Recognising that unhealthy diets and physical inactivity are among the leading causes of the major non-communicable diseases (NCDs), the WHO Global Strategy on Diet, Physical Activity and Health (DPAH) called for public health actions that will bring about changes in dietary habits and patterns of physical activity that will require the combined efforts of many stakeholders, public and private. All parties are urged to support the Global Strategy effectively by collaborating with national and international partners to support consumers adopt healthy lifestyles.

The private sector has been urged to be a significant player in promoting healthy diets and physical activity. The food industry, retailers and catering companies could become partners with governments and nongovernmental organizations in implementing health-promoting measures aimed at encouraging healthy eating and physical activity. Initiatives identified include efforts by the food industry to innovate and renovate to make available healthier food choices. This includes reducing fat, sugar and salt content and portion sizes of processed foods as well as increasing introduction of innovative, healthy, and nutritious choices.

In the country, various national action plans have also highlighted the importance of food innovation/renovations to make healthier food choices available to the consumer. A great deal of emphasis has also been given to ensuring that the public has access to nutrition information. The National Plan of Action for Nutrition of Malaysia and the National Strategic Plan for Non-Communicable Diseases have outlined various key programmes and activities to achieve these two objectives.

This seminar by ILSI Malaysia Country Committee was focused on the role that food innovation and renovation can play in providing healthier processed food choices to consumers. Papers presented were related to industry efforts to innovate/renovate processed foods to provide healthier alternatives to the public, and the achievements and challenges. The focus was also on consumer perception and acceptance of healthier food choices. The seminar provided a platform for all stakeholders to discuss effective approaches to food innovations and renovations and consumer acceptance.

The seminar was attended by 140 participants from various organisations including research institutions, academia, government agencies and several food companies. Participants included nutritionists, dietitians, food scientists and technologists.

Food innovation/renovation for healthier food choices – government and industry perspectives

To set the stage for the seminar, the first presentation was on Promoting healthy diets – role of food innovation and consumer education by Dr Tee E Siong, International Life Sciences Institute, South East Asia Region. In cognizance of the rapid increase in the burden of non-communicable diseases (NCDs), the WHO Global Strategy on Diet, Physical Activity and Health was adopted in 2004 and also endorsed by the United Nations General Assembly. The 2nd International Conference on Nutrition (ICN2) in November 2014 has also
addressed the prevention of NCDs. The National Plan of Action for Nutrition and other strategies in Malaysia have also highlighted the severity of NCDs and outlined strategies to tackle the problem.

Two common areas of focus have been highlighted by the international and national strategies for arresting the increase in NCDs. Firstly, the focus is on making healthier food choices to consumers. Strategies include efforts by food industry to provide healthier food choices through food innovation/renovation. Secondly, there is a need to strengthen programmes to promote healthy eating among consumers, including consumer education to increase acceptance and demand for healthier diets. The food industry has been encouraged to provide healthier alternatives of prepackaged foods, e.g. the “negative” nutrients in prepackaged foods, enrichment with micronutrients, and functional foods with addition of bioactive components (with health claims). Consumer education has been conducted in the country for decades by government agencies, professional bodies and food industry. Various educational materials based on the dietary guidelines have been published.

Dr Tee emphasised that more needed to be carried out. After 4 decades of various activities, He pointed out that NCDs remain on a serious threat to the wellbeing of the population. Firstly, he felt that greater focus needs to be given to foods and beverages consumed in various eateries, e.g. restaurants, cafes, coffee shops. These meals can be high in fat, sugar, salt, imbalanced and come in large serving sizes. Secondly, he called for more effective nutrition communications to consumers. This can only be done if we have greater understanding of consumer needs and choices.

Ms Rokiah Don, Nutrition Division, Ministry of Health Malaysia followed up with a presentation highlighting government perspective and expectations of food innovation and renovation. She started off with a summary of the disease and food consumption trends in the country. The main cause of premature deaths among Malaysian adults today can be attributed to the alarming increase in non-communicable diseases (NCDs) and associated risk factors. The prevalence of obesity amongst adults above 18 years has increased from 4.4% (1996) to 15.1% (2011). Unhealthy eating and physical inactivity contributes to this undesirable development, as evidenced from the Malaysian Adult Nutrition Survey (MANS) 2003 and the National Health and Morbidity Survey (NHMS) 2011.

Ms Rokiah next highlighted the nutrition and related policies and plan of actions that have been developed through collaborative efforts of various stakeholders, including the food and beverage industry. Various interventions and initiatives have been adopted to promote healthy eating from womb-to-tomb from a life cycle approach. These include interventions for vulnerable groups comprising antenatal mothers and infants and children. Initiatives carried out include those in day-care centres as well as in schools. Initiatives for the general public include Healthy Kitchens, Healthy Catering, Healthy Cafeterias and Healthy Shopping Through Supermarket Tours, as well as through information and communication technology.

In line with the focus of this seminar, Ms Rokiah emphasised that the role of food and beverage industries to shape the eating practices of consumers must be recognised. Healthier food choices should be made more available at affordable prices. The Ministry of Health Malaysia, through its public-private partnership, will continue to engage and communicate to the food and beverage industries to seriously make efforts to innovate and renovate processed foods to provide healthier alternatives to the community. This includes making available food products with free, reduced or less fat, sugar and sodium content and products with more fibre. It is hoped that with the various short and long term strategies adopted and the engagement of food industries for product formulation and reformulation, the landscape of nutrition in Malaysia will be more favourable towards healthy eating.
Prof Aminah Abdullah, represented the Malaysian Institute of Food Technology (MIFT) in sharing views of a professional body in the area of food innovation and renovation. Growing populations, rising incomes and changing lifestyle have altered where and how food products are grown, processed and distributed. Social and environmental concerns are also bringing pressure for more changes. Farmers, produce traders, processors and other stakeholders are challenged to improve the efficiency of their operations and to be more responsive to consumer demands as well as regulatory frameworks. In her talk entitled Food Innovation: the Lifeblood of a Food Technologist, Prof Aminah elaborated how the food industry need to innovate and renovate to rise up to the demands of consumers. She emphasised that innovation is the key driver to address changes in demand for food and accentuate economic growth.

She discussed the 5 key phases in product reformulation: justification, mitigation, characterisation, realisation and qualification. She highlighted various technological considerations in these phases. Changing an ingredient and/or process will change the product and have an impact on consumer acceptance, which has to be quantified and mitigated. Reducing sugar, fat and salt in products may negatively affect consumer appeal; other ingredients may have to be added to bring back the taste and mouthfeel. Such alterations in ingredients may also affect the product stability and shelf-life. The sensory profile and consumer preference and how the reformulation process may affect the sensory characteristics need to be carefully studied using appropriate sensory evaluation techniques. A replacement ingredient is therefore rarely a like-for-like swap and requires optimization. Other important considerations include cost of the reformulated product and consumer acceptance. The new product needs to be made known to consumers through promotion and advertisements. Finally, any reformulated product must fulfil the regulatory requirements.

Ms Koo Pei Fern representing the Malaysian Food Manufacturing Group (FMM MAFMAG) of the Federation of Malaysian Manufacturers (FMM) shared with participants the food innovation & renovation activities of the food industry, success stories and key challenges. FMM MAFMAG, comprising manufacturers and affiliates in the Food and Beverage companies, has been set up to promote co-operation among food industries to drive health and nutrition related matters in Malaysia. As the problem with NCD is multidimensional, the solution will require an interdisciplinary approach involving the cooperation of food companies with other stakeholders. The Health & Nutrition Technical Working Group was thus set up to lead FMM in this initiative. On main commitment of this TWG is to continue to increase the production and promotion of healthier food choices to Malaysians. To this end, food industries have made some contributions in offering healthier choice of products including sugars, sodium and fat reduction across different food and beverages products. Meanwhile, FMM MAFMAG has had some success in producing products added with functional ingredients which were backed up with scientific substantiation of the beneficial effects for human health.

Another important aspect of this presentation is to highlight the key challenges that food industries faced in food innovation and/or renovation. The key challenges include consumer acceptance, getting the wider group participation, innovation & technological limitation and some local food regulation standards that could restrict industries from advance innovation. In response to the key challenges in offering healthier choices of products for consumers, FMM MAFMAG believe that Public-Private-Partnership is a proven effective model in educating and raising health awareness among consumers and to combat NCDs as ultimate goal. Hence, we are looking forward to work with all relevant stakeholders as a team to start an innovation journey today in cultivating a healthier nation.

**Promoting consumer acceptance of healthy food choices**

Two presentations highlighted activities carried out to promote healthy eating among consumers. Prof Norimah A Karim, of Nutrition Society of Malaysia (NSM) highlighted the activities undertaken by a professional society in promoting healthy eating among...
consumers. Since its formation 29 years ago, the NSM has worked relentlessly to contribute towards promoting healthy eating among all Malaysians.

To date, NSM has published numerous educational resources to empower the public with appropriate, unbiased information. These include leaflets, booklets and articles to promote healthy eating practices and active living. Recognising the interest of consumers for recipes in the preparation of meals the healthier way, NSM published two volumes of Healthful Recipes, Wise Choice some years ago, followed by another two volumes under a new series, Nutritionist’s Choice Cookbook in the last two years.

NSM has carried out a number of intervention programmes for specific target groups. Particular attention has been given to infants and children. The Mother’s Smart Choice programme is a recent programme focused on promoting breastfeeding, appropriate complementary feeding, and healthy meals for toddlers. The Healthy Kids Programme includes a nutrition awareness component as well as a research component, to reach out to primary school children. A comprehensive programme, MyNutriChild aims to disseminate the messages of the new Malaysian Dietary Guidelines for children and adolescents. Focus has also being given to mothers and woman of reproductive age. The MI-Care programme, initiated in 2011, focuses on care of the pregnant and lactating women.

NSM has also regularly carried out community nutrition outreach programmes for the consumers. The largest of such programmes has been the nation-wide Nutrition Month Malaysia (NMM), initiated 12 years ago, in 2002. It is a collaborative programme amongst three professional bodies, namely NSM, the Malaysian Dietitian’s Association (MDA) and the Malaysian Association for the Study of Obesity (MASO) to increase awareness of Malaysians towards importance of healthy nutrition and active living.

The second presentation on this topic was by Ms Koo Pei Fern representing FMM MAFMAG. She shared with participants industries’ contributions and key considerations in nutrition promotion. Members of the Group have made significant contributions in promoting nutrition. These contributions include front-of-pack labeling initiative, consumer education on healthy eating and lifestyle as well as understanding food labeling. In addition, the Group has adopted an active role in the multi-sectorial partnerships whereby it has collaborated and worked synergistically with different stakeholders towards the common goals. This includes sharing expertise with Ministry of Health in nutrition and regulatory development and contributed to school programmes. The Group has partnered with professional bodies in organizing scientific events, community health campaigns, development of educational tool and materials as well as research collaborations with higher learning institutions. Importantly, FMM MAFMAG has engaged other stakeholders such as media agencies and SME group to get the wider group participation in making our commitments a success.

Ms Koo also highlighted some key considerations in the effort of promoting nutrition. Consumers’ knowledge, attitude & practice are the most challenging factors to overcome. In addition, getting the participation and commitment from wider group, limited resources and Code of Ethics restriction are also key challenges. She called for discussions on how the Group can work together with all relevant stakeholders in addressing the challenges and to enable FMM MAFMAG to make greater achievements in promoting nutrition to Malaysian.

**Consumer perception and attitude towards food choices**

Assoc Prof May O. Lwin, Nanyang Technological University (NTU), Singapore spoke on Consuming health: Drivers of attitudes towards healthy eating and packaged foods. Attitude towards foods has been shown by health researchers to be a key determinant of an individual’s food consumption. The presentation covered the major facets influencing attitudes towards food as identified by researchers in multidisciplinary fields ranging from psychology to public health. In particular, the discussion featured factors relating to the
environment that consumers navigate within both within the retail and the media contexts, recent marketing approaches globally and perspectives relating to Asian food consumption.

There is growing scientific evidence that what people eat—and their likelihood of being obese—is influenced by the food environment in which they live. Ready access to healthy foods is thus critical in battling the obesity crisis. The potential influences of advertisements and various types of claims on food purchases were discussed. Dr Lwin also discussed major drivers of consumption among children. These include food product branding, advertisements based on entertainment and pop culture and toys. She emphasised that children and attitude formation as a unique and important sub-set of public health policy concern. Overall, she felt that we do not fully understand what drives food consumption although we do have more information. She called on health authorities to continue to educate consumers to enable them to make healthier food choices.

Mr Ch'ng Oon Teong of TESCO Malaysia provided insights of Consumer understanding and acceptance of healthier food choices from the perspectives of a retail chain. He shared with participants data from focus group discussions conducted in different parts of the country. Findings obtained showed that Malaysian consumers are aware of the many health problems in the country, especially diet-related chronic diseases. They are aware that these diseases are caused by an unhealthy lifestyle. However, it remains a challenge to sustain a healthy lifestyle due to a lack of sense of urgency and motivation. Taste preference is still the biggest driver of Malaysians’ food choice.

Many leading brands by food companies in the country including Tesco have incorporated FOP (Front of pack) labelling on food packaging that ease consumer use as a guide to calorie intake. It is however noted that there is less participation from SME companies. A wide variety of products carry the FOP, but the category with the most of such scheme is cereal foods. Healthier food choice is a journey due to low customer attention and acceptance. Mr Ch’ng highlighted several Tesco initiatives aimed at promoting healthy living to consumers and colleagues to help them approach healthy lifestyle journey together. These activities include Walk for Life, 5 A Day and Nutritional Profiling.

Panel Discussion

The Seminar ended with a panel discussion to provide an opportunity to speakers and participants to further deliberate on collaborative approaches that can be undertaken to enable effective food innovation/renovation and consumer education. The session was chaired by Dr Tee E Siong and all the speakers served as panel members: Ms Rokiah Don, Prof Aminah Abdullah, Ms Koo Pei Fern, Prof Norimah A Karim, Assoc Prof May O. Lwin and Mr Ch’ng Oon Teong. The make up of panelists represent viewpoints from the main stakeholders in the promotion of healthy diet, namely government, professional groups/academia, food industry and consumer perspectives.

Panel members and participants pointed out various concerns regarding consumer attitude and practices, many of which are potential impediments to the promotion of healthy diets. Environment factors were mentioned as major impediments to consumers making healthy food choices. Malaysia has often been referred to as a food haven, with affordable foods available in many outlets, almost at all times of the day. The Malaysian culture and lifestyle of holding numerous ceremonies and festivals and eating during all these occasions tends to promote over eating. In addition to focusing on pre-packaged foods, it is therefore also important to promote preparation and consumption of healthier meals.

One important issue discussed was the finding that awareness of inappropriate dietary pattern and the resultant ill effects is high, but consumers do not find it an urgency to practise healthy eating. To some consumers, the concept of being sick is when one is bedridden, wheelchair bound. The perception is that being obese is not being sick and therefore does not need urgent action to be taken. Obesity is not viewed as a health problem, but rather related to appearance.
Studies have shown that taste is paramount when consumers make food choices. This underscores the importance of making sure that tastes are not adversely affected when renovating or improving food products. Consumers generally think that healthy foods are not tasty. The possibility of “training” children from a young age to accept or prefer foods with less salt, less sugar and less fat was discussed. This should be possible if such tastes are acquired rather than in-born. Recognising this, the importance of promoting healthy eating among young children was emphasised.

Recognising the prevailing consumer attitude and practices, discussion also centred on steps to be taken to enable effective food renovations and consumer education to be carried out. It was clear that to effectively reach out to consumers, more data on consumer perception of food choices and their attitude towards healthy eating need to be urgently obtained. The drivers of food choices for various community groups need to be identified to enable effective interventions to be carried out.

Promotion to consumers to consume healthy diets has been conducted in the country for decades. However, consumers do not seem to see the urgency to adopt healthy lifestyles. Participants discussed adopting more effective approaches to nutrition and health promotion. It is important to focus on correct messaging to the consumer. It was debated whether messaging should be stronger when reaching out to consumers. It was certainly agreed that more innovative approaches and media should be utilised.

Participants discussed policy options towards promoting healthy eating. A proposal was for hard policies to be undertaken, eg taxation on foods high in fat, salt and sugar and removal of subsidy for such commodities. The question to be asked is if measures such as taxation have been shown to be effective in other countries. There was also a proposal that instead of punitive measures, incentives could be provided to companies producing healthier alternative products.

The food industry was urged to continue to make healthier food choices available to consumers. It was remarked that there are not many improved products produced by SMEs. Assistance and incentives may be needed for these companies. The industry was also urged to practice responsible marketing of foods. The pledge to practise voluntary control of marketing of foods to children must be properly monitored and that companies do comply.

There was general agreement that there is a need for multi-stakeholder approach towards promoting healthy diets for the prevention of NCDs. This should include government ministries and agencies, academia, private sector, consumer groups. Non-health sectors should also collaborate in these efforts. The various stakeholders can work through existing infrastructure, e.g. the Obesity Task Force and the National Plan of Action Malaysia working groups.

Report by

E-Siong Tee, PhD
Country Coordinator
ILSI Malaysia Country Committee

24 December 2014