

Cost of the Diet Study Results



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Investing in Nutrition – value for money

1 in 3 children under 5 are stunted

1 in 4 Indonesians are anemic

1 in 8 children under 5 are overweight

1 in 4 adults are overweight

Annual losses due to vitamin and mineral deficiencies in Indonesia: USD 4.3 billion

\$1 invested in nutrition = \$48 return

Can the IDR 19 trillion or USD 1.4 billion spent on Rastra have a higher impact?

Humans need 40 different nutrients to be healthy, grow and develop – This requires a diverse diet

Nutrient / Compound	Dietary sources
Vitamins, plant origin	Vegetables, fruits, grains
Vitamins, animal origin	Breastmilk, dairy, meat, fish, eggs
Minerals	Animal and plant source foods
Protein, essential amino acids	Legumes, lentils, nuts, grains, animal source foods
Essential fatty acids	Soybean, rapeseed, fish oil



Young children need foods with a higher nutrient concentration than adults

	6-8 mo old breastfed child	Adult man
Body weight	7 kg	70 kg
Energy intake, incl breastmilk	600 kcal	2700 kcal
Energy from foods, excl breastmilk	200 kcal	2700 kcal
Iron / 100 kcal food	4.5 mg	0.5 mg

Young children require 9 times more iron than adult men

Introduction to Cost of Diet study



Background

- Rastra provides 15 Kg rice/month (24,000+110,000)
- Bantuan Pangan Non-Tunai (BPNT) provides Rp 110,000 / HH
 - Original plan: Rice + eggs
 - Actual implementation: Rice + sugar



Study objectives

1. Is it possible to purchase a nutritious diet using foods locally available on the market?
2. What is the cost and content of a nutritious diet?
3. Do households have enough money to purchase this nutritious diet?
4. Which locally available foods should be included in BPNT's local food basket?
5. If it is possible to increase the cash value of the BPNT voucher, what foods should be included?

Methods



Cost of the Diet: How does it work



Locally available food items



Possible nutritious diets meeting all nutrient requirements of the model household



Least expensive nutritious diet

Study sites



Definition used for a nutritious diet

Staple-adjusted nutritious diet

- Takes into account staple preference (rice)
- Also includes other commonly consumed foods
 - Maize in NTT
 - Sweet potato in Papua
- Includes recommended daily amount of breastmilk for child 12-23 months
- Meets requirements for energy, fat, protein, 9 vitamins and 4 minerals
- Does not exceed the upper limits for any nutrients

Results and Key Findings



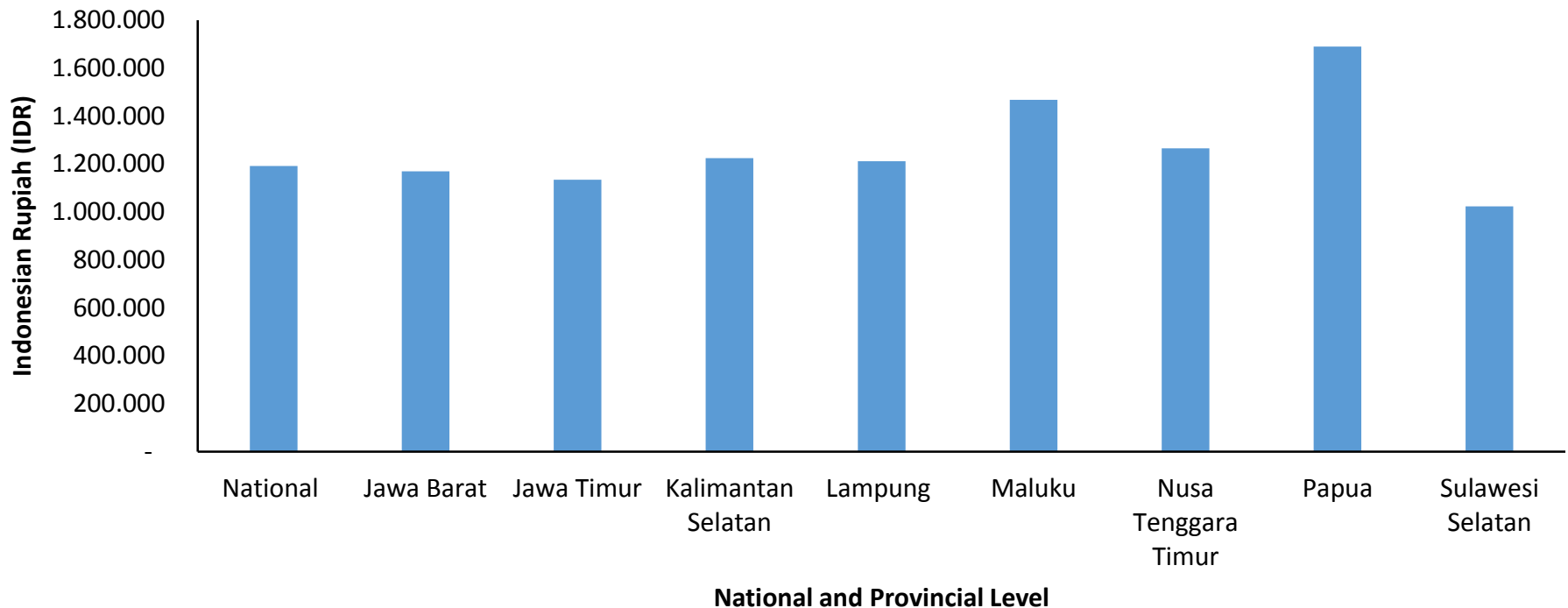
✓ Results: Objective 1

- It is possible to purchase a nutritious diet using foods available in the local markets
- Rice, eggs and green leafy vegetables met the greatest share of nutritional requirements at the lowest cost = Nutritious Package

	Rice	Fortified wheat flour	Maize	Sweet potato	Sago	Taro	Cassava	Peanut	Tofu/ Tempeh	Fish	Egg	Green leafy vegetables	Fortified oil	Breast milk
National	X	X			X		X	X	X	X	X	X	X	X
Jawa Barat	X	X				X	X	X	X	X	X	X	X	X
Jawa Timur	X	X				X	X	X	X	X	X	X	X	X
Kalimantan Selatan	X	X				X		X	X	X	X	X	X	X
Lampung	X	X				X	X	X	X	X	X	X	X	X
Maluku	X	X			X		X	X	X	X	X	X	X	X
Nusa Tenggara Timur	X	X	X			X	X	X	X	X	X	X	X	X
Papua	X	X		X	X			X	X	X	X	X	X	X
Sulawesi Selatan	X	X				X		X	X	X	X	X	X	X

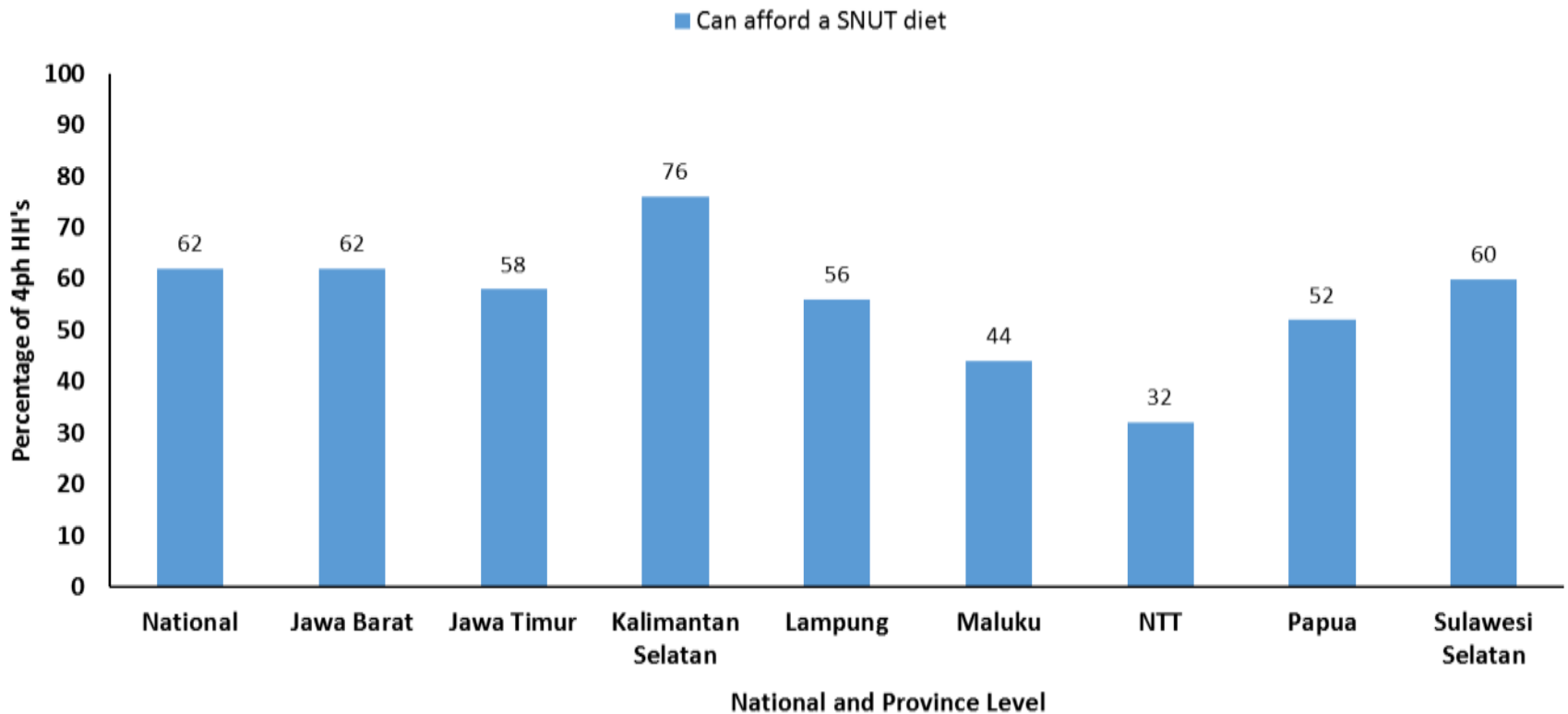
✓ Results: Objective 2

- At a national level, a nutritious diet for the average household costs 1,191,883 IDR per month



✓ Results: Objective 3

- At national level, 62% of households can afford a nutritious diet



✓ Results: Objective 4





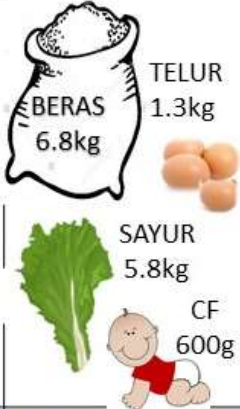

















- Food availability is not a key barrier to better nutrition
- Affordability is a key barrier for the poor
- Preference, convenience or knowledge may be key barriers

SUSENAS 2016: showed that on average households purchased 1.4 kg of boiled or steamed cake, 3.2 kg of fried foods and 0.77 kg of snacks for a child (any age) such as krupuk per week, compared to 87 g of spinach, 47 g of mustard greens and 170 g of tofu



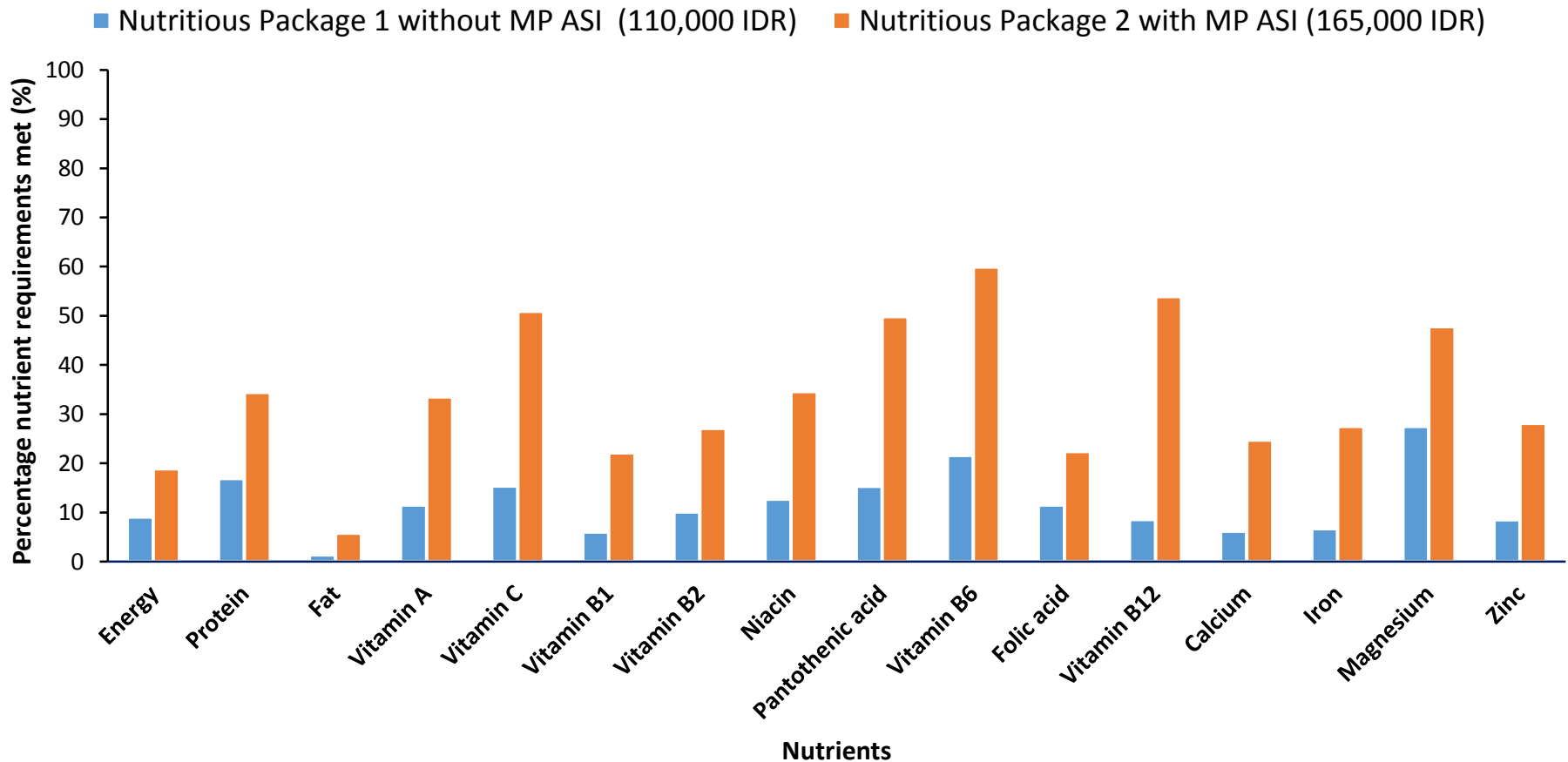
✓ Results: Objective 5 (cont.)

- The nutritious package has the greatest nutritional impact compared to the current Rastra programme, BPNT with rice and sugar and BPNT with rice and eggs

National		Rastra	BPNT rice + sugar	BPNT rice + eggs	Nutritious package 1	Nutritious package 2	Nutritious package 3
Subsidy paid by the government (IDR per month)		110,000	110,000	110,000	110,000	165,000	220,000
Ingredients							
% Recommended intake	Protein						
	Vit A						
	Iron						

✓ Results: Objective 5 (cont.)

- Adding MP-ASI to the nutritious package as a greater nutritional impact for children aged 12-23 months



Do Cash or e-Voucher Programs for Vulnerable Households Impact Nutrition?

Experiences from Other Countries



Providing staple food may not impact nutrition - Indonesia

Community and International Nutrition

Food-for-Work Programs in Indonesia Had a Limited Effect on Anemia¹

Regina Moench-Pfanner,^{†2} Saskia de Pee,[†] Martin W. Bloem,^{†**} Dorothy Foote,^{*} Soewarta Kosen,[‡] and Patrick Webb^{††}

*Helen Keller International, *Jakarta, Indonesia, †Singapore, **New York, NY; ‡National Institute for Health Research and Development, Jakarta, Indonesia; and ††United Nations World Food Programme, Rome, Italy*

- Food assistance supports household and likely improves dietary diversity
- But, to enhance impact on micronutrient deficiencies, incl anemia, specific nutritious foods may need to be consumed by specific target groups

Providing cash alone may increase overweight/obesity - Mexico

Findings from Oportunidades, Mexico:

Cash Component of Conditional Cash Transfer Program Is Associated with Higher Body Mass Index and Blood Pressure in Adults^{1,2}

Lia C. H. Fernald,^{3*} Paul J. Gertler,^{3,4} and Xiaohui Hou⁵

³School of Public Health, and ⁴Haas School of Business, University of California, Berkeley, Berkeley, CA 94720; and

⁵The World Bank, Washington, DC 20433

J. Nutr. 138: 2250–2257, 2008.

In the context of the nutrition transition, increased income increases the consumption of high-sugar, high-fat and animal-source foods and reduces the intake of fruits, vegetables and whole grain foods.

E-voucher to purchase any food is associated with more overweight/obesity and higher NCD risk – USA

	Mean values		
	SNAP participants (N=1,296)	Income eligible non-participants (N=4,179)	Higher income non-participants (N=7,175)
Body Mass Index (BMI)	30,9	28,5	28,4
BMI ≥25 (%)	73,7%	65,8%	68,0%
BMI ≥30 (%)	46,7%	34,7%	33,1%
History of heart disease (%)	7,7%	8,4%	5,1%
Reported history of stroke (%)	4,6%	4,2%	2,1%
Reported diabetes (%)	10,4%	9,9%	6,8%
Weight gain over past year (pounds)	2,3	0,5	-0,5

Combining cash & special food for children works best - Niger

OPEN ACCESS Freely available online

PLOS MEDICINE

Preventing Acute Malnutrition among Young Children in Crises: A Prospective Intervention Study in Niger

Céline Langendorf^{1*}, Thomas Roederer¹, Saskia de Pee², Denise Brown³, Stéphane Doyon⁴, Abdoul-Aziz Mamaty⁵, Lynda W.-M. Touré⁵, Mahamane L. Manzo⁶, Rebecca F. Grais¹

1 Epicentre, Paris, France, **2** Policy and Strategy Division, World Food Programme, Rome, Italy, **3** World Food Programme, Niamey, Niger, **4** Médecins Sans Frontières, Paris, France, **5** Epicentre, Niger, **6** Regional Department of the Ministry of Public Health, Maradi, Niger

Abstract

Background: Finding the most appropriate strategy for the prevention of moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) in young children is essential in countries like Niger with annual “hunger gaps.” Options for large-scale prevention include distribution of supplementary foods, such as fortified-blended foods or lipid-based nutrient supplements (LNSs) with or without household support (cash or food transfer). To date, there has been no direct controlled comparison between these strategies leading to debate concerning their effectiveness. We compared the effectiveness of seven preventive strategies—including distribution of nutritious supplementary foods, with or without additional household support (family food ration or cash transfer), and cash transfer only—on the incidence of SAM and MAM among children aged 6–23 months over a 5-month period, partly overlapping the hunger gap, in Maradi region, Niger. We hypothesized that distributions of supplementary foods would more effectively reduce the incidence of acute malnutrition than distributions of household support by cash transfer.

Including healthy and fortified foods in e-voucher positively impacts nutrition - USA

The Impact of the 2009 Special Supplemental Nutrition Program for Women, Infants, and Children Food Package Revisions on Participants: A Systematic Review

Daniel Joseph Schultz, MS; Carmen Byker Shanks, PhD; Bailey Houghtaling

J Acad Nutr Diet. 2015;115:1832-1846.

WIC participants increased consumption of fruits, vegetables and whole-grain products, and consumed less juice, white bread, whole milk.

SNAP participants would support incentives to increase fruits and vegetable consumption and restrictions to consumption of sugar-sweetened beverages.

Currently, SNAP is not supporting participants in meeting the 2010 Dietary Guidelines for Americans.

Conclusion: In order to impact nutrition, cash or e-voucher program should guide the choice of foods

E-vouchers should

- Have sufficient cash value
- Specify which foods can be bought in which amounts
- Include a special nutritious food for specific target groups (e.g. children 6-23 mo)
- Include behavior change communication on nutritious food choices – how & why

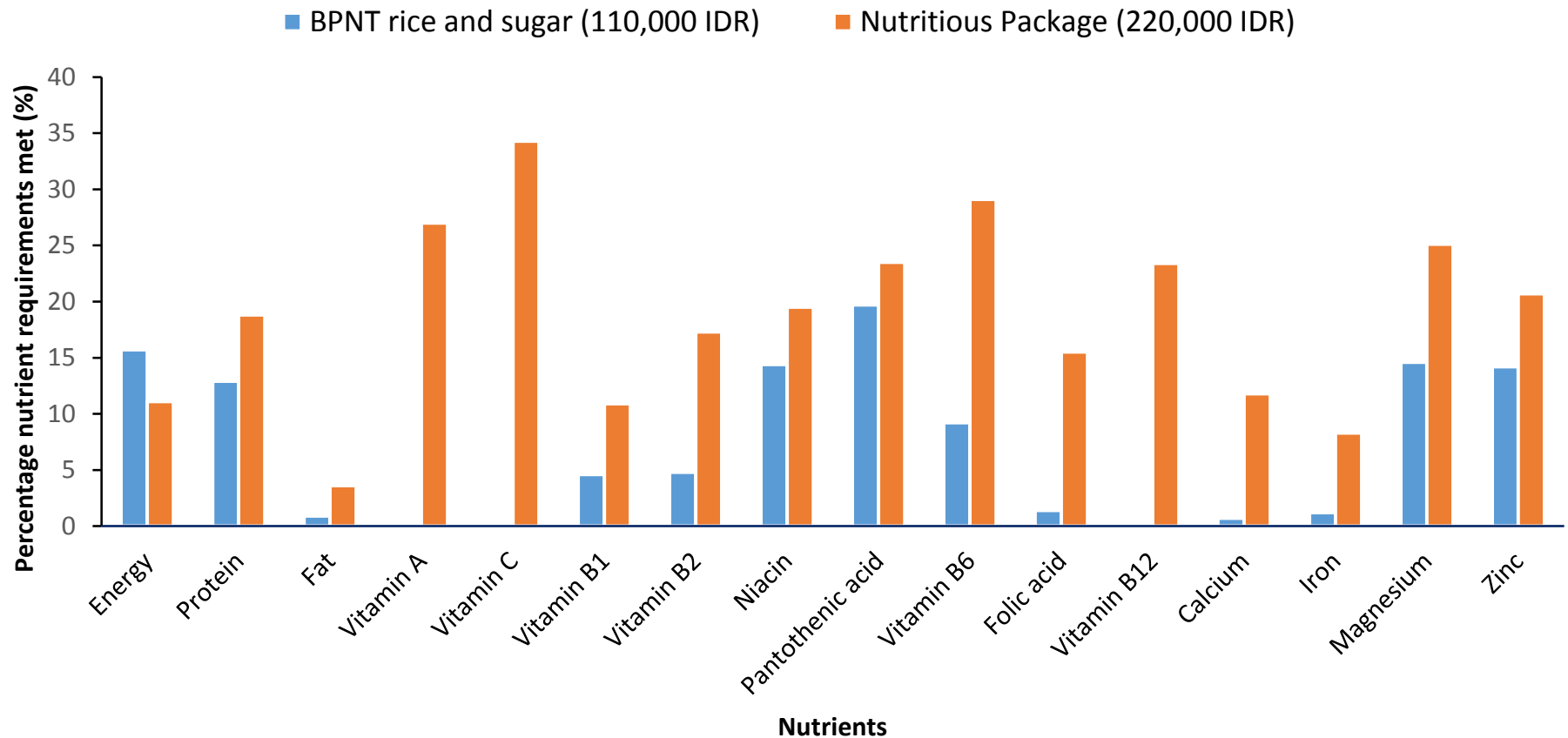
Recommendations for BPNT



Recommendation #1

A basket of rice and sugar should not be provided as part of the BPNT

- It provides very little nutritional impact
- It may potentially exacerbate levels of overweight and obesity



Recommendation #2

The recommended food basket for the Rastra transformation programme (BPNT) is rice, eggs and green leafy vegetables

- Restrictions should be made on the quantities of each food that can be purchased by the voucher



Recommendation #3

Increase the voucher value by 50% (to 165,000 IDR) to include 20g per day of a special food for children aged 6-23 months



Recommendation #4

If possible, double the voucher (to 220,000 IDR) to include complementary food for children and purchase other nutritious foods of their choice with the remainder



Recommendation #5

As the cost of foods differ by province, fixed quantities of foods should be available for households to purchase regardless of the province in which they live – voucher value will hence differ by province / region

	Nutritious Package 1	Nutritious Package 2	Nutritious Package 3
National	110,000	165,000	220,000
Jawa Barat	98,300	157,800	168,500
Jawa Timur	91,800	140,200	149,500
Kalimantan Selatan	115,500	168,000	179,800
Lampung	101,700	154,700	165,700
Maluku	149,000	214,800	234,000
Nusa Tenggara Timur	124,700	184,900	204,400
Papua	177,000	247,500	272,800
Sulawesi Selatan	91,300	143,200	154,300

Recommendation #6

Explore mechanisms for ensuring that food price volatility does not reduce the amount of foods that participants can get for the voucher



Recommendation #7

Monitor food expenditure, dietary diversity and nutrient intake of BPNT recipients in order to evaluate its contribution to nutrition



Summary



Summary of Recommendation

1. BPNT basket not to include rice & sugar
2. BPNT basket 110,000 IDR: rice, eggs, dark-green leafy vegetables
3. Voucher value 165,000 IDR, add MP-ASI for 6-23 mo old child
4. Voucher value 220,000 IDR, add MP-ASI for 6-23 mo old child and some free choice of nutritious foods
5. Food entitlements should not differ by province – fix the basket and adapt voucher value to accommodate food price differences
6. Protect BPNT recipients against food price fluctuations
7. Monitor diet of BPNT recipients

Question and answer

