
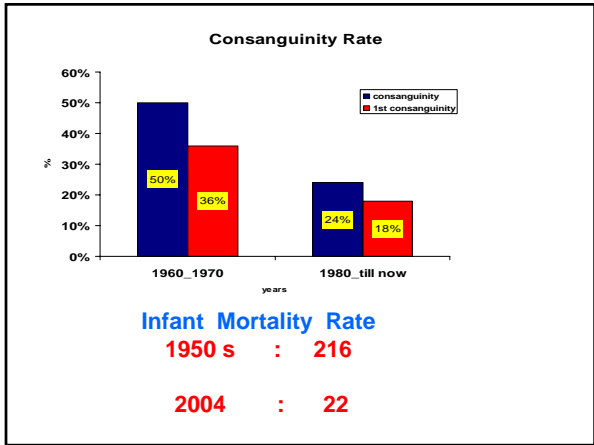



Jordan Neonatal Screening Genetic Programmes
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 Section for Prevention of Genetic & Congenital Disorders
 Directorate for Disease Control and Prevention
 Ministry of Health
 Jordan



Jordan Population : 5.5 million +
Population Growth Rate : 2.6 %
Annual Birth Rate : 150.2 thousand



Neonatal Screening

Proposals - Ministry of Health 1995 1998 2000

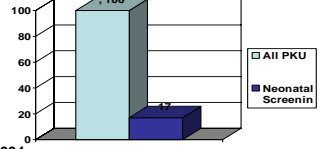
- Hypothyroidism HT** Pilot Screening

Incidence

Year	Number	Status
1986 - 1996	28291	screened
1996 - 1998	15465	screened


- Phenylketonuria PKU** Selective Screening Affected Families

1996 - 2006



- G6PD Deficiency** 1990 s - 2004

Prevalence 3 % Amman
6 - 12 % Mid & North regions



Collaboration programme 2004 - 2007
 MOH & WHO
 Budget & Time Frame
 2 Governorates
 New born age 4 - 14 days
 Method : Dry Blood Spots \ Elisa
 Confirmation : Serum
 May - Oct 2006 : 1439 Screened
 Poor Utilization 22%

	PKU	HT
Cutoff points	Phe 240 umol	TSH 7 IU
Recall	6	5
Confirmed	2	1
Confirmed Serum Level	Phe 900,1242 umol	TSH 18 IU

Plan : Country Wide All 12 Governorates
End of 2007
Requirements :
 Community Health Education
 Education & Training
 Health Centers : health workers & materials
 3 Regional Equipped Lab.
 Counseling
 Treatment Centers .
***Budget for Screening & Management**
***350 thousand JD = 500 thousand \$**
Other Genetic Programmes
 National Strategy 2006 - 2010
 Premarital Screening : 2004
 National Birth Defect Registry BDR 2007
 Food Fortification : Iodine, 1996
 Vitamins , Bread flour

Genetic Programmes in Jordan obtained

Strong Political Support
Health Authorities Commitment
Integration in the Primary Health Services
Free of Charge Services MOH

Difficulties

Deficient Geneticists
Deficient education - training – secretarial data entry
Insufficient community health education
limited communication facilities Team work improving
Await Budget Approval 2007.

Conclusion

- Prevention Genetic & Cong. Disorders : a Health Priority .
- Monitoring Strengthening Review are required .
- Continued Education & Training are mandatory .
- Cost effectiveness Premarital Thalassaemia Screening ?
- Country wide Neonatal Screening for HT PKU G6PD could be cost effective .

Common Genetic & Congenital Disorders

Carrier Rate :

Thalassaemia : 3.4 Range 3 – 9 %
Sickle Cell : 1 %
FMF : 10 %

Gene Frequency :

Cystic Fibrosis : 0.04 %

Incidence :

G6PD deficiency : 3 – 12 %
Expected HT : 1 : 2000
Expected PKU : 1 : 4000 – 6000

Neural Tube Defects **NTD** 11 % of all notified cong. abnormalities
Muscular Dystrophies

Recessive Cerebral Palsy.