



# Supplementary Document:

Salt Reduction Strategy to Prevent and Control NCD for Malaysia 2015-2020

Prepared by:
Disease Control Division
Ministry of Health Malaysia

### Contents

Acknowledgement	3
Executive Summary	4
Strategy One: Monitoring (M)	5
Strategy Two: Awareness (A)	11
Strategy Three: Product (P)	17
Conclusion	19

# Acknowledgement

This production of this supplementary document required a lot of guidance, encouragement, suggestions, and constructive criticisms that have contributed immensely to the evolution of this document. It would not have been possible without the participation and assistance of so many people whose names may not all be enumerated. Their contributions are sincerely appreciated and gratefully acknowledged.

#### Executive Summary

Salt Reduction Strategy to Prevent and Control NCD for Malaysia 2015-2020 was developed in line with the Global Action Plan by WHO 2013 to 2025 to prevent and control NCD in Malaysia. This supplementary document is a part of the National Strategic Plan for Non-Communicable Disease (NSP- NCD) 2016-2025.

The general objective of this Salt Reduction Strategy is to promote, educate and collaborate with all related stakeholders to reduce salt intake among the Malaysian population, working towards achieving the 30% reduction of the average salt intake (from 8.7 g/day to 6.0 g/day) of the adult population by the year 2025.

Salt reduction strategy is the simplest and most cost-effective measure for reducing cardiovascular disease because of its high impact on health, high feasibility, and low implementation costs. Without strategy intervention to reduce salt intake, we will likely have an increase in the prevalence of hypertension and potentially fatalities resulting from cardiovascular diseases.

Through the 3 main strategies, i.e Monitoring, Awareness, and Product (MAP), this document outlines related activities involving the Ministry of Health, other government and non-government stakeholders including the private sector, professional bodies, academia, NGOs, and civil society. This document outlines the outcomes achieved throughout the five years (2015-2020)

## Strategy One: Monitoring (M)

In term of monitoring, the population-based salt intake survey to support the national salt reduction programme for Malaysia (Malaysian Community Salt Survey – MyCoSS, 2017-2019) showed that the salt intake using 24-hour urinary sodium among Malaysians was 7.9 g salt per day (3167 mg sodium per day) which is higher than WHO recommendation of 5 g of salt per day (2000 mg sodium per day). In order to achieve global target reduction of 30% mean salt intake among population by year 2025, 8.7 g salt (3429 mg sodium per day) intake among healthcare staff in 2012 was used to be reduced to 6.0 g in 2025 which is the main target of this policy. Another study among healthcare staff in 2015 (MySalt, 2015) showed that salt intake has reduced to 7.15 g per day (2860 mg sodium per day). The reduction on salt intake among healthcare staff is in line with the global target of NCDs. Other studies which measure salt intake was done among adolescent in 2016. There were three products surveys done including sodium content in sauces, instant noodle, bread, and processed foods from 2018 to 2020. The date base on salt content food has been developed and accessible online to be used as reference for the healthcare staff, industries, and general population.

STRATEGY: Monitoring (M)
the state of the s
2012 - Sodium intake among normotensive health staff assessed by 24-hour urinary excretion: A cross-sectional study¹  8.7 g salt/ day (3429 mg sodium/day) among 445 healthcare workers  * Corrected to include 5% sodium loss  2015 - Determination of dietary sodium intake among the Ministry of Health staff 2015 (MySalt 2015)²  7.15 g salt/ day (2860 mg sodium/day) among 1027 healthcare workers  * Corrected to include 5% sodium loss  2019 - Population-Based Salt Intake Survey to Support The National Salt Reduction Programme For Malaysia (Malaysian Community Salt Survey – MyCoSS)³  7.9 g salt/day (3167 mg sodium/day) among 798 participants  * Corrected to include 10% sodium loss  2016 - Dietary Intake among Adolescents in a Middle–Income Country: An Outcome from the Malaysian Health and Adolescents Longitudinal Research Team Study (the MY HeARTs Study)⁴  Sodium intake was 2289.5mg/day among adolescents in middle income

<sup>&</sup>lt;sup>1</sup> Institute for Public Health (IPH) 2013.Estimating Dietary Sodium Intake Among Ministry of Health Staff: A Pilot Study

<sup>&</sup>lt;sup>2</sup> Institute for Public Health (IPH) 2016. Determination of dietary sodium intake among the Ministry of Health staff 2015 (MySalt 2015)

<sup>&</sup>lt;sup>3</sup> Institute for Public Health (IPH) 2019. Population-Based Salt Intake Survey to Support The National Salt Reduction Programme For Malaysia (Malaysian Community Salt Survey – MyCoSS)

<sup>&</sup>lt;sup>4</sup> Abdul Majid H, Ramli L, Ying SP, Su TT, Jalaludin MY, Abdul Mohsein NA-S.2016. Dietary Intake among Adolescents in a Middle–Income Country: An Outcome from the Malaysian Health and Adolescents Longitudinal Research Team study (the MyHeARTs Study). Plos ONE, 11(5); e0155447doi.10.1371/journal.pone.0155447)

Activities	Indicators	Achievement
Creation of a database on salt content of processed food, with data the public	Web-based application	Foods composition database: Malaysian Food Composition Database (MyFCD) <sup>5</sup>
		Current: The latest version of FCD which contains a list of new food items and consists of 44 nutrient and non-nutrient components including sodium (157 entries)  1997 FCD: Food Composition Table in Malaysia published by IMR (Tee et al., 1997).  Contains 783 food items consisting of 19 nutrients including sodium (1033 entries)  Industry: Data contributed by the food industry (data locked in by the industry). (306 entries)
Research on salt intake among specific groups	Number of papers published	2017 - The Association of Knowledge, Attitude and Practice with 24 Hours Urinary Sodium Excretion among Malay Healthcare Staff in Malaysia <sup>6</sup>
		This study showed that the main sources of sodium among Malay healthcare staff is cooked food. Poor knowledge and practice towards reducing salt consumption among them contributes to the high sodium consumption. The practice of healthy eating among them together with continuous awareness campaign is essential to educate them to minimize sodium consumption and to practice healthy eating.
		2018 - Global Bread Survey 2018 by World Action on Salt and Health (WASH) <sup>7</sup>
		In Malaysia, unfortunately out of 203 bread samples surveyed, 128 or 63.1% had no sodium or salt label. In Malaysia, there is a wide range of variabilities in the salt content

<sup>&</sup>lt;sup>5</sup> Malaysian Food Composition Database (MyFCD). https://myfcd.moh.gov.my/

<sup>&</sup>lt;sup>6</sup> Mahat D, Mahmood MI, Tamil AM, Othman F. 2017. The Association of Knowledge, Attitude and Practice with 24 Hours Urinary Sodium Excretion among Malay Healthcare Staff in Malaysia. International Journal of Public Health Research Vol 7 No 2 2017, pp (860-870)

<sup>&</sup>lt;sup>7</sup> WASH Global Bread Survey All Bread Data. 2018. http://www.worldactiononsalt.com/news/surveys/2018/

Activities	Indicators	Achievement
		of flat bread from as low as 0.01 to 2.50 g/100 g, suggesting the possibilities to reduce the salt content of the products. In Malaysia, the salt content of white bread ranged from 0.38 to 1.09 g/ 100 g, with those in the sweetened categories had the lowest salt content. The salt content in whole meal breads ranged from 0.93 to 1.12 g/ 100 g, suggesting the possibilities to reduce the salt content in this supposedly to be a healthier bread product. There is a trend of an increase bread consumption among the population due to its convenience as a ready to go meal as compared to traditional rice-based meals. Further, most dieters prefer to eat bread as it is a simpler dish as compared to rice based diet that usually accompany with high calories dishes.
		2019 - Sodium content in sauces—a major contributor of sodium intake in Malaysia: a cross-sectional survey <sup>8</sup>
		Of the 233 sauces surveyed, 116 did not include sodium content information on the nutrient information panel (49.8%). Soy sauce (particularly sweet soy sauce) and ketchup (particularly chili sauce) were found to be the highest number of products surveyed in the analysis (N=54 and N=48, respectively). The highest sodium content information was displayed by fish/prawn sauce (budu/cencalok) (5192±3228 mg/100 g) which was followed by the light/thin soy sauce (5116±2084 mg/100 g) and followed by salty soy sauce (4780±988 mg/100 g). The sodium content information of the imported sauces was higher compared with local products produced in Malaysia. However, for sweet soy sauce, the sodium content information of the local products was higher compared with the imported products. Of the 116 sauces which displayed information regarding their sodium content, only 18.2% of the salty soy sauce and 25% of the light/thin soy sauce were found to be

<sup>&</sup>lt;sup>8</sup> Shahar S, You YX, Zainuddin NS, Michael V, Ambak R, Haron H, He FJ, MacGrego GA. 2018. Sodium content in sauces—a major contributor of sodium intake in Malaysia: a cross-sectional survey. BMJ Open 2019;9:e025068. doi:10.1136/bmjopen-2018-025068

Activities	Indicators	Achievement
		below the 2017 Malaysian sodium guidelines. Furthermore, only 21.7% of chilli ketchup and no tomato ketchup were below the 2017 UK salt guidelines.
		2019 - Critical review on dietary sodium reduction policies in Malaysia <sup>9</sup>
		Several key components in achieving successful salt reduction in the population must be addressed immediately like mandatory labelling for sodium content in foods.  Reformulation of food products to contain less salt must be more aggressive in Malaysia. This might be achieved through the demand from the community. For the community to demand salt reduction in food products, the community must be made aware of the dangers of high salt diet through awareness programmes that should be intensified and cover a wider population.
		2020 - Salt content of instant noodles in Malaysia: a cross-sectional study <sup>10</sup>
		Of the 707 different packaging and flavours of instant noodles, only 62.1% (n=439) provided the salt content in their food label. Salt content in instant noodles is very high, with 90% exceeding the daily salt intake recommended by WHO
		2020 - A Survey on Salt Content Labeling of the Processed Food Available in Malaysia <sup>11</sup>

<sup>&</sup>lt;sup>9</sup> Shahrir SN, Abdul Manaf MR, Mustapha FI, Md. Isa Z. 2019. Critical review on dietary sodium reduction policies in Malaysia. International Food Research Journal 26(1): 33 - 40 (February 2019) Journal homepage: http://www.ifrj.upm.edu.my

<sup>&</sup>lt;sup>9</sup> Tan CH, Chow ZY, Ching SM, Devaraj NK, He FJ, MacGregor GA, Chia YC. 2019.Salt content of instant noodles in Malaysia: a cross-sectional study BMJ Journal.: e024702. doi:10.1136/bmjopen-2018-024702 http://dx.doi.org/10.1136/bmjopen-2018-024702

<sup>&</sup>lt;sup>11</sup> Haron H, Hiew I, Shahar S, Michael V and Ambak R.2020. A Survey on Salt Content Labeling of the Processed Food Available in Malaysia. International Journal of Environmental Research and Public Health.2020, 17, 2469; doi:10.3390/ijerph17072469

Activities	Indicators	Achievement
		The percentage of processed food products without salt and sodium labeling was determined in this study, in which 76.5% of unlabeled processed food products were made in Malaysia, while 23.5% were imported products. The food group with the highest average salt content was gravy and sauce (3.97 g/100 g), followed by soup (2.95 g/100 g), cheese (2.14 g/100 g), meat (1.37 g/100 g), fish (1.25 g/100 g), chicken (1.20 g/100 g), vegetables (1.18 g/100 g), butter and margarine (1.13 g/100 g), breakfast cereal (0.94 g/100 g), savory snacks (0.90 g/100 g), flatbread (0.86 g/100 g), sweet snacks (0.30 g/100 g), and potato (0.29 g/100 g). Most processed food products available in local supermarkets were high in salt content.
		2020 - Improvement of nutritional intake for the low-income urban dwellers with hypertension in Malaysia 12
		Macronutrients and micronutrients showed a significant improvement at the end of 12-month dietary intervention. The energy, carbohydrate, protein, total fat, sodium, and potassium are showing significant reduction from baseline to end of the 12-month intervention. There is no significant reduction in blood pressure. Fasting blood glucose, renal sodium, triglyceride, low-density lipoprotein cholesterol and high-density lipoprotein cholesterol showed a significant improvement, after controlling for age and reported physical activity

<sup>&</sup>lt;sup>12</sup> Azizan NA, Majid HA, Mohamed AN, Su TT. 2020. Improvement of nutritional intake for the low-income urban dwellers with hypertension in Malaysia. SAGE Open Medicine.https://mc.manuscriptcentral.com/sageopenmedicine

## Strategy Two: Awareness (A)

To increase awareness on the relation of salt and health, educational tools have been developed comprising of guideline, manual, infographic, video, poster, recipes book, booklet sodium counting, slide presentation which can be browsed through the website Ministry of Health Malaysia (<a href="https://bit.ly/KKMGaram">https://bit.ly/KKMGaram</a>).

Training of trainers (TOT) on the use of educational materials has been conducted among healthcare staff in 5 zones of Malaysia including medical officers, dietitians, nutritionists, health education officers and paramedics. In addition, various activities were carried out to increase public awareness to reduce salt intake, including talks, exhibitions, cooking demonstrations, seminars, workshops, continuous medical education especially during World Salt Awareness Week which is being celebrated every year. Based on trainings and intervention in four states it was found out that there was an increase in knowledge among the participants with average of 29.5%. E-learning intervention in all states showed that there was an increasing of 52.9% of knowledge among 80 participants completed the e-learning intervention Besides that, salt reduction intervention among the volunteers in some locality of KOSPEN has been implemented. Promotion through mass media and social media is ongoing through newspaper, television, radio, article, magazine, YouTube, Facebook, and twitter.

Activities	Indicators	Achievement			
STRATEGY: Awareness (A)					
Health promotion and education 2015	Number of resource tool	Manual Penggunaan Bahan Pendidikan Kesihatan Penjagaan Pemakanan dalam Pengawalan Pengambilan Garam			
	kit <sup>13</sup>	1. 17 Infographic on Salt and Health			
		2. 19 Posters related to Salt and health			
		3. Slide Reduce Salt in the form of Prezi and power point			
		4. Video Health and Salt			
		5. Video Cooking demonstration			
		6. Video Sodium Counting			
		7. Video & Song #SedapTakSemestinyaMasin			
		8. Recipe book # SedapTakSemestinyaMasin			
		9. Booklet Panduan Pengiraan Sodium			
		10. Guideline for Health Care Professionals, Health Education and Communication Tools to Reduce Salt Intake in Malaysia.			
		11. National level Innovative and Creative Group Competition (KIK): SMART Na <sup>+</sup> Sodium Calculation Guide Concept (1st prize hybrid category, Improvement 2018)			
		12. National Innovation Competition, final stage 2018: Sodium Calculation Guide Concept (SMART Na <sup>+</sup> )			
		13. DTAM Awards for Public Sector People Centric Award Category, final ranking 2019: Smart Na <sup>+</sup>			
		14. Evaluation form Knowledge, Attitude and Practice (KAP) on Salt			
		15. Intervention on Knowledge & Attitude through e-learning			
		16. Poster/ Infographic in conjunction with World Salt Awareness Week (WSAW) by theme each year			

<sup>&</sup>lt;sup>13</sup> Ministry of Health Malaysia. https://www.moh.gov.my/index.php/pages/view/2026

Activities	Indicators	Achievement
		17. Recommended Nutrient Intakes for Malaysia (RNI). Chapter 23: Sodium <sup>14</sup>
		18. CPG on Primary & Secondary Prevention of Cardiovascular Disease <sup>15</sup>
	KAP survey in target groups	2015: Knowledge, Attitude and Practices (KAP) of Primary School Students in Putrajaya WHO Participated in The World Salt Awareness Week 2015 <sup>16</sup>
		2019: Knowledge, Attitude & Practice of Pre and Post Intervention Study to Reduce Salt Intake Among Public Health Staff at Ministry of Health (MOH) (NMRR-17-1679-36670 (IIR) <sup>17</sup>
	Number of training/ workshop/ courses	<ol> <li>Seminar Less Salt Please (19<sup>th</sup> September 2016)</li> <li>Training to Trainer (TOT) Middle Zone (26<sup>th</sup> April 2018)</li> <li>Training to Trainer (TOT) Northern Zone (14<sup>th</sup> May 2018)</li> <li>Training to Trainer (TOT) Southern Zone (10<sup>th</sup> July 2018)</li> <li>Training to Trainer (TOT) Borneo Zone (14<sup>th</sup> August 2018)</li> <li>Training to Trainer (TOT) Eastern Zone (30<sup>th</sup> October 2018)</li> <li>Training to Trainer (TOT) Sarawak (12<sup>nd</sup> April 2019)</li> <li>Teaching Plan Session for ND2044 MNT 1 - Hypertension in the community UKM :25 March 2019</li> <li>Let's Act #SedapTakSemestinyaMasin on 20th June 2019 in collaboration with the Sports and Welfare Club of the Ministry of Health Malaysia Headquarters (KESKIP)</li> </ol>

<sup>&</sup>lt;sup>14</sup> National Coordinating Committee on Food and Nutrition.2017. Recommended Nutrient Intakes for Malaysia (RNI). Ministry of Health Malaysia, Putrajaya

<sup>&</sup>lt;sup>15</sup> National Heart Association of Malaysia.2017. CPG on Primary & Secondary Prevention of Cardiovascular Disease. MOH/P/PAK/343.17(GU)

<sup>&</sup>lt;sup>16</sup> Mohd Yazid SFZ, Michael V. Poster Presentation 4<sup>th</sup> Dietetics & Food Service Conference: "Upgrading Our Services Through Sharing of Knowledge and Empowerment"

<sup>&</sup>lt;sup>17</sup> Mohd Yazid SFZ, Rahman AA, Michael V, Nik Mahmood NM, Jamaludin NA. Poster Presentation at Dietitians' Quality and Research Convention 2019. 1st - 2nd July 2019. Cempaka Apartment Hotel, Cheras, Kuala Lumpur.

Activities	Indicators	Achievement						
		<ol> <li>N &amp; D Innovation Show Conference 2019 (MDA Kuala Lumpur</li> <li>Program Champion Tall organized by the Minist</li> <li>Workshop to Fight High Chancellor Tuanku Muk</li> <li>Occupational Safety and September 2019.</li> <li>Walk and Explore with September 2019 at Tan</li> <li>Talk in the Diabetic Nur October 2019</li> <li>Mini Seminar Reducing on 29<sup>th</sup> June 2020</li> <li>Workshop on Strategic Malaysia 9<sup>th</sup>-11<sup>th</sup> September</li> </ol>	Conferen  Creative  Cry of Tran  Blood Pre  Chriz UKM  Health W  Dietitians i  nan Tasek  Sess Educa  Salt Intake  Communic	and Innoversport Malassure organical (IV) which was a second to the conjunction of the co	vative Groaysia (MO anized by HCTM) r the MOH tion with I i, Kuala Lu ium at Ser sia: An Int	4 <sup>th</sup> June 20 up, 2019 o T) UKM on 2 <sup>th</sup> I Medical Malaysian Impur rdang Hos erim Evalu	219 at Hoten 21st Aug 9th August Program of Dietitian I pital, Selar lation of V	gust 2019 2019 at on 19 <sup>th</sup> Day on 22 <sup>nd</sup> ngor on 2 <sup>nd</sup> What Works on in
Incorporating salt reduction intervention into KOSPEN	Resource tool kit	Training to KOSPEN voluntee	er through	lectures/	workshop,	/ health ex	khibition/	official visit
Promotion through mass media and social media	Number of newspaper	-Estimation						
	articles, television, and		2015	2016	2017	2018	2019	2020
radio slot	Newspaper /magazine/comic article	14	2	3	10	12	5	
		Television	1	1	1	2	2	1
		Radio Slot	2	2	2	5	2	5

Activities	Indicators	Achievement			
		Various posts on social media such Health Malaysia	as Youtube, Fac	ebook and Twitter u	nder Ministry of
		Social media (Views/reach)			
		Video	Youtube	FB KKM-portal myHealth	Twitter KKMalaysia
		Reduce Salt Intake: Prevent and Control Hypertension	25		
		Video Garam dan Kesihatan	544	89.3K	64.2K
		Hari Pertama #SedapTakSemestinyaMasin	836	3.2K	
		Hari Kedua #SedapTakSemestinyaMasin	278	2.4K	
		Hari Ketiga #SedapTakSemestinyaMasin	199	2.9K	
		Hari Keempat #SedapTakSemestinyaMasin	185	2.7K	
		Hari Kelima #SedapTakSemestinyaMasin	262	2.5K	762

Activities	Indicators	Achievement		
		Twitter (post, like, and retwee stakeholders  Health Sectors	et tweets on salt) from Govern TV & Radio	oment Ministries and other  Others
		<ul> <li>Kementerian Kesihatan Malaysia@ KKMalaysia</li> <li>KKM Portal MyHealth</li> <li>Bahagian Pemakanan KKM</li> <li>Infosihat 2U</li> <li>Kesihatan Perlis@JKN Perlis</li> <li>Pejabat Kesihatan Bahagian Mukah</li> <li>Pejabat Kesihatan Bahagian Kuching</li> </ul>	<ul> <li>RTM Sarawak</li> <li>Sarawakfm</li> <li>MIRIFm @mirifm</li> <li>KLfm</li> <li>TRAXXfm</li> <li>Kelantanfm</li> <li>Melakafm</li> <li>Tawarfm</li> <li>Terengganufm</li> <li>Seksyen TV_RTM Kuching</li> <li>Sandakanfm</li> <li>mySabahfm</li> <li>FM Sri Aman</li> </ul>	<ul> <li>AADK Daerah Mersing</li> <li>AADK Kota Tinggi</li> <li>AADK Batu Pahat</li> <li>Jabatan Penerangan Negeri Sabah</li> <li>Pusat Maklumat Rakyat UTC Sabah</li> <li>Muslimat PAS Malaysia Facebook</li> <li>Public Health Malaysia</li> </ul>

# Strategy Three: Product (P)

Under the product strategy, up to now there are 62 products have been reformulated by food industry by way of voluntary initiatives and to achieve the target of a minimum of 5 products each year. Finally, one of the best achievements under this salt reduction policy is the gazettement of mandatory labelling for the salt content in food packaging in July 2020 and the enforcement will be by year 2024.

Activities	Indicators	Achievement			
Strategy: Product (P)					
Product reformulation of high- salt content processed foods	Number of products with reduced salt/sodium content	62 products have been reformulated by food industry through voluntary initiatives <a href="https://myfcd.moh.gov.my/myfcdindustri/">https://myfcd.moh.gov.my/myfcdindustri/</a>			
Labeling of sodium content in processed foods	Compulsory labelling for foods that require mandatory nutrition labelling	The gazettement of mandatory labelling for the salt content in food packaging in July 2020 and to be enforced by the year 2024 <sup>18</sup> Food Safety and Quality Division. Ministry of Health Malaysia (MOH).20202. http://fsq.moh.gov.my/v6/xs/page.php?id=38			

<sup>18</sup> Food Safety and Quality Division. Ministry of Health Malaysia (MOH).20202. http://fsq.moh.gov.my/v6/xs/page.php?id=38

Conclusion

Effective implementation of the Salt Reduction Strategy requires a multi-sectoral approach,

involving many stakeholders including the private sector, NGOs, and civil society.

research findings and the evidence-based salt reduction strategy developed in study could

potentially be generalizable to many other developing countries, particularly South East Asia.

A reduction in salt intake, even by a small amount, across the whole population around the

world will have enormous benefits in reducing the huge burden attributable to chronic non-

communicable diseases.

Several key components in achieving successful salt reduction in the population must be

addressed immediately like mandatory maximum salt/sodium level in high-risk food. This must

be addressed immediately by making amendments to the Food Act 1983 (Act 281) and

Regulations (Food Act). Reformulation of food products to contain less salt must be more

aggressive in Malaysia. This might be achieved through the demand from the community. For

the community to demand salt reduction in food products, the community must be made aware

of the dangers of high salt diet through awareness programme that should be intensified and

cover a wider population

For further information, please contact:

Siti Farrah Zaidah Mohd Yazid

CVD-Diabetes Prevention and Control Unit

Disease Control Division, Ministry of Health Malaysia

Level 2, Block E3, Complex E 612590 Putrajaya

Tel: 03-8892 4522

Emel: siti.farrah@moh.gov.my

19