / 0.13 / 1.5 Lack of enforcement	0.3 Perceived burden & risk	0.1 / 0.4 / 0.5 / 0.6 / 0.7 / 0.12 / 0.15 / 1.5 / 1.6 Stakeholders priorities / engagement 0.1 LA buy in	0.2 / 0.5 / 1.1 Easy access to unhealthy foods outlets surrounding schools	0.1 Understanding of secondary school food system
0.4 / 0.6 Poor organisation / communication	0.1 / 0.4 / 0.5 / 0.6 / 0.15 / 1.1 / 1.5 Training provision.	0.2 / 0.4 / 0.5 Full-service kitchen / facilities	0.3 / 0.4 / 0.6 policy misconceptions / understanding	0.3 / 0.6 / 0.7 / 0.10 / 0.11 / 0.13 / 1.5 / 1.8 Policy governance Accountability measures, clear roles, consistency nationally	0.3 / 0.6 Purpose of guidelines (& contention around)	0.1 / 0.4 / 0.5 / 0.7 / 0.12 Common goal collective / coordinated actions	1.1 Food outside of the standards remit	0.7 Voices of youth often not consulted
0.4 / 0.6 / 0.12 / 1.5 / 1.6 / 1.8 Management structures, clear roles and responsibility	0.3 / 0.4 / 0.12 / 0.15 Streamlined well-resourced support system Good infrastructure	0.3 / 0.4 / 0.6 Capacity (schools and food companies)	0.2 / 0.6 Clear well communicated policy	0.1 / 0.2 / 0.3 / 0.5 / 0.6 / 0.7 / 0.10 / 0.11 / 0.13 / 0.15 / 1.1 / 1.5 Monitoring compliance	0.5 / 0.6 Attitude towards policy (inc. policies unclear & 'open to interpretation')	0.3 / 0.7 / 1.5 Tension between govt, organisational and personal responsibility 'Responsibility conflict'	1.7 Timings of the school day including length of break and lunchtimes	

0.4 presence of taskforce committee	0.3 / 0.4 / 0.5 / 0.12 Resources / guidance Information/	0.3 Insufficient staffing	0.3 Complex guidelines	0.3 Guideline compliance in food company contracts	0.5 Motivation
0.6 Top-down approach	0.3 / 0.5 / 0.6 / 0.12 / 1.6 Collaborative approach 0.3 relationships with stakeholders e.g., suppliers	0.3 / 0.15 skills or lack of	0.3 / 0.6 Strong guidelines	0.15 / 1.5 Feedback	0.6 Positive attitudes 1.1 perceived attitudes of others
0.3 0.4 School committee involvement/ policy champions	0.3 / 0.4 / 0.6 / 0.7 Resistance and tensions from foods companies		0.6 Lack of implementation framework	0.13 complex monitoring data collection	0.3 / 0.6 / 0.13 External motivation to implement and achieve guidelines
0.12 High level direction	0.2 Availability of nutrition specialist		1.3 Food vs Nutrient based standards	0.13 light touch, using existing inspection mechanisms with low effort needed	1.1 Parental, governor and pupil beliefs and motivations
0.12 Co-ordinated action (multiple system level)	1.1 / 1.5 Parental support 1.1 Governors support Pupil support 1.2 / 1.3 / 1.5		1.3 LA vs non-LA catering providers	0.13 incentives for compliance e.g., budget / performance indicators	
			1.5 / 1.6 Collaborative approach 7 better co-	1.1 Lack of external body	

ordination
between
education and
health govt
departments/
sectors

Enablers and barriers to monitoring compliance: key findings

Policy Characteristics	Governance	Support	Catering System
0.10 / 0.6 Barrier: Inconsistent Frameworks	0.10 Barrier: Non-responsiveness	0.10 / 0.6 Barrier: Lack of training	0.10 / 0.6 Barrier: Stakeholder preventing information sharing
0.10 / 0.6/ 1.5 Barrier: Lack of consistent standardisations/ indicators	0.10 / 0.6 / 1.8 Barrier: Unclear responsibilities	0.10/ 0.6 Barrier: Lack of awareness	0.10 Centralisation vs decentralisation of school system 0.16 e.g., Barrier when food is not centrally provided by schools. Caterers would require additional monitoring
0.10 / 0.8 / 1.6 Enabler: Consistent clear indicators	0.8 Barrier: Mutual accountability / shared governance	0.10 / 0.6 Barrier: Lack of guidance	
0.10 / 0.9 / 1.6 Enabler: Simple/ few indicators 0.9 quick menu audit approach	0.9 Barrier: Self reporting measures	0.10 / 0.6 Barrier: Lack of resources	
0.14 / 1.6 Enabler: unified monitoring framework	0.16 / 0.8 Enabler: independent reviewer to have authority and capacity	0.10 Barrier: Lack of data and 0.13 provisions to monitor children's intake	
0.9 Enabler: audit tool based on school food			

standards core principles

0.16 Food based standards and ease of monitoring vs nutrient based

0.9 / 1.6 Enabler: Engagement with stakeholders in development of framework
Inc. canteen managers and suppliers

1.6 Enabler: Unify multiple systems

1.6 Enabler: Utilise Existing data sources

0.10 / 1.6 Enabler: embed school food specific questions into local, national, or international surveys

0.8 / 1.6 / 1.8 Enabler: Clear feedback loop (clear governance structure)

0.9 Enabler: Pilot the approach

1.8 Enabler: Clear expectations, roles, and responsibilities

0.10 Enabler: Consistent monitoring

0.15 Enabler: use of digital technology telephone and text messaging support

0.9 Enabler: Input by nutrition experts

1.8 Enabler: In-person support / in school visits



GIG
CYMRU
NHS
WALES

Iechyd Cyhoeddus
Cymru
Public Health
Wales

Gweithio gyda'n gilydd
i greu Cymru iachach

Working together
for a healthier Wales