



NUTRITIONAL ASSESSMENT OF RESETTLED PAEDIATRIC REFUGEES IN WESTERN AUSTRALIA

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- 2018 RACP Rue Wright Awards Presentation

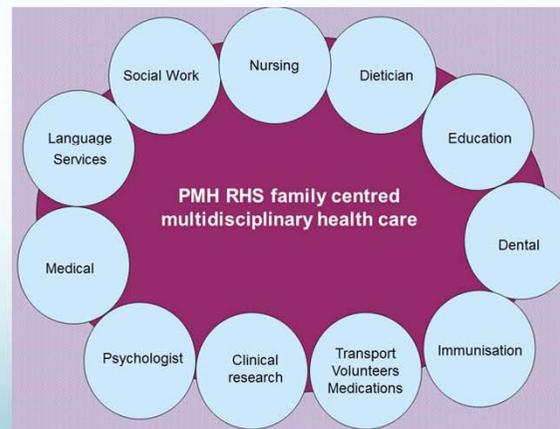
Why is this important?

- Nutritionally vulnerable group
- High rates of 'food insecurity'
 - 55.9% of refugees resettled in Perth metro
- Limited Australian population data



Aims

- To establish baseline data for Refugee Health Service (RHS) cohort between 2010-2015
 - Social and demographic
 - Anthropometric
 - Nutritional concerns



Methods

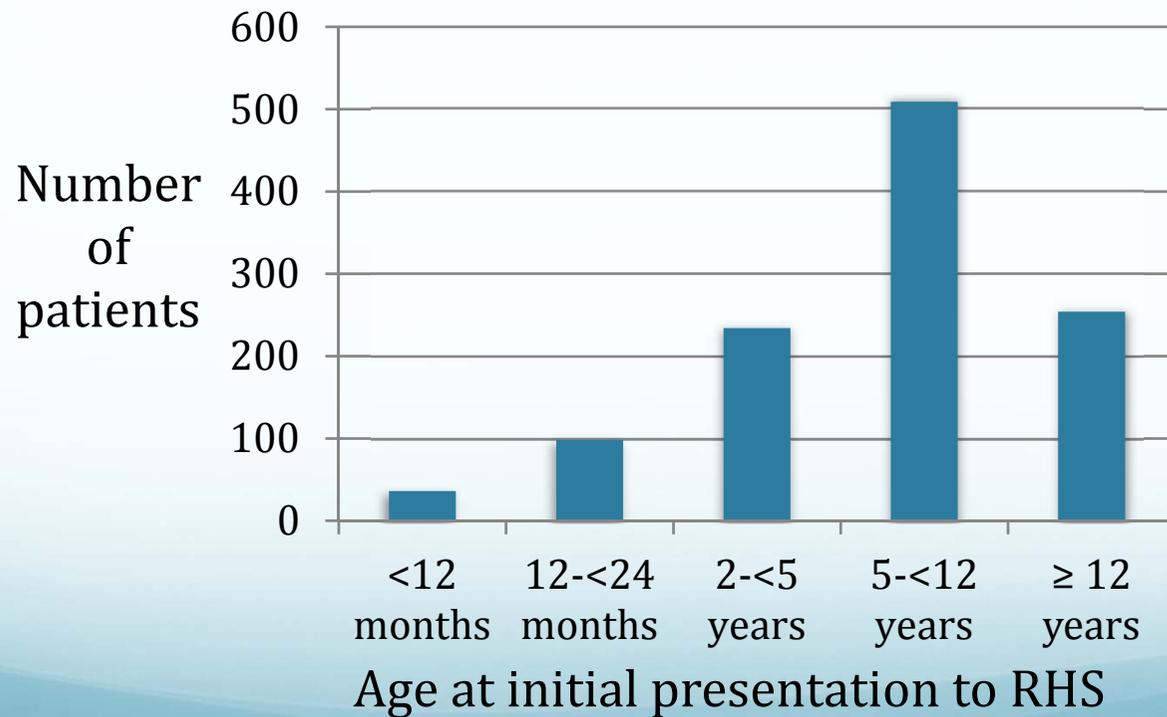
- Prospective completion of standardised PMH RHS initial multidisciplinary health assessments
- Retrospective audit
- Data analyses - SPSS V.23
- Project approval: GEKO Quality Activity #8473, HREC #1255EP

Results: Demographics

- 1131 children (male 53.6%)
- Age range 2 months - 17.8 years (median 7.4 years)
- Median time from arrival in Australia to assessment at RHS 5 months (IQR 3.6-6.6)
- Median transit time 36 months (IQR 18-72 months)

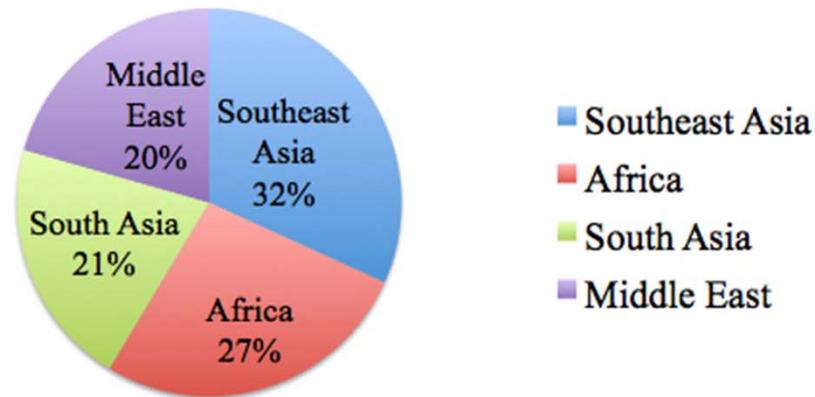
Results: Demographics

Age Distribution



Results: Demographics

Ethnicity



- 25.8% spent time in refugee camp
 - Long periods for African and Southeast Asian children
- 14.6% spent time in detention
 - Majority Middle Eastern and South Asian

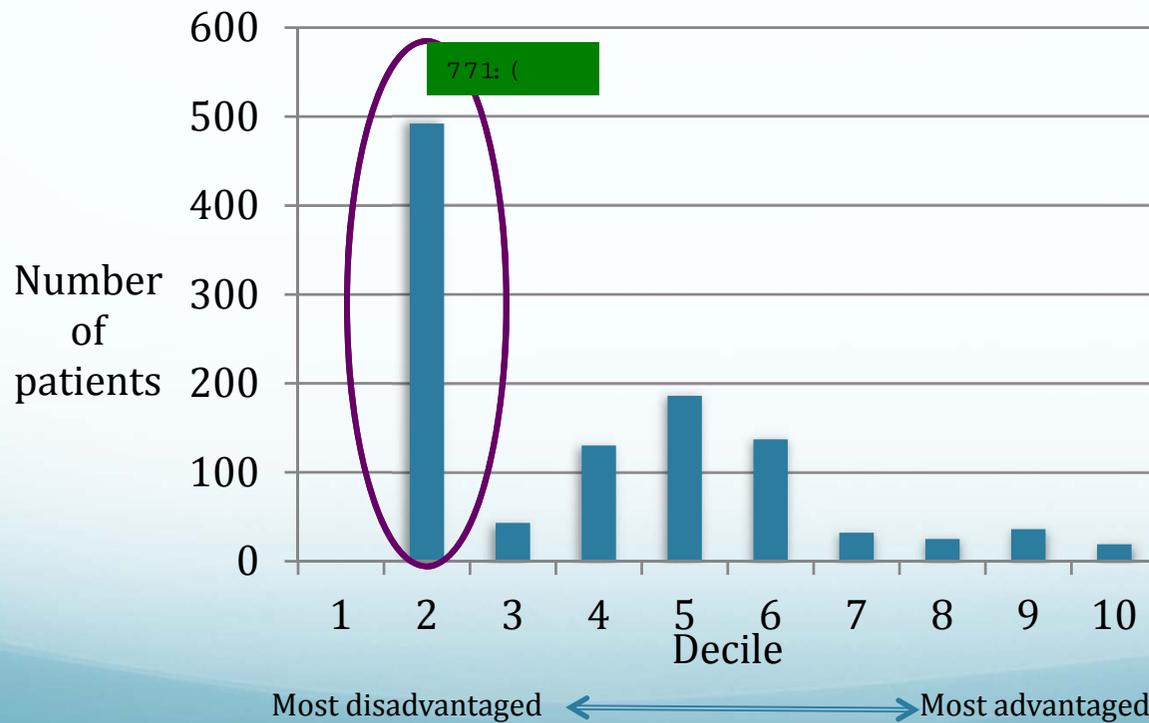
Results: Demographics

- 93.5% permanent visas, 2.5% asylum seekers
- Nuclear family separation 27.9%
- Majority of carers (86.7%) not English proficient
- Limited parental education (nil or primary only) 44.1%*

* n=458 parents where data available

Results: Demographics

Postal Area Index of Relative Socio-economic Advantage and Disadvantage

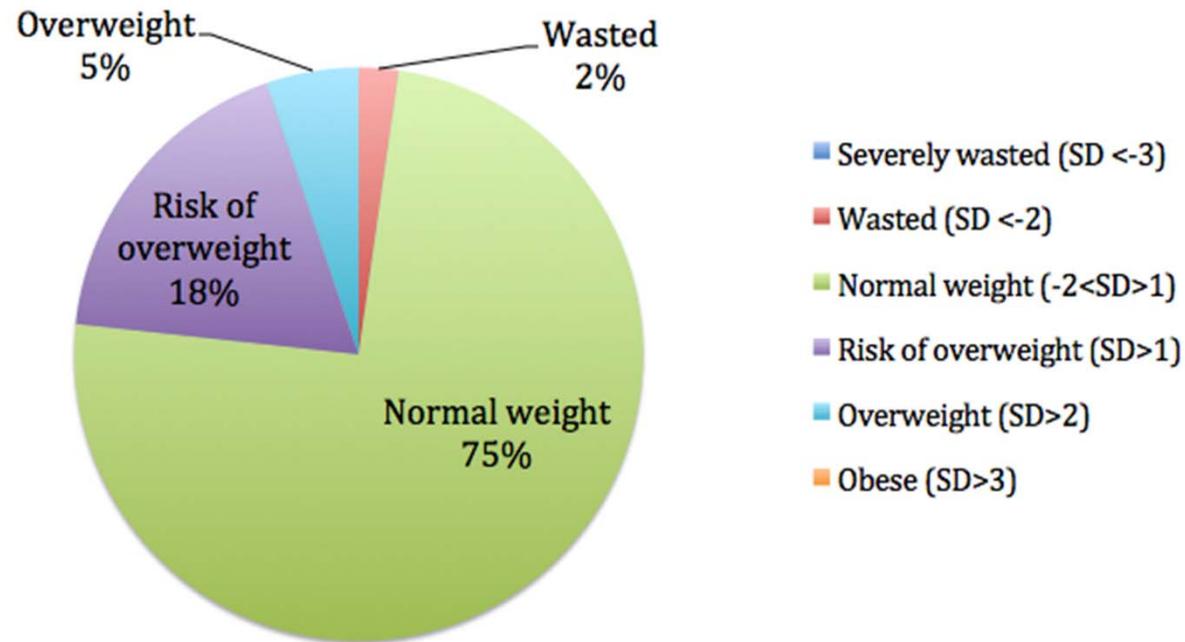


Results: Haematological/biochemical

- Vitamin D insufficiency (<50nMol/L) 50.3%
- Iron deficiency 12.3%
- Anaemia 7.3%
 - Southeast Asian children (11.5%, $p<0.001$)
 - Ages 12-24 months (19.8%, $p<0.001$)

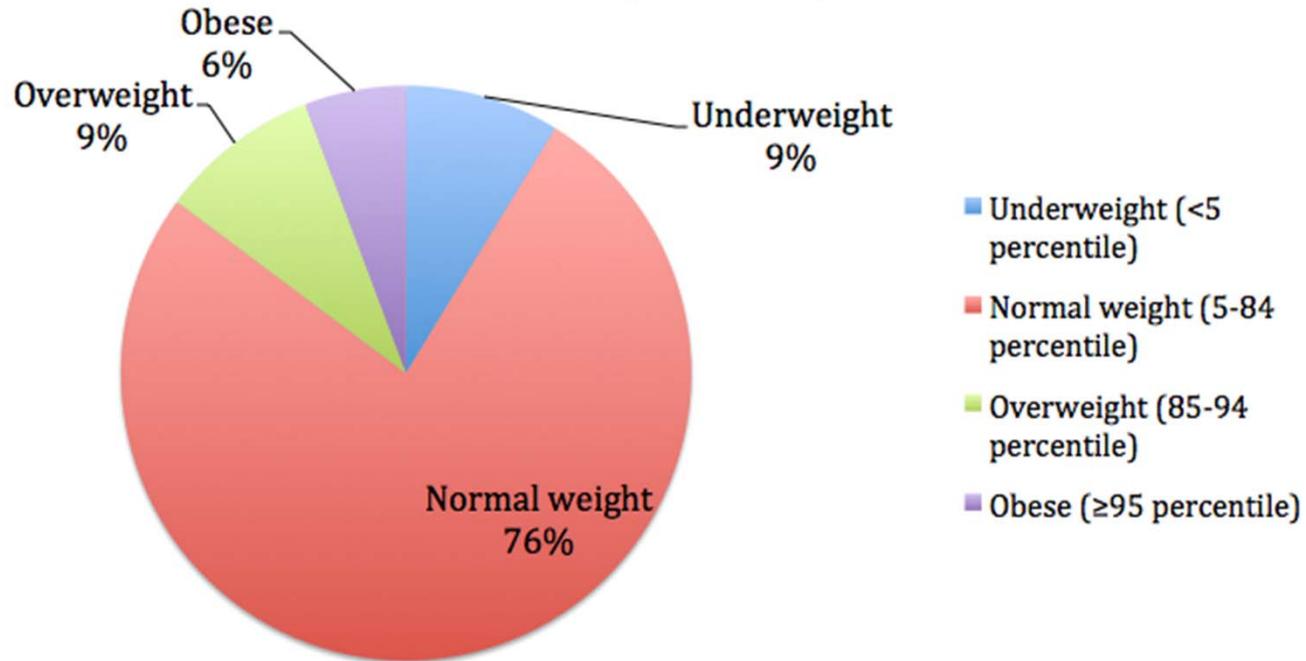
Results: Anthropometric <24 months

Weight-for-length z-score at time of RHS assessment (n=133)



Results: Anthropometric ≥ 24 months

BMI percentile category at time of RHS assessment (n = 991)



Results: Dietary

- Breastfeeding of those 12-24 months = 44%
 - 4x increased odds iron deficiency (OR 4.0, 95% CI 1.4-11.6, p=0.012)
- Median age completed weaning 18 months (IQR 12-24 months)
- Median age of introduction of solids 6 months (range 3-24 months)

Results: Dietary

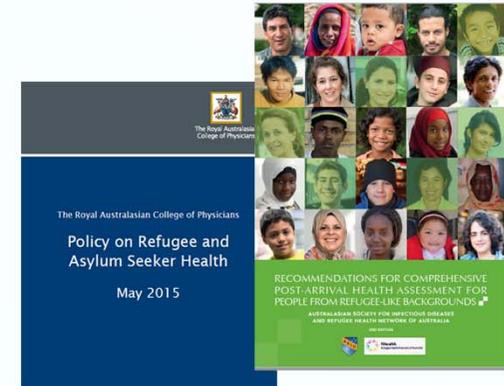
- 'Excess' juice consumption 34.4%
- Inadequate dairy intake 20.9%
 - Highest amongst Southeast Asian (31.5%, $p < 0.001$)
- Red meat intake 66.7%
- Non-meat eaters - significantly higher prevalence of iron deficiency
 - 34.7% versus 12.4%
 - OR 3.7, 95% CI 2.0-7.0, $p < 0.001$

RHS care issues identified

1. Relative poverty and poor English proficiency
2. Nutritional compromise
 - Vitamin D deficiency
 - Anaemia – Southeast Asian, 12-24 months
 - Iron deficiency - vegetarian, prolonged breastfeeding
 - Low dairy intake – Southeast Asian
 - Excess juice
3. Growth concerns at presentation
 - Underweight in African children
 - Overweight in Middle Eastern children

Strengths

- Largest Australian paediatric refugee dataset post resettlement
- Standardised assessment
- Demonstrates importance of holistic assessment at time of resettlement
 - Awareness of cultural norms
 - Heterogeneity
 - Socioeconomic determinants of health



Limitations

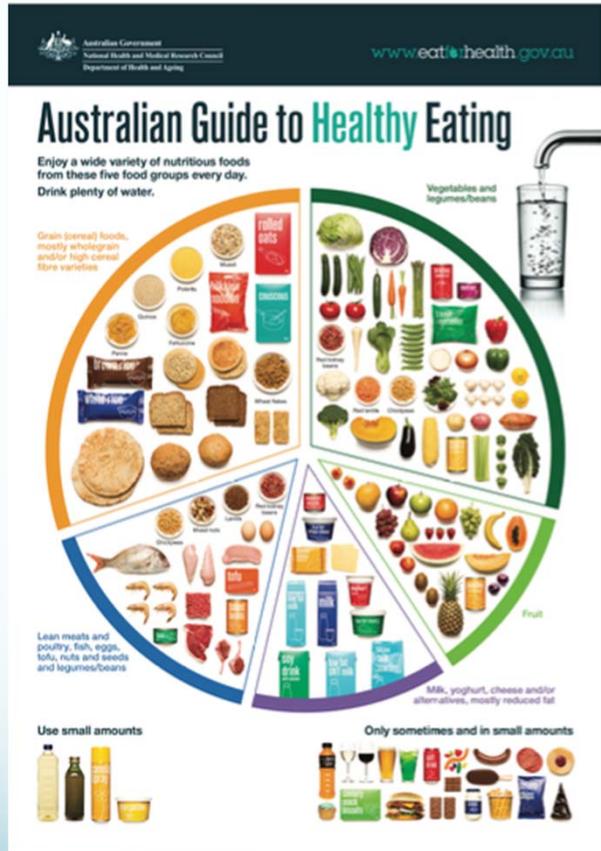
- Cross-sectional and retrospective
- Subjective dietary histories
- Impact of trauma on recall
- Cultural variation and “norms”
- Potential cohort with incorrect date of birth

Service implications

- Health literacy and relative disempowerment of cohort
- Screening for food insecurity
- Importance of multidisciplinary assessment, particularly routine dietetic review
 - No community dietetic service available
- Cultural heterogeneity of concerns
- Targeted nutritional interventions

Future directions

- Longitudinal research to assess growth trajectories
- Status of physical activity, “junk food” intake, screen use
- Need for resource development for health professionals



What is a standard serve?

Products can be fresh, frozen, packaged or tinned/canned

	19-50 years	51-70 years	70+ years
Men	6	5	5
Women	5	5	5

	2-3 years	4-8 years	9-11 years	12-13 years	14-18 years
Boys	2%	4%	5	5%	5%
Girls	2%	4%	5	5	5

Vegetables and legumes/beans — about 75g

	19-50 years	51-70 years	70+ years
Men	2	2	2
Women	2	2	2

	2-3 years	4-8 years	9-11 years	12-13 years	14-18 years
Boys	1	1%	2	2	2
Girls	1	1%	2	2	2

Fruit — about 150g

	19-50 years	51-70 years	70+ years
Men	2	2	2
Women	2	2	2

	2-3 years	4-8 years	9-11 years	12-13 years	14-18 years
Boys	1	1%	2	2	2
Girls	1	1%	2	2	2

Thịt nạc và thịt gia cầm, cá, trứng, đậu phụ và các loại hạt, đậu khô và rau đậu / trái đậu

	19-50 tuổi	51-70 tuổi	70 tuổi +
Đàn ông	3	2%	2%
Đàn bà	2%	2	2

	2-3 tuổi	4-8 tuổi	9-11 tuổi	12-13 tuổi	14-18 tuổi
Con trai	1	1%	2%	2%	2%
Con gái	1	1%	2%	2%	2%

Sữa, sữa chua, phô mai và/hoặc các món thay thế, phần lớn đã được làm giảm chất béo

	19-50 tuổi	51-70 tuổi	70 tuổi +
Đàn ông	2%	2%	3%
Đàn bà	2%	4	4

	2-3 tuổi	4-8 tuổi	9-11 tuổi	12-13 tuổi	14-18 tuổi
Con trai	1%	2	2%	3%	3%
Con gái	1%	1%	3	3%	3%

Được in năm bởi Vùng Y tế Địa phương Tây Nam Sydney, Vùng Y tế Địa phương Miền Tây Sydney và Vùng Y tế Địa phương Sydney (South Western Sydney Local Health District, Western Sydney Local Health District and Sydney Local Health District) - Tháng Năm 2014

Đưa lên và lưu được cung cấp bởi Hội đồng Nghiên cứu Y học và Sức khỏe Trẻ em Quốc gia (National Health and Medical Research Council) 1 chén = 1 tách = 250mL

<http://www.mhcs.health.nsw.gov.au/publicationsandresources/>

Acknowledgements

- The other PMH RHS Dietitians involved during the study period (Leah Queit and Marina Keating),
- RHS staff, interpreters and families.



Thank you 😊
Questions?

