

Pediatric Endocrinology Training Center for Africa (PETCA)

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Pediatric Endocrinology

- Diabetes
- Growth
- Puberty
- Thyroid
- Disorders of sexual differentiation
- Adrenal
- Obesity
- ...



European Society for Pediatric Endocrinology (ESPE)

- ❑ Founded in 1962
- ❑ First annual scientific meeting held in Zurich (President: Andrea Prader)
- ❑ 1989: addition of former Eastern European countries
- ❑ Leader for international scientific communities of paediatric endocrinologists



European Society for Pediatric Endocrinology (ESPE)

- ❑ 2010: training program in Maghreb (Algeria, Tunisia, Morocco)
- ❑ 2010: development of the GPED (Global Paediatric Endocrinology and Diabetes)
 - ❑ Aims at supporting the development of Ped Endo in developing countries

*Global Paediatric
Endocrinology and Diabetes
(GPED)*



European Society for Pediatric Endocrinology (ESPE)

- ❑ The Paediatric Endocrinology Training Center for Africa started in 2008
- ❑ Target: 36 fellows over 3 years
- ❑ Tutors from ESPE, I SPAD come for a 1-2 mo-period
- ❑ Funding: World Diabetes Foundation and ESPE

European Society for Pediatric Endocrinology (ESPE)

- Located in Gertrude's Hospital (Nairobi, Kenya)



	Dental Surgeon	S2
N2	Dr. George Josiah	
	Chiropractor	S3
N3	Dr. Joel Lessan	
	Paediatric Surgeon Urologist	S4
N4	Muthaiga Eye Clinic	
	Mrs. Zahra Rashid	S5
	Specialist in Paediatric Optometry & Low Vision	
N5	Paediatric Endocrinology Training Centre For Africa	S6
N6		
		S7
N7	Specialist Clinics	
N8	Specialist Clinics	S8

Pediatric Endocrinology Training Center for Africa

- ❑ Main goal: to develop Pediatric Endocrinology in (English-speaking) Sub-Saharan Africa
- ❑ Specific objectives:
 - Training of Pediatricians in Clinical Endocrinology
 - Build capacity in African countries
 - Transfer of responsibilities to local Nairobi Team (sustainability)
 - Founding of the African Society for Pediatric and Adolescent Endocrinology
 - Develop research and networking in Pediatric Endocrinology in Africa

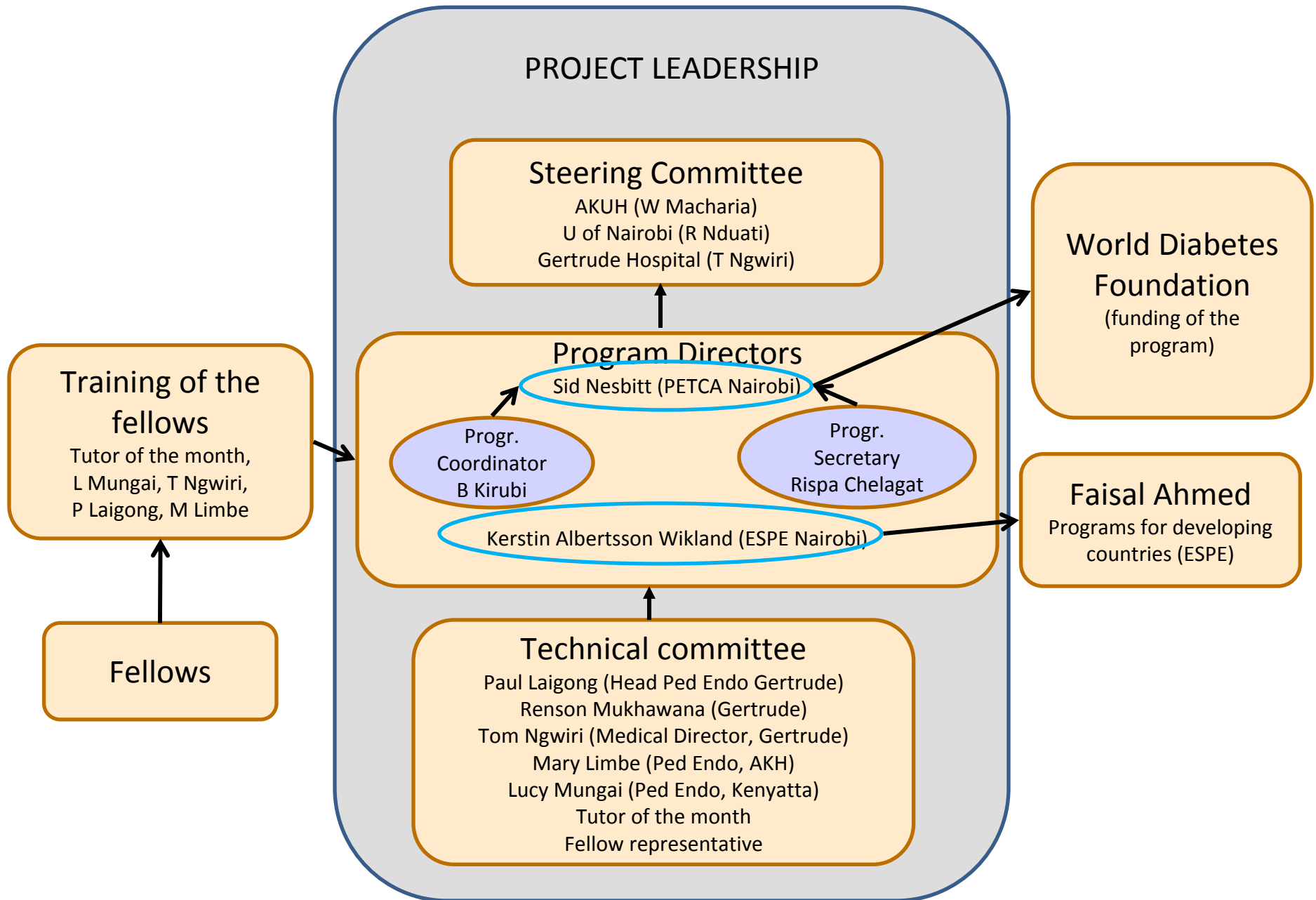
Pediatric Endocrinology Training Center for Africa

□ Funding:

○ Fellows:

- Expected keep salary from home institution during fellowship
- Flight + stipend for expenses in Nairobi
- Secretary of the program in Nairobi
- Travel expenses/accommodation for tutor

Pediatric Endocrinology Training Center for Africa (PETCA)



Program description: months 0-6

- Clinical fellowship in Nairobi
 - 3 x ½ day clinic per week: Gertrude's Hospital, Aga Khan Hospital, Kenyatta Hospital
 - Lectures, JC, lab/pharmacy sessions, case discussions
 - Preparation of a research project









Program description: months 6-15

- Implementation/organisation in home country
 - Clinical care
 - Advocacy/awareness/policy makers
 - Research project

Program description: months 15-18

- Completion of fellowship
 - Examination
 - Presentation of research
 - Diploma (ESPE)



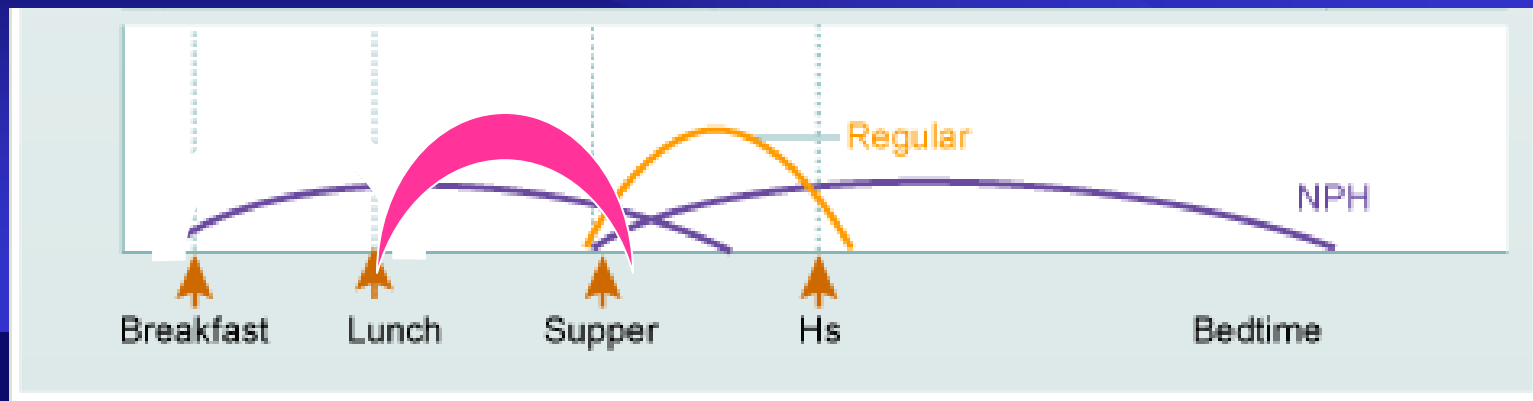
What did we see?

Type 1 diabetes

- 140 known children in Nairobi and surroundings
- Successes
 - Program leads to early survival
 - Free delivery of insulin to all patients
- Challenges
 - Poor quality of the glycemic control
 - Long-term complications?

Clinical case

- ❑ 10 year-old
- ❑ Lives 3 hours from clinic by bus
- ❑ Medical care limited locally
- ❑ How to keep insulin at 4C when there is no electricity?
- ❑ No money for regular food: breakfast was often skipped, large meal for lunch





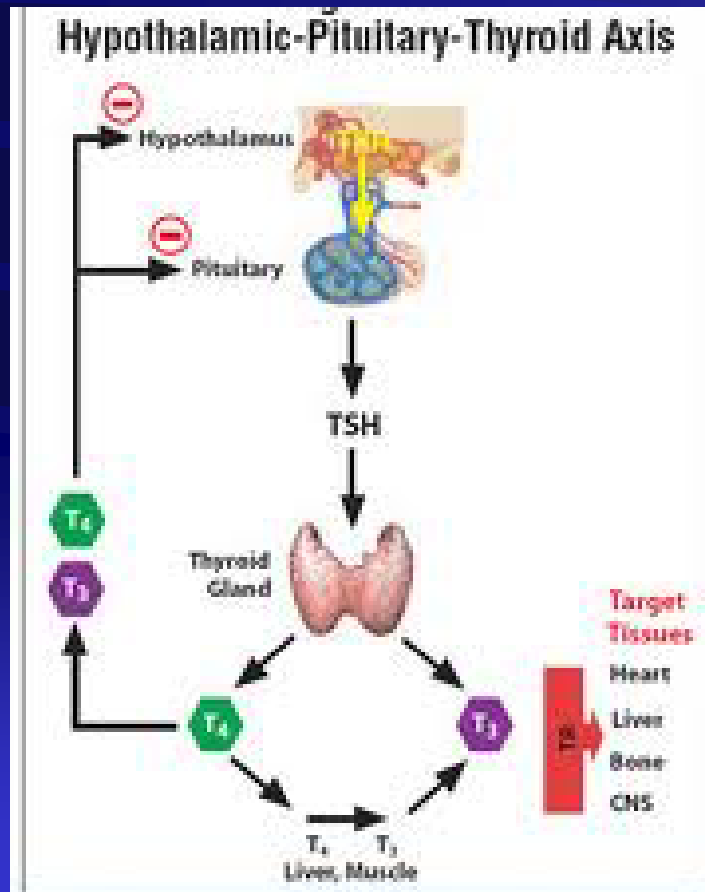
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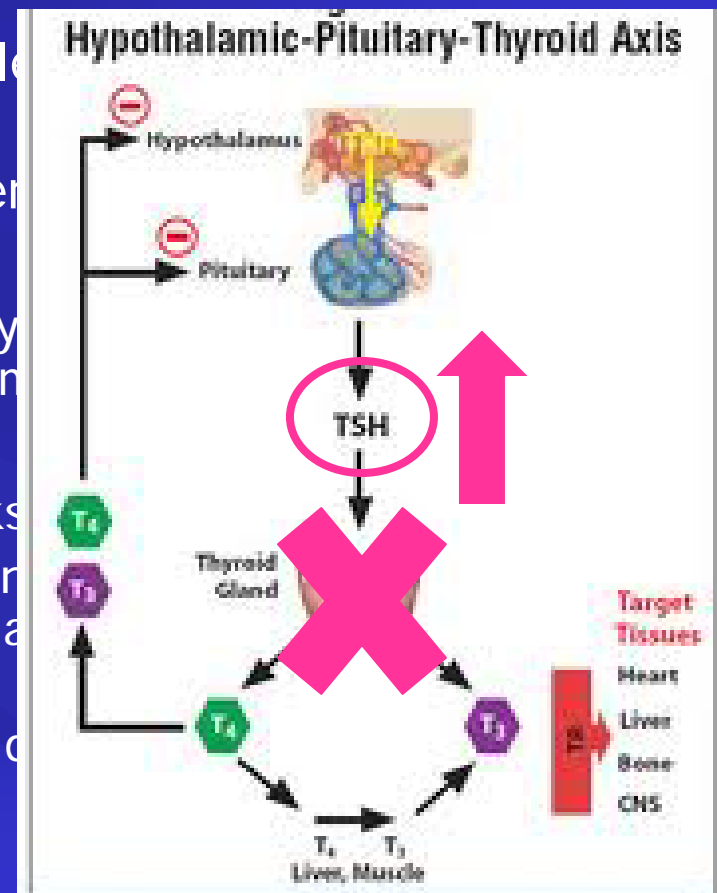
Role of HbA1c?

What did we see?

Congenital hypothyroidism



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Clinical case

- ❑ 18 month old with congenital hypothyroidism
- ❑ Clinical diagnosis at the age of 1 year
- ❑ Monitoring: thyroid function tests (TSH)
- ❑ Issues:
 - Irreversible mental retardation
 - Excessive use of laboratory tests increased cost of FU (TSH, F3, TT3, FT4, TT4)



What did we see?

Disorders of sexual differentiation

- ❑ Many patients
- ❑ Socially extremely difficult, importance of fertility
- ❑ Successes:
 - Generated interest from African pediatricians.
 - Soudan: multi disciplinary team with lawyer and religious representative
 - Improved diagnosis and treatment
- ❑ Challenges:
 - Late recognition and secrecy
 - Difficult access to genetic testing
 - Poor surgical, psychological follow up
 - Cost of treatment

Clinical case

- ❑ 7 month-old boy
- ❑ Ambiguous genitalia.
Diagnosis: partial androgen resistance (likely)
- ❑ Raised as a boy
- ❑ Issues:
 - Most DSD babies raised as boys for socio/cultural reasons
 - Poor access to genetic testing (caryotype unavailable in Kenya, use of Barr bodies)
 - Lack of multidisciplinary care



What did we see? Congenital adrenal hyperplasia

- ❑ Defect of adrenal gland function that results in adrenal insufficiency (life threatening) and virilization of affected girls
- ❑ Often not recognized

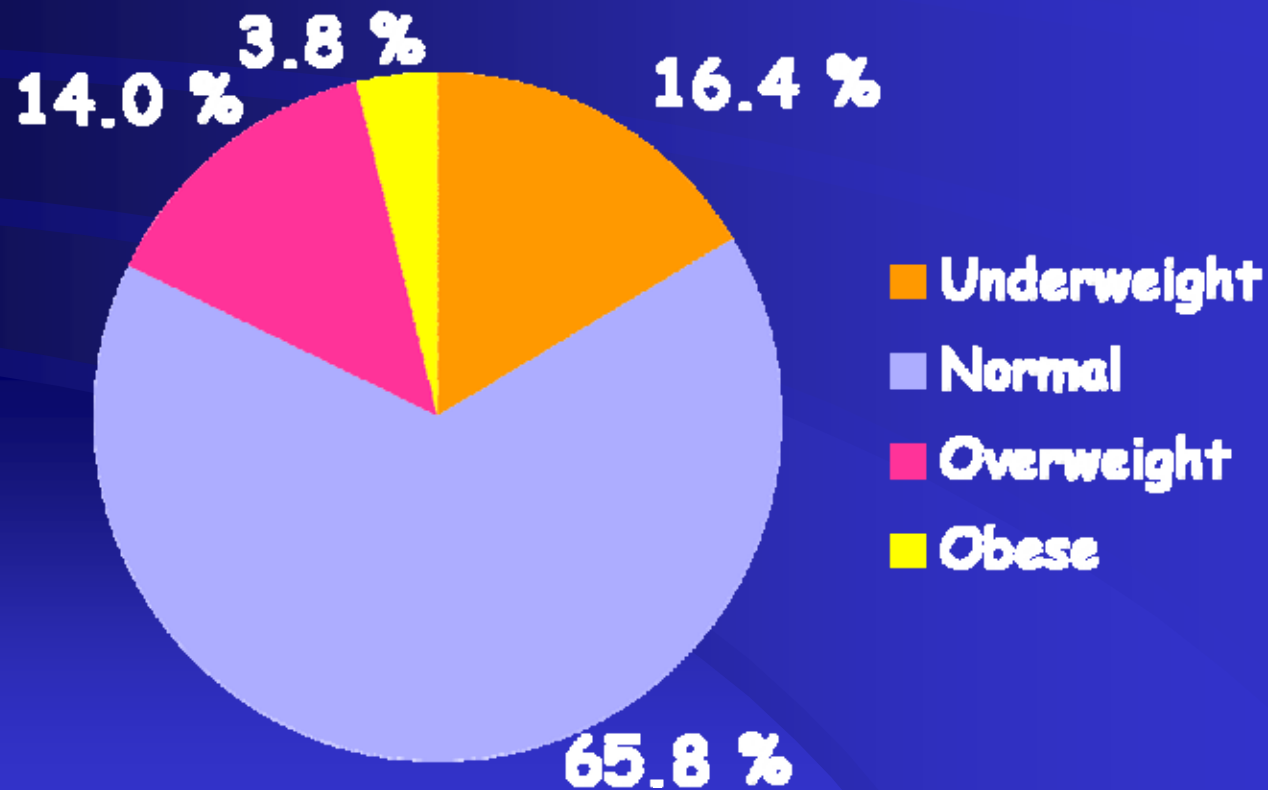
Clinical case

- ❑ 10 day-old baby
- ❑ Admitted for shock to ICU
- ❑ Clinical picture consistent with CAH (low Na, high K, ambiguous genitalia)
- ❑ Patient died in ICU after 10 days
- ❑ CAH diagnosed at autopsy
- ❑ Issues:
 - Condition not recognized

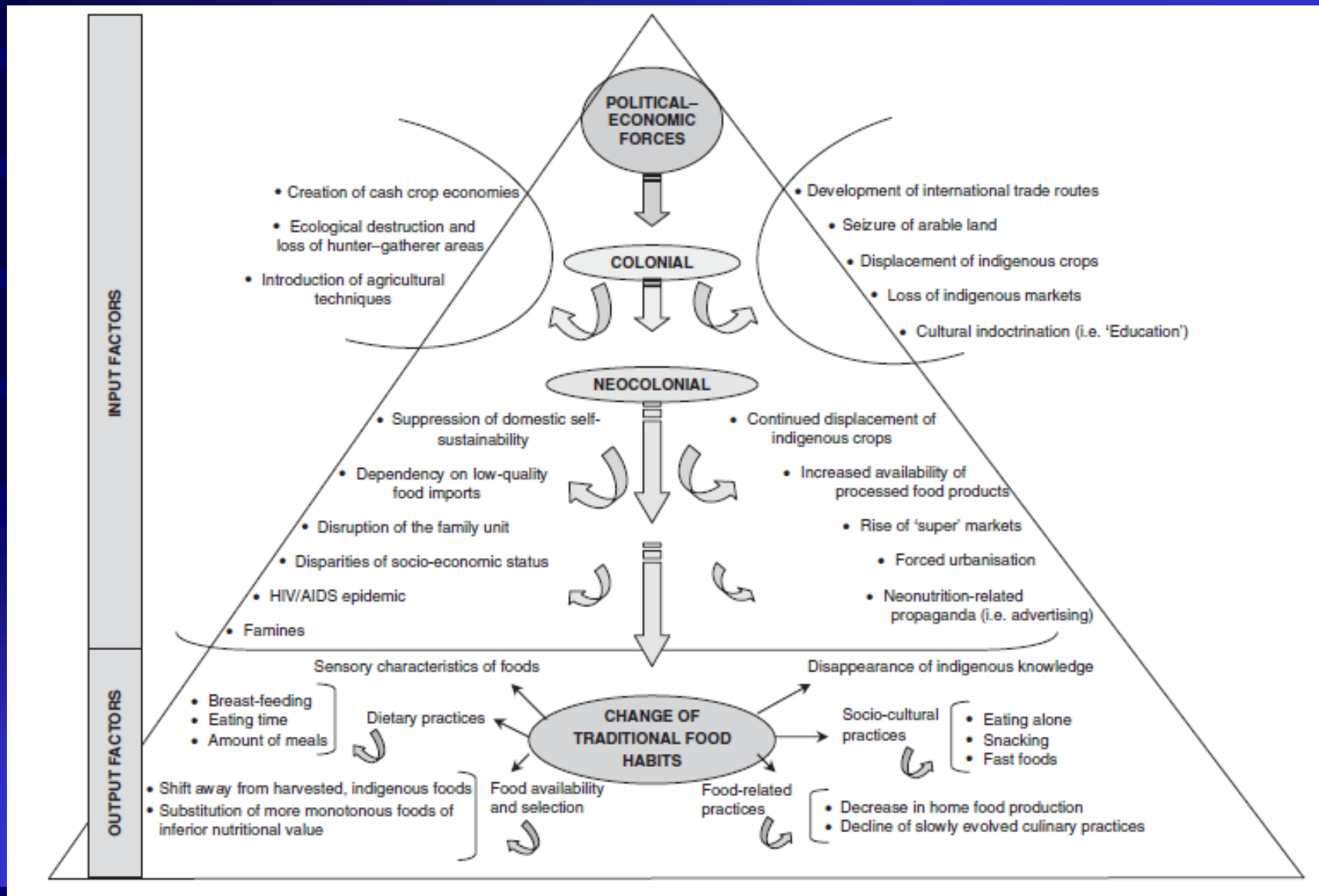


What did we see? Weight excess

Prevalence of malnutrition among pre-school children:
Kenyan Demographic and Health Survey, 2003



Eradication of traditional food habits in East Africa



What I learned...

- Problem solving
 - Few trained allied health professionals
 - Patient may not come back (distance, cost...)
- Choice of laboratory tests
 - Limited access to tests (costly)
 - Need to ensure optimal choice of tests
- Impact of a different culture on medical approach
 - Gender assignment

Why a pediatric endocrinology program in Africa?

The "Nay-sayer" view

- ❑ African countries are facing numerous more common health challenges: infections, undernutrition, HIV...
- ❑ Pediatric endocrinology addresses issues of a relatively small number of patients
- ❑ Need for continuous therapy (CAH, diabetes, hypothyroidism...)
- ❑ Is it a priority?



Why a pediatric endocrinology program in Africa?

The "Yea-sayer" view

- ❑ Not uncommon conditions that can
 - be life-threatening (diabetes, adrenal hyperplasia...)
 - lead to irreversible damage if untreated (congenital hypothyroidism)
 - markedly decrease QOL (ambiguous genitalia)
- ❑ Early recognition often leads to good outcome
- ❑ Treatment available and "cheap" (i.e. thyroid hormones, hydrocortisone)
- ❑ Program is building a critical mass of pediatric endocrinologists
- ❑ Necessary first step for African expertise in Pediatric Endocrinology



Successes

□ Training

- 13 fellows completed training from May 2008-May 2010
- Ongoing training for 9 fellows
- New group (6) started in June 2010

□ Funding

- Need for renewal grant in November 2010

Successes

□ Sustainability

- Local organizing committee identified
- Plan is to decrease presence of tutors in the future and empower local, newly trained Ped Endos

□ Networking

- Gift of medications (Insulin/hGH)
- Laboratory tests (genetic, hormonal)



Successes

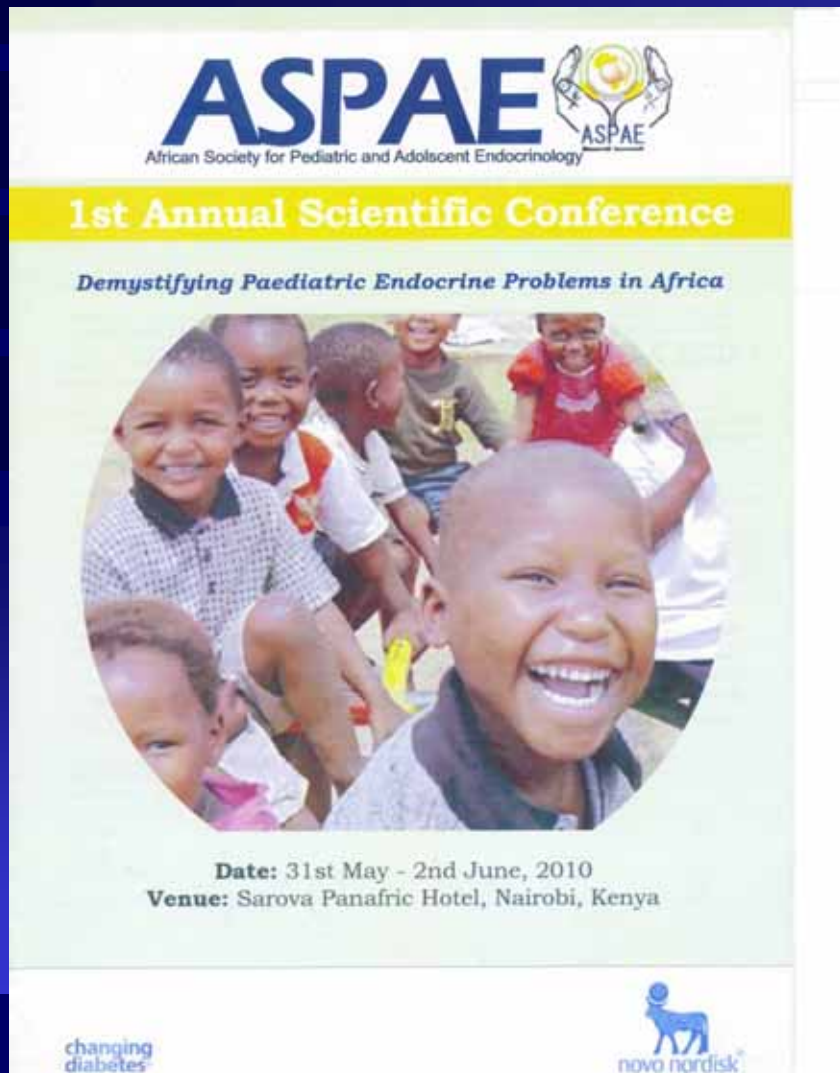
□ ASPAE



ASPAE

African Society for Pediatric & Adolescent Endocrinology

Successes



- ❑ 1st conference
- ❑ Next in Nigeria
- ❑ Funding?

Successes

□ Awareness:

- Measurements/teaching by fellows in schools (growth, nutrition)



Successes

□ Awareness

- Training of health professionals/
information to families



Challenges

- ❑ Sustainability of the program
 - Need for newly trained Ped Endos in Nairobi to be provided appropriate time/resources and take over.
- ❑ Training of health professionals for recognition of children in need of referral to Ped Endo

Challenges

- ❑ Difficulty of developing a Ped Endo program in the trainee's country (many countries have 0 ped endos)
- ❑ Need for awareness of government leaders
- ❑ Optimizing access to laboratory tests and life-saving medications

A photograph of a hospital entrance. The main entrance is covered by a large, white, cantilevered roof supported by several thick, grey concrete pillars. The roof is tiled with reddish-brown tiles. On the white fascia of the roof, the words "MAIN ENTRANCE-CASUALTY" are written in large, bold, red capital letters. In the background, a two-story hospital building with blue window frames and a similar tiled roof is visible. The foreground is a paved area with some yellow markings, and there are various green plants and bushes around the entrance.

MAIN ENTRANCE-CASUALTY

Casualty (person): a person who is killed or injured in a war or disaster

The emergency department of a hospital, also known as a *Casualty Department* (chiefly in the UK)

Wikipedia