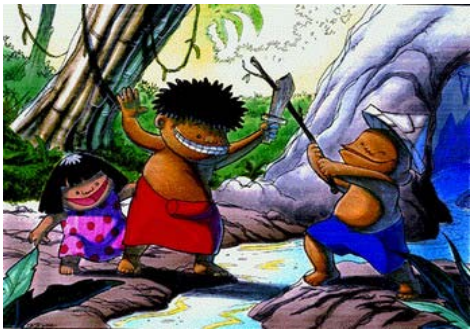
MORTALITY, MORBIDITY & MALNUTRITION IN ORANG ASLI CHILDREN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SUMMARY POINTS:

- Orang Asli comprise 150,000 people with more than 55% below 20 years of age
- The poverty rate for Orang Asli remains at a high at 76.9%
- Childhood malnutrition among Orang Asli children range from 30-60% (compared to 7.5% moderate malnutrition & 0.6% severe for national average)
- Perinatal mortality rates for Orang Asli are more than 3 times national average (25.7 vs 8.1 per 1000 births)
- Infant mortality rate for Orang Asli are more than 3 times national average (19.3 vs 6.2 per 1000 live births)
- Orang Asli children under 5 years are 15 times more likely to die than Malay/Chinese/Indian children
- Malnutrition rates appear to be increasing in Orang Asli children with more fatalities on presentation to government hospitals

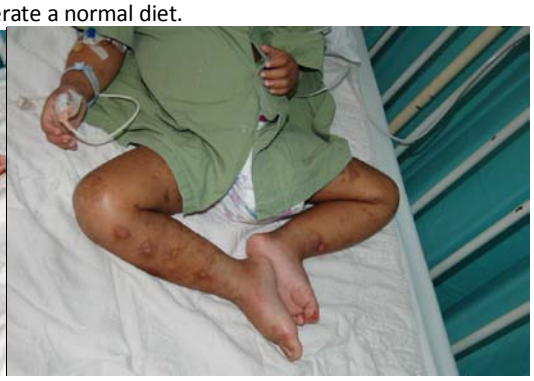
KEY RECOMMENDATIONS (Full Recommendations On Page 6)

- Make OA children mortality and malnutrition rates a national indicator to highlight the importance
- Proactively identify all Orang Asli children with severe malnutrition and admit to re-feeding center
- Develop an intervention programme to reduce mortality using OA village health workers & a modified IMCI training programme
- Extensively revamp the Kekurangan Zat Makanan (KZM) MOH programme
- Responsibility for the provision of health care needs of Orang Asli to be moved completely from Jabatan Hal Ehwal Orang Asli (JHEOA) to Ministry of Health

"When I became Prime Minister, I said tell the leader the truth. I don't want to hear nice things only."
"Truth can be repeated again and again so we won't forget to address it (issues) until we resolve it,"
Datuk Seri Abdullah Ahmad Badawi, August 7, 2008

FAISAL'S STORY (An example of many OA children we see almost daily)

Faisal is almost 5 years old and in the past 12 months he has been admitted to the Paediatric Intensive Care Ward at Ipoh Hospital 4 times. Each time he has come in with a severe infection but his underlying problem has been malnutrition. Faisal has Kwashiorkor – protein energy malnutrition. Tests show that his serum albumin is extremely low (15 g/l). With the oedema he weighs 15 kilograms. With treatment (when oedema subsides, he only weight 10 kilograms, the weight we expect for a, 1½ year old child. Feeding Faisal is also a major challenge each time he is admitted. Due to the severe malnutrition and chronic lack of protein, he is not able to tolerate protein introduction quickly. Normal strength milk or high protein diet kill him and he requires very careful and slow introduction of nutrition supplements based on the IMCI regimen (F-75) for many weeks until he is able to tolerate a normal diet.



Despite many admissions, with aggressive care and slow re-feeding, he has returned to the same state repeatedly. How did Faisal get to this state and why does it recur? He is a normal boy in all other ways, in that he has no major health problem. His problem is malnutrition induced by poverty. A problem faced by the majority of Orang Asli children. Faisal's mother has 2 other younger children. Their father left some time back to find a better job but has yet to return, and does not support them financially. His mother lives with her brother in a simple home with caters for more than 10 people. They have no toilet or safe water supply (use the river). She works 6 days a week at a restaurant in a nearby town from 7am to 12 midnight for RM 500 per month. Her brother has his own mouths to feed and cannot help much. Most days Faisal does not have the luxury of breakfast. Lunch and dinner is a simple plate of white rice with salt and a drink of teh-o. This usually last for around 15 days in the month (that's all they can afford). For the other days in the month they make do with bananas or sweet potatoes grown around the home. The health department tries to give the family a month food basket but Faisal's mother says that this does not always arrive.

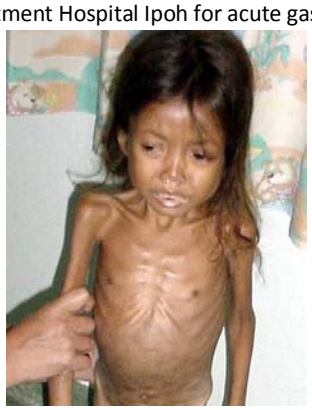
In the ward Faisal looks apathetic with little will to live. His mother cannot stay with him as she needs to work for the family, or else lose her job. He will get better with hospital care but he will return to his environment where the vicious cycle will recur.Bah Faisal is almost 5 years old but will he live to see his 6th birthday?

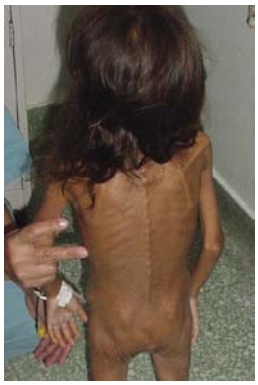
ROSMARIA'S STORY

Rosmaria is 7 years old and comes from Gua Musang. Her village expects a visit from the health department once a year due to accessibility problems. She was sent to the Paediatric Department Hospital Ipoh for acute gastroenteritis, but she has been existing with marasmus for many years.

She had to stay 3 months in the department to gain reasonable weight (i.e. borderline malnutrition).

Her problem will recur as the primary issue of poverty in her village is not settled. She is the tip of the iceberg for OA children in the interior – the majority of whom never reach us early enough to save them or never reach us at all.





1 INTRODUCTION

Despite much improvement in the health status of the general population over the past 30 years, Orang Asli health has not changed as significantly and may have deteriorated. The perinatal and infant mortality for Orang Asli remains much higher than the national average and many Orang Asli Children also die before their 5th birth day (under 5 mortality). Of those admitted ill to Paediatric Departments, the death rate due to malnutrition is high. However, the true mortality rates in Orang Asli children are not known as many deaths are not reported. There are many logistic and social issues that limit accurate data collection.

This paper has been written a number of years ago and been updated periodically. Data from this paper has been obtained from a variety of sources (see references). Its purpose has been to attempt to sensitise senior managers to the severe and urgent needs of the Orang Asli children. In the past 26 years of working, I have personally seen the health of Orang Asli children deteriorate. Despite many regional attempts, by many of us, via government agencies to rectify the problems, the situation appears to be worsening. It almost appears as if this group of people and children are not visible to our managers and leaders. There is also a tendency by other people groups and professionals (MOH, MOE, JHEOA, etc) to "look down" on this people group.

It is important, as we strive to support this group of Malaysians, that we do not make them beggars. Equally vital is the need to respect and preserve their culture/way of life and spiritual beliefs. We need to understand them and work with them to enable them to take control of their lives, society and health needs. No single initiative or agency will work. While there is an urgent need to intervene and reduce malnutrition, long term needs are socioeconomic development that is sustained and culturally acceptable.

2 SELECTED DATA TO SUPPORT OPINIONS

2.1.1 ORANG ASLI POPULATION & SOCIAL ISSUES

The Orang Asli population in 2004 was 149,512 (0.6% of the national population) comprising Negrito, Senoi and Proto-Malays. The Orang Asli population, regardless of the tribe, consists of a younger population with more than 55% below 20 years old (see Table 1).

Table 1: Percentage Distribution of Orang Asli tribes of Negrito, Senoi and Proto-Malays by Age and Sex 2005

Age Group	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
Male (Proto-Malay)	30.5	25.3	15.3	12.4	7.7	4.6	2.8	0.1	0.03
Female (Proto-Malay)	31.3	25.7	15.7	12.5	7.3	4.2	2.2	0.8	0.2
Male (Negrito)	31.7	24.3	17.7	9.7	7.8	5	2.8	1.6	0.1
Female (Negrito)	28.6	26.4	17.9	11.6	8.3	4	1.9	0.6	0.7
Male (Senoi)	34.1	23.2	16	10.7	6.4	5.1	3.1	1.1	0.3
Female (Senoi)	35	23.4	16.4	10.9	6.9	4.1	2.2	0.8	0.2

There are 840 designated Orang Asli villages throughout Peninsular Malaysia 383 in the interior, 448 in the fringes and 9 villages in the urban areas. Total number of households among Orang Asli populations is 23,155, with an average family size of 5.0 (1998 survey).

The majority are in Pahang, Perak, Selangor and Kelantan (see Table2). Figures for Kelantan may not be accurate as the population appears to be much larger than documented.

Table 2: Total Number Of Orang Asli Population According To States (Source: JHEOA, Dec 2003)

States	Negrito	Senoi	Proto-Malays	Total	Percentage
Pahang	657	22,609	31,027	54,293	36.8%
Perak	2,131	45,093	363	47,587	32.3%
Selangor	-	3,758	10,403	14,161	9.6%
Kelantan	953	9,701	-	10,654	7.2%
Johore	-	2	10,940	10,942	7.4%
N. Sembilan	-	-	7,624	7,624	5.2%
Melaka	-	23	1,228	1,251	0.8%
Terengganu	28	640	-	668	0.5%
Kedah	232	-	-	232	0.2%
Total	4,001	81,826	61,585	147,412	

There is a high rate of school drop out and illiteracy among Orang Asli children (estimated as 70%). The Government has built 47 hostels and 92 primary schools to cater for the needs of the community. While there has been some improvement in the levels of education attained among the Orang Asli, education levels still lag far behind those achieved by other communities. Almost half (49.2 percent) of the Orang Asli are illiterate, while the remainder (38.5 per cent) have mainly primary education. Until 2004, a total of 436 Orang Asli students had successfully completed their studies at the institutions of higher learning. Table 3 shows the Orang Asli students enrolled in primary, secondary and tertiary between 1997-2004. At the tertiary level, the number of Orang Asli children that have completed their education at university and college level is still low compared to their population size. At primary and secondary school level, the drop-out rate is very high - about 62% of Orang Asli schoolchildren drop out of school each year, while 95% do not go beyond secondary (SPM) level. A high number of Orang Asli children have never had the opportunity to enrol in school.

Table 3: Enrolment of Orang Asli Students, 1997-2004

Year	Primary	Secondary	Tertiary
1997	16,806	3,306	10
1998	19,033	4,186	19
1999	21,131	4,653	26
2000	21,704	5,971	30
2001	20,871	5,239	35
2002	22,098	6,219	42
2003	23,607	6,675	112
2004	25,354	7,559	154

The poverty rate for Orang Asli remains at a high at 76.9% (national poverty rate 6.5% in 2003). 35.2% classified as hardcore poor (compared to 1.4% nationally). A report by the Japan Bank for International Cooperation entitled "Poverty Profile - Executive Summary, Malaysia, February 2001" stated that "*Orang Asli is the largest in indigenous groups in the peninsula. They show the worst socio-economic indicators among any other social groups in the country and are found left out completely …… To fill the gap between the other social groups, the government has implemented Development Programme for the Hardcore Poor (Program Pembangunan Rakyat Termiskin: PPRT) targeted for Orang Asli, though the disparity still remains.*"
RM 257 and RM361.8 million has been allocated under the RM8 and RM9 government budget to fight poverty & improve housing for Orang Asli (see table 4).

Table 4: Budget Allocation for the Development Of The Orang Asli, 1986-2010

Malaysian Development Plan	Total Allocation (RM)
Fifth Malaysia Plan (1986-1990)	51,300,000
Sixth Malaysia Plan (1991-1995)	109,500,000
Seventh Malaysia Plan (1996-2000)	149,011,800
Eighth Malaysia Plan (2001-2005)	257,000,000
Ninth Malaysia Plan (2006-2010)	361,800,000
Total	556,811,800

Services for the Orang Asli are largely carried out under the Jabatan Hal Ehwal Orang Asli (JHEOA). JHEOA is a federal government body, now under the Ministry of Rural Development and Cooperative Development. The JHEOA also maintains a hospital, training center, museum, and library at Gombak. There are six state branch offices, of which four cover two states or districts: Pahang, Perak/Kedah, Kelantan/Trengganu, Johore, Negeri Sembilan/Malacca, and Selangor/Wilayah Persekutuan. These branches administer 36 district offices and 133 post (pos) or poject (projek) offices.

There are three schemes implemented by the Government under the Land Development Programs. They are:

a. Resettlement Scheme (Rancangan Pengumpulan Semula, RPS)

This is a scheme designed for remote and scattered settlement of the Orang Asli community. The RPS is designed to provide agriculture activities for the Orang Asli as their main economic livelihood. The RPS Scheme is also equipped with basic facilities such as housing, kindergarten, community halls, electricity, water supply and access roads. Presently, a total of 17 RPS has been implemented by JHEOA and benefited by 3,015 families.

b. Village Restructuring Scheme (Program Penyusunan Semula Kampung, PPSK)

This scheme was introduced in the Seventh Malaysia Development Plan to provide a better quality of life for the Orang Asli community through the provision of basic infrastructure and economic activities. The Orang Asli are also granted individual titles for the land. Presently, 217 PPSK have been implemented under the program.

c. Integrated Development of Remote Villages Scheme (PROSDET)

This is an integrated development plan to develop the scattered settlements in the remote areas that are not accessible by any means of transport. The pilot project under this scheme is undertaken in the village of Pantos located in the district of Kuala Lipis within the State of Pahang. The scheme has benefited 200 families.

Personal observation over time suggests that the RPS resettlement scheme worsens Orang Asli health and nutrition. They loose access to traditional food sources and are not able to adapt to agriculture activities.

2.1.2 HEALTH SERVICES TO THE ORANG ASLI

Health services to the Orang Asli population has slowly improved but still lags behind the rest of the country. Before 1990's the maternal and child health services for Orang Asli children were the sole responsibility of Orang Asli Affairs Department (JOEA). In the late 1990's, Ministry of Health (MOH) started providing maternal and child health services for the Orang Asli children in the jungle fringes and some interior areas via community clinics, mobile clinics and health camps held in the Orang Asli villages.

The Orang Asli health care services is now made up of 125 treatment centres (designated locations where a mobile clinic visits periodically), 20 transit centres (centres where patients and accompanying persons are housed while waiting to be transferred to a hospital for treatment), and 10 health clinics (JHEOA 2005). There is an understanding between the Ministry of Health (MOH) and the JHEOA's Department of Health and Medicine, whereby the MOH provides services to the areas that are accessible by land transportation, leaving the interior villages, numbering 323 villages out of a total of 869, to the JHEOA.

However availability of healthcare is still not optimal. As an example, Table 5 shows the percentage of safe deliveries Among Orang Asli women in the interior and fringes in three States. It clear that the provision of health care varies in the different states and is poorer for Orang Asli living in the interior.

Table 5: Percentage of Safe Deliveries among Orang Asli women in the interior and fringes in the States of Pahang, Selangor and Perak in 1998 - 2002

Year	1998	1999	2000	2001	2002
Pahang (Fringes)	57.6	59.2	59.5	59.9	61.8
Pahang (Interior)	17.2	16.5	17.3	18.0	19.0
Selangor (Fringes)	96.3	88.7	88.5	83.7	87.1
Perak (Interior)	23.7	29.7	33.6	39.7	36.6
Perak (Fringes)	47.7	40.5	33.2	33.6	42.4
Gen. Population			96.6		97.5 (2003)

Source: MCH Unit State Health Department of Pahang, Selangor and Perak; MCH JHEOA; Information & Documentation System, Planning & Development Division, MOH

Immunisation rates vary between 75-83% for Orang Asli children. One recent survey of 61 Orang Asli children admitted to Hospital Gua Musang showed that 85.2% were not vaccinated or only partially vaccinated.

2.1.3 CHILDHOOD MALNUTRITION

There is a relatively high prevalence of malnutrition (underweight, stunting and wasting) among the Orang Asli children. A summary of some available data shows:

1. A study done amongst children in Jempol, Negri Sembilan found that 34.1% were underweight, 36.6% stunted and 7.3% categorized as wasted (Mohd Faizal, 1999).
2. A study conducted on the nutritional status of Orang Asli children in selected villages shows that 24.4% were malnourished, 19.65% were stunted and 7.1% were both stunted and wasted. The percentage of wasting was highest in the toddler age group and stunting in the preschoolers (S. M. Puad et.al, 1990).
3. A study of 368 children, aged 2-15 years showed that the overall prevalence of mild and significant underweight was 32.1 and 56.5%, respectively. The prevalence of mild stunting was 25.6%; while another 61.3% had significant stunting. 28% of the kids had albumin levels below 35g/ and 42% had low lemoglobin l. (JHEOA 2004-2005, Moktar et al. Asia-Pac J Clin Nutr 13:s122, 2004 and 14 (2):188-194, 2005).
4. A study in the neonatal unit at Temerloh Hospital in 2003 showed that 29% of OA babies has a birth weight of under 2.5g (Kandsamy, Somasundram. Singapore Med J. 48(10): 926-8, 2007).
5. A study of 95 children with severe malnutrition (under the Kekurangan Zat Makanan- KZM of MOH) from very poor Orang Asli in the Kuala Kangsar and Hulu Perak Districts, showed that 50% of food baskets were not received on time and had little impact on malnutrition (Sofiah, et al 2006). A study of the programme Pemulihan Pemakanan Kanak-kanak Kekurangan Zat Makanan (PPKZM) by Ministry of Health from June 2001 till 2002 showed similar poor results from the programme.
6. A study of Orang Asli children admitted to the Paediatric Department at Ipoh Hospital from Jan-Dec 2007 and Jan-June 2008 showed that the admission and malnutrition rate among ill OA children was rising (see Table 6).

Table 6: Admissions of ill Orang Asli children to the Paediatric Intensive Care Unit (PICU), Ipoh Hospital

	Jan-Dec 2007	Jan-June 2008
Total OA Admissions to PICU	123	64
Number with malnutrition	38 (30.8%)	34 (53.0%)
Deaths	10	6
Percentage of deaths due to malnutrition	60.0%	83.3%

2.1.4 CHILDHOOD MORTALITY

Table 7 shows that the deaths of infants are often not reported. Infant mortality rates for Orang Asli are more than 3 times national average (19.3 vs 6.2 per 1000 live births). Data collection has improved over the years and shows that the true rate may be much higher that known in the past.

Table 7: Comparison of Infant Mortality Rate (IMR) Among The Orang Asli in state of Pahang, Selangor and Perak And The General Population 1998 – 2002 (per 1000 live births)

Year	**1998**	**1999**	**2000**	**2001**	**2002**
Orang Asli	9.1	13	8.1	10.8	19.3
General Population	8.1	8.5	7.9	6.3	6.2

Source: MCH Unit, State Health Department of Pahang, Perak And Selangor and Orang Asli Affairs Department

This has also true for perinatal mortality where rates (PNM) for the Orang Asli are much higher than the rest of the population but grossly underreported in nationally. For example data from the Perak State Perinatal

Report 2005 showed that the PNM rate for Orang Asli in that region was 25.7 per 1000 births compare with a national rate of 8.1 per 1000 birth.

Whether this rise is due to better reporting or due to a decline in the health care of Orang Asli children is uncertain. It is possible that both factors are happening as malnutrition rates appear to be increasing in Orang Asli children with more fatalities on presentation to government hospitals.

The top three causes of death of OA in MOH Hospital in 2004 were infections (septicemia, pneumonia and sepsis in the newborn). These are related to malnutrition and availability of health care.

The National under 5 Mortality Study data has just been made available. This study tried to obtain data on all deaths under 5 years for the year year 2006. The study however may have missed many OA deaths that have occurred in the interior. Using the study data and population data on under 5 by ethnicity, the table below shows the relative risk of dying for OA children.

Table 8: Comparison of Relative Risk of Under 5 Mortality for OA Children Versus Other Ethnic Groups, 2006

Comparison	**RR**	**95% CI**	**Significance**
Orang Asli vs Malay/Chinese/Indian	15.5	13.0-18.5	Significant
OA vs Bumi Sarawak-Sabah	6.7	5.5-8.1	Significant
Malay vs Chinese	1.7	1.4-2.0	Not significant
Malay vs Indian	1.1	0.9-1.4	Not significant
Bumi Sarawak-Sabah vs Malay/Chinese/Indian	2.3	2.0-2.6	Significant

Note that the true difference (RR) is very likely to be much higher as many deaths go undetected. Note also that there is no significant difference between other ethnic groups in Peninsular Malaysia and that the OA children also fare worse than Sarawak & Sabah Bumi children.

The study also showed that OA Children were 2.6 times more likely to die at home than in hospital as opposed to all other ethic groups (see table 9).

Table 9: Comparison of Under 5 Mortality for OA Children Versus Other Ethnic Groups by place of Death, 2006

Ethnic Group	**Hospital Deaths**	**Home Deaths**	**RR (OA vs rest)**
Orang Asli	60	87	2.6 (95% CI 2.3-3.1)
Malay/Chinese/Indian	791	232	
Bumi Sarawak-Sabah	244	67	

3 CURRENT STRATEGIES IN PERAK (AND WIDER)

The following strategies have been attempted in Perak by the Paediatric Department at Ipoh Hospital with the help of various State Health Directors and Public Health Officers.

Mortality Reduction (emergency care)
1. Paediatric department at Ipoh has written protocols acute management of OA managing – resuscitation and re-feeding.
2. All mortality of OA children is extensively discussed to identify remedial measures.
3. Posted a Paediatrician to Gerik Hospitals to support front line care.

Morbidity Reduction (Reduction of OA child malnutrition & identification of decompensated children)
1. Develop and sustain re-feeding centers at Sg Siput & Tapah Hospitals
2. Proactively identify (via health teams visiting OA villages) all Orang Asli children with severe malnutrition (IMCI "z" score below minus 2) and admit to re-feeding center.
3. Established Paediatrician visiting Cameron Highlands Hospital and Gua Musang health centers to improve health delivery.
4. Established Paediatrician visiting OA transit camps in Perak to improve health delivery.
5. Paediatrician used NGOs to visit extremely interior villages to establish health clinics & motive villages.

Planning & Advocacy
1. Orang Asli Liaison Meeting to Discuss Strategies (Chaired by Pengarah Kesihatan Negeri Perak) 6th Aug 2005.
2. State health indicator for Perak Health Department on all ill OA children - have to be discussed with a paediatrician (escalate care up to specialist level for any malnourished OA child immediately).
3. Situation brought to the attention of various government agencies and senior officers.

Research Conducted
1. Case control study to look at the MOH Kekurangan Zat Makanan (KZM) MOH programme to show poor deliver and effectiveness.
2. Malnutrition rates in Gerik area.
3. Malnutrition as a cause of death for Ipoh admissions.

Current Initiative (to propose to MOH):
To develop an intervention programme to reduce mortality using village health workers and the IMCI programme. This will involve the selection and training of OA village health workers in modified IMCI skills (identification of the ill child, early management to reduce mortality and early referral to MOH staff). It will also document the true mortality of OA children.

4 RECOMMENDATION & SUGGESTIONS

There is an urgent need to have a comprehensive initiatives to address the needs of Orang Asli children. This cannot in reality be achieved without helping the community as a whole. We have summarised initiates by phases and achievability.

Some urgent short term measures that have shown value:

1. Mortality Reduction (emergency care) - this is for the decompensated child with an acute illness (or crisis).
    a. For this the Paediatric department at Ipoh has written protocols (recently extensively updated) for use by doctors unfamiliar with managing these children. The basic idea is not to resuscitate to aggressively as our treatment can kill. These will be included in the national paediatric protocols.
    b. We need to escalate care up to specialist level for any malnourished OA child immediately (this has become a State health indicator for Perak Health Department).
    c. Post Paediatricians to Gerik, Gua Musang and Cameron Highlands Hospitals to support front line care (when we had a Paediatrician in Gerik the OA mortality rate for children was reduced by two third).
2. Morbidity Reduction - this is for the "not doing so well" OA child (malnourished)
    a. Improve on existing (Sg Siput & Tapah Hospitals) and create new re-feeding centers (Gerik, Cameron Highlands, Gua Musang, Temerloh Hospitals, etc). This can only be a "stop gap measure" as we will put them back in their environment of poverty.
    b. Proactively identify (via health teams visiting OA villages) all Orang Asli children with severe malnutrition (IMCI “z” score below minus 2) and admit to re-feeding center.
3. Make OA children mortality and malnutrition rates a national indicator to highlight the importance.

Some intermediate term measures that may be of value:

1. To develop an intervention programme to reduce mortality using village health workers and the IMCI programme (Perak happy to initiate). This will involve the selection and training of OA village health workers in modified IMCI skills (identification of the ill child, early management to reduce mortality and early referral to MOH staff).
2. Extensively revamp (replace) the Kekurangan Zat Makanan (KZM) MOH programme. The food basket programme is not working and needs to be extensively revised.

Some long term measures that may be of value:

1. Responsibility for the provision of health care needs of Orang Asli to be moved completely from Jabatan Hal Ehwal Orang Asli (JHEOA) to Ministry of Health.
2. Have a national task force on the needs of Orang Asli.

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