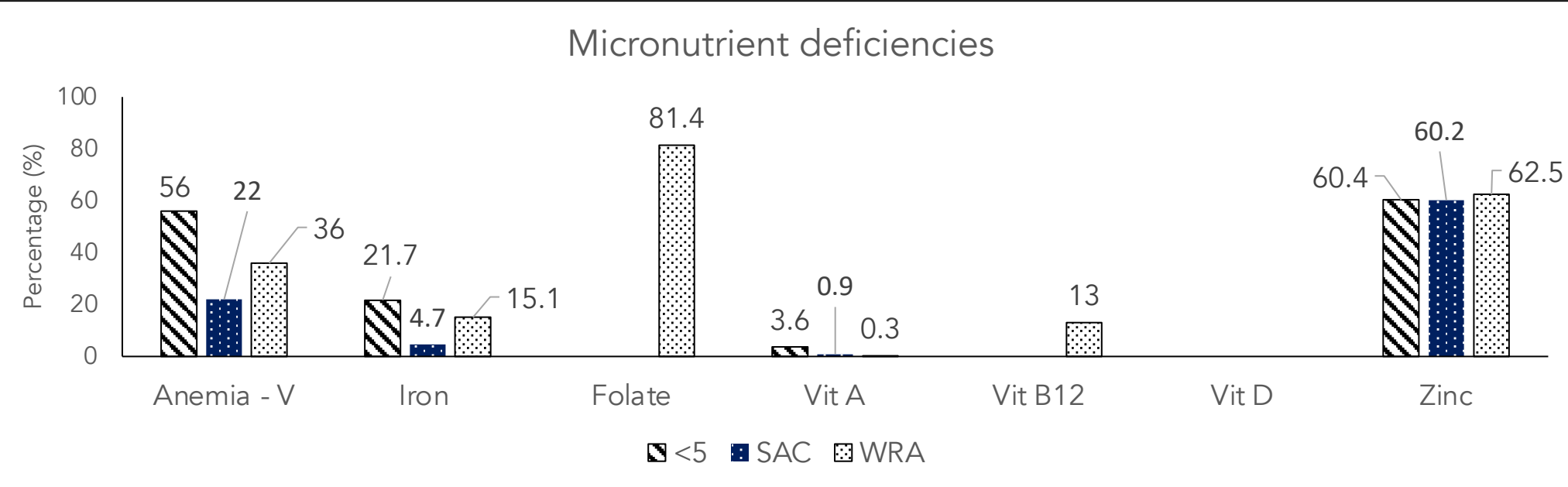


Malawi Large-Scale Food Fortification (LSFF) Data Landscape

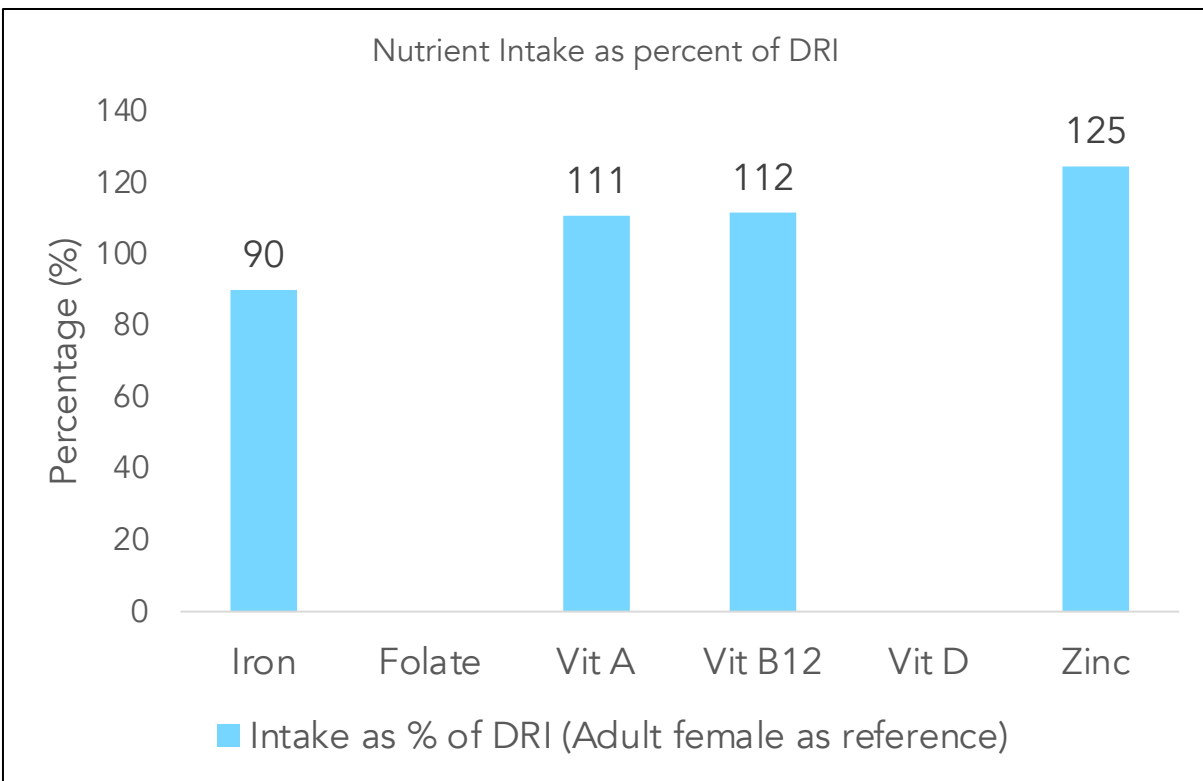
Jason Chigamba¹, Lusungu Mwaungulu², Tifness Banda¹
¹Ministry of Health, ²Ministry of Trade and Industry



Data on Selection of Nutrients



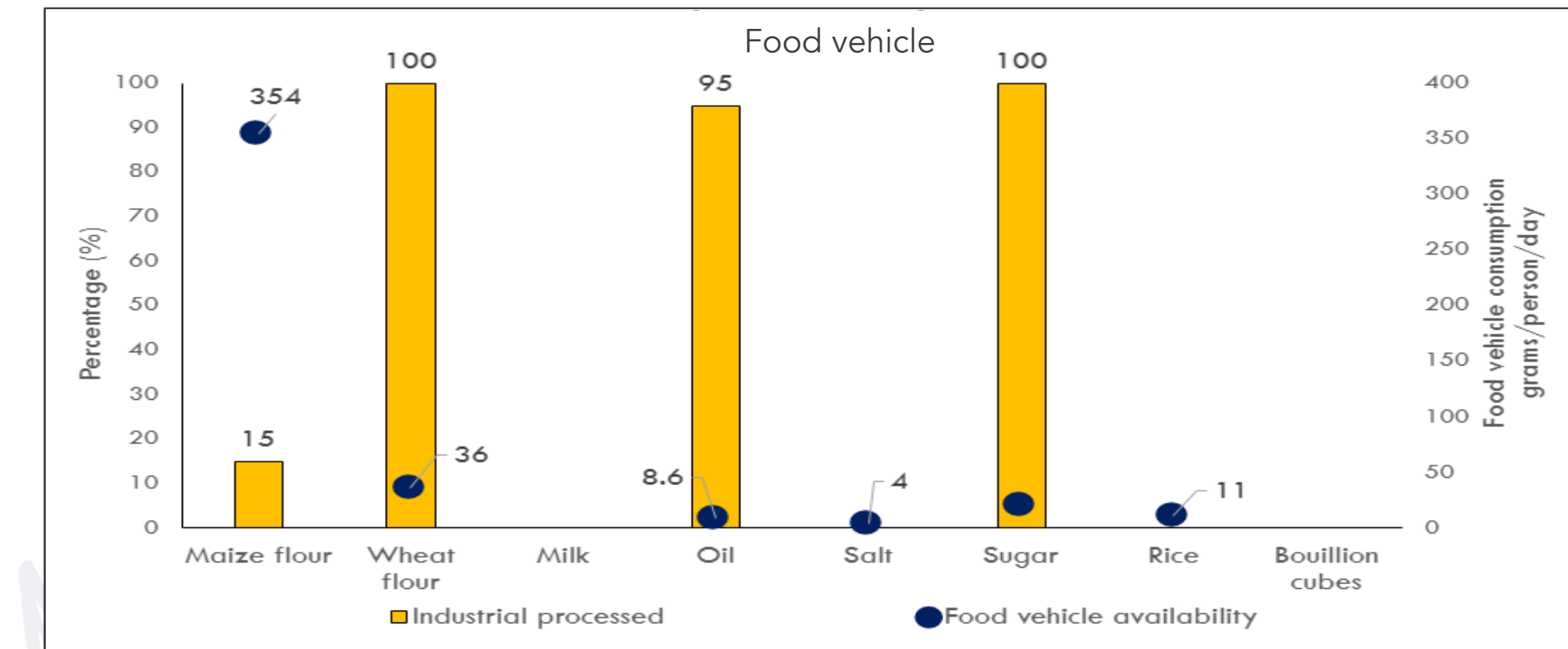
Anemia - V: Anemia estimated using hemoglobin measured in venous blood. Sources: National Micronutrient Survey 2015/16 & Malawi Demographic and Health Survey (MDHS) 2024.



DRI – Dietary Reference Intake; Source: Malawi Micronutrient Survey (2016)

- Iron, folate, vitamin B12, and zinc deficiency prevalent in children under 5 (U5) and women of reproductive age (WRA).
- Anemia prevalent in U5, school aged children (SAC), adolescent girls (42%), WRA, and pregnant women (41%).
- Iodine status (not shown) adequate (>100 µg/L) in SAC (268 µg/L) and WRA (271.4 µg/L).
- Latest micronutrient survey conducted in 2024 but results not yet available.
- Dietary intake of iron, vitamin A, vitamin B12, and zinc adequate.

Data on Food Vehicles



Source: Industrial processed- Key informant interview data captured in GFDx biannual survey (2018-2020); Food vehicle availability - FAO Supply Utilization Accounts (2022).

Nutrient →	Fe	Zn	Vit A	Vit D	B1	B2	B3	B6	Folate	B12	Iodine	Std. Yr
Food vehicle↓												
Maize flour	✓✓	✓✓	✓✓	●	✓✓	✓✓	✓✓	●	✓✓	✓✓	●	2011
Wheat flour	✓✓	✓✓	✓✓	●	✓✓	✓✓	✓✓	●	✓✓	✓✓	●	2011
Milk	●	●	●	●	●	●	●	●	●	●	●	
Oil	●	●	✓✓	●	●	●	●	●	●	●	●	2012
Salt	●	●	●	●	●	●	●	●	●	●	✓✓	1998
Sugar	●	●	✓✓	●	●	●	●	●	●	●	●	2012
Rice	●	●	●	●	●	●	●	●	●	●	●	
Bouillon cubes	●	●	●	●	●	●	●	●	●	●	●	

✓✓ - Added to address known deficiency
✓X - Added but unknown deficiency status
○ - Can potentially be added to the vehicle
● - No data / Not applicable

Source: Micronutrient status data; Legislation status; DInA key informant interview data.

- Maize fortification is mandatory only if flour is packed/branded, regardless of production capacity of the mill.
- Malawi imports all salt.

Opportunities for Data-Driven Decision-Making



Collaboration for data systems

- Develop integrated tools to consolidate data from different systems for data-informed decision making e.g., health information system (DHIS2), national information system, surveys, Bureau of Standards, and nutrition lab.
- Establish district-level market surveillance by incorporating fortification indicators into Environmental Health Officers' monthly reporting forms.
- Ministry of Health is considering adopting a mobile data collection system that feed district-level data into a database for program management.



Monitoring

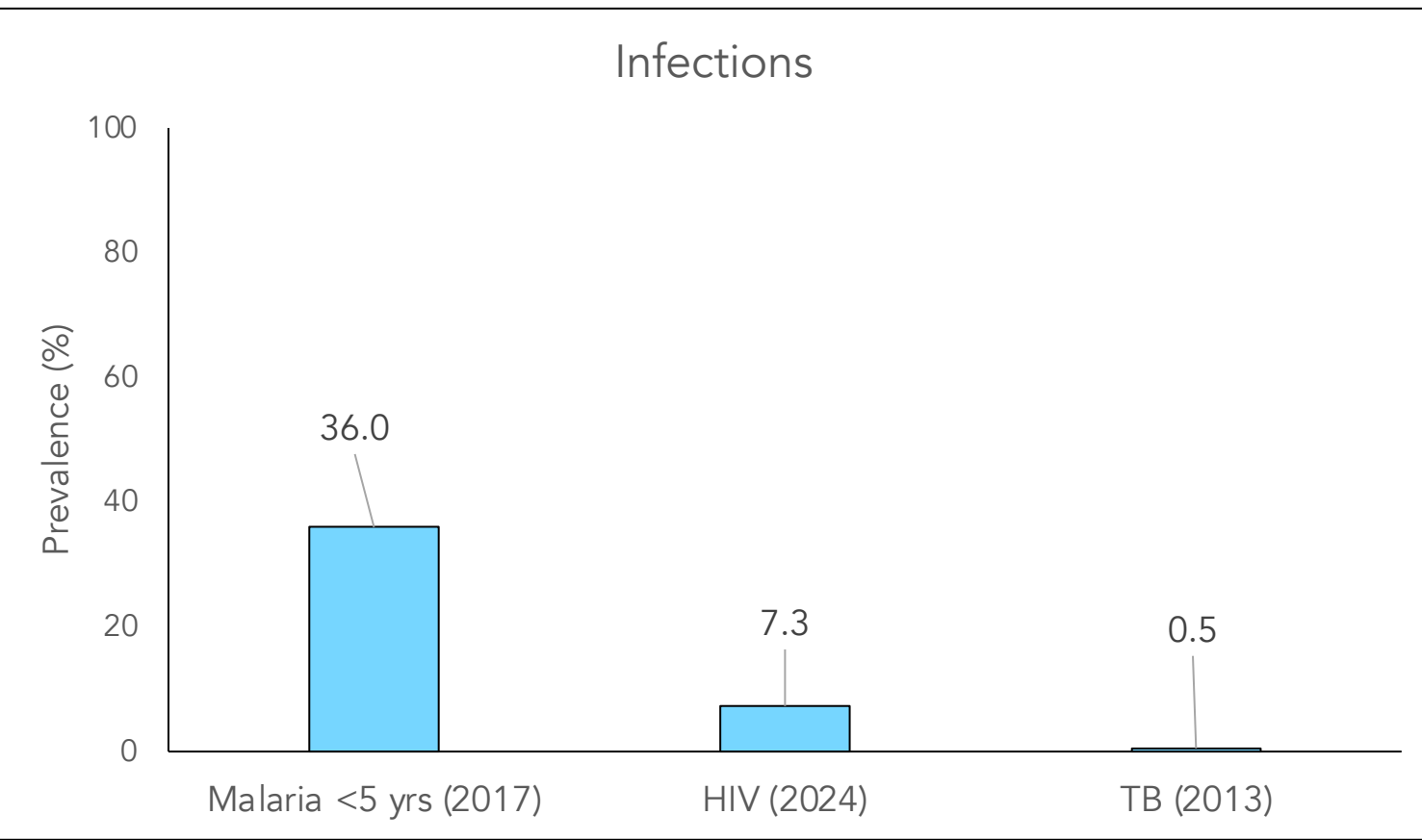
- Develop of a real-time dashboard for compliance data that automatically updates from collection points to enable timely analysis and decision-making.
- Leverage existing sentinel surveillance (established by UNICEF in collaboration with Nutrition Laboratory at Public Health Institute} due to limited support for national surveys.
- Establish quarterly data-sharing protocols for the Bureau of Standards to utilize inspection and sample collection data for program monitoring.



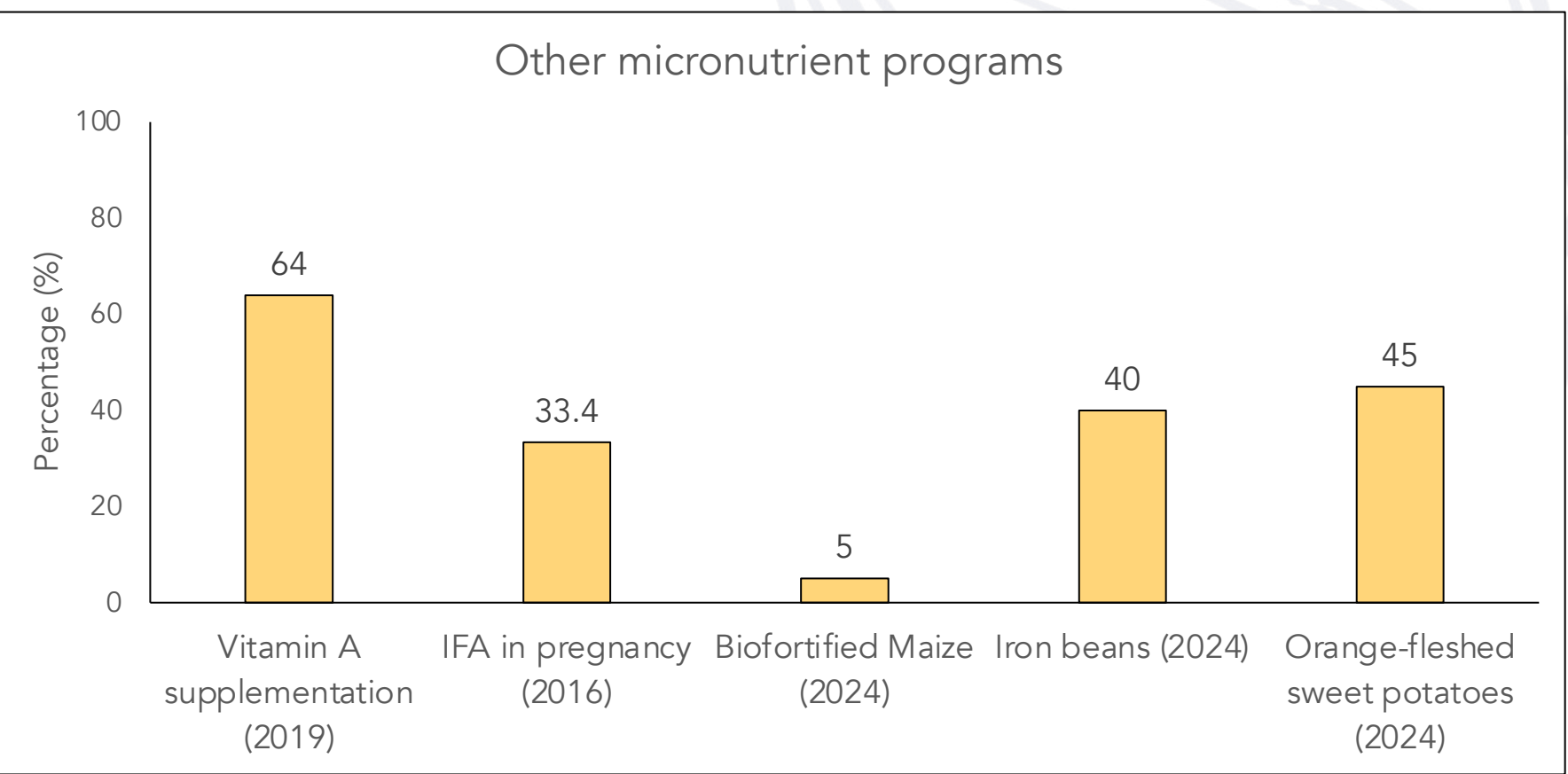
Prioritization

- Maintain coordination through the National Fortification Alliance with the Ministry of Trade, Health, Agriculture, and other key partners, including the Central Laboratory , the Bureau of Standards, and the Chancellor College's reference laboratory.
- Review and compare results from forthcoming 2024 micronutrient survey with the 2016 survey to identify gaps and inform future intervention strategies.
- Re-establish bi-annual sentinel surveillance targeting urban areas, rural districts, and vulnerable districts identified through the Malawi Vulnerability Assessment.

Data on LSFF-Related Health Conditions & Programs



Source: Malaria – Malawi Malaria Indicator Survey (2017); HIV - UNAIDS Sentinel surveillance (2024); TB - WHO national TB prevalence surveys (2013); Vitamin A supplementation in U5- UNICEF Data Warehouse (2019); Iron-folic acid (IFA) supplementation – Malawi DHS (2016); Biofortified food coverage – HarvestPlus (2024)



Compliance to Fortification Standards

Vehicle (nutrient)	%Fortified	Std. range (mg/kg)	Weighted average (mg/kg)	% above lower end of std. range
Salt (iodine)	99	30-60	59	88
Sugar (Vit. A)	56	6-22	13	56
Maize flour (Vit. A)	52	0.5-1.4	0.9	100
Maize flour (iron)	52	21-41	34	100
Wheat flour (iron)	73	21-41	30	93
Wheat flour (Vit. A)	73	0.5-1.4	0.7	93
Oil (Vit. A)	47	20-40	21	52

Std. range– Range of permissible concentration for the nutrient in the food vehicle, as per standard; Source: GAIN Supported National Market Assessment (2019).

- Supervisory monitoring of industry and inspection data exists, but stakeholders do not regularly receive the information.
- Lack of adequate resources to respond to non-complying industries; need to strengthen enforcement and hold industries accountable.
- Salt compliance high (99%), with weighted average of iodine close to maximum permissible concentration.
- Maize and wheat flour compliance not high, but good compliance for positive samples.
- Compliance for oil is 47%, but average vitamin A concentration close to the minimum of the standard range.

Data on Coverage of Fortified Food

- Household coverage of fortified salt – 80% (2022).
- Data awaited from latest micronutrient survey (2024).

Impact of LSFF

- Micronutrient survey (2016) that was conducted three years after introducing fortified sugar indicated vitamin A deficiency of 4% - not a public health problem.
- Follow up study conducted in 2024 but results not available yet.

Disclaimer

This country profile may not capture the full scope of the country's large-scale food fortification data value chain and reflects information gathered through key informant interviews and publicly available data as part of meeting preparations.