



The LINFA project

**An integrated project of child health
surveillance through current information flows**

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Rationale: LINFA Project

Results

Conclusions





Children represent our future



LINFA Project

Longitudinal
Infant
Neonatal
Follow-up
Adolescence

Birth cohort 2007-2009 in Trentino Region





At birth:

CERTIFICATE OF DELIVERY ASSISTANCE



Pregnancy

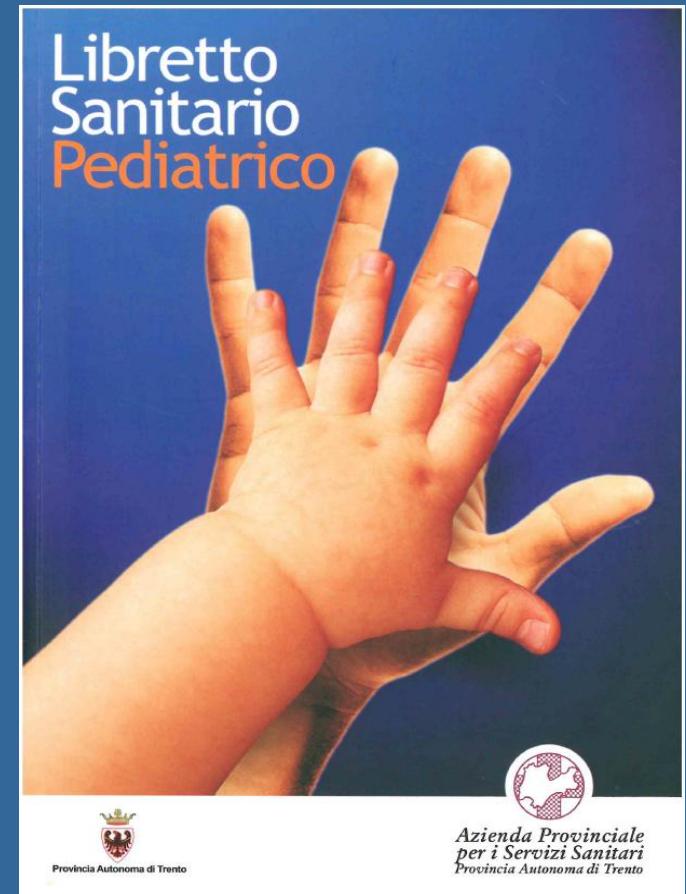
Mother/father

Delivery

Newborn

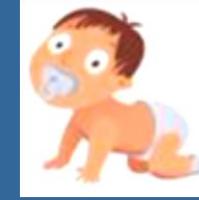


PEDIATRIC HEALTH BOOKLET





At 12-months:



INTERCURRENT DISEASES

BREASTFEEDING & WEANING





12-months health evaluation form

Comune di residenza _____

Nome e cognome _____

N. bilanci di salute 1° m 3° m 6° m 12° m altri ricovero alla nascita sì no

Sesso M F data di nascita / / barrare se nato fuori provincia

Madre italiana sì no (indicare provenienza _____)

Peso neonatale g _____ peso a 12 mesi g _____

Lunghezza a 12 mesi cm _____ circonferenza del cranio a 12 mesi cm _____

Frequenta il nido sì no Genitori fumatori sì no

Malattie (0-12 mesi)

Note sulle malattie

<input type="checkbox"/> Ottite	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Ottite recidivante	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Alte vie respiratorie	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Basse vie respiratorie	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Diarrea acuta	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Malattie infettive	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Infezioni vie urinarie alte	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Dermatite atopica	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Malattie neurologiche	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Ematol./Metabol./Ormonali	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Interventi Chirurgici/Ortopedici	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP
<input type="checkbox"/> Malformazioni congenite	Ricovero <input type="checkbox"/> P <input type="checkbox"/> FP

P = Ricovero in provincia FP = Ricovero fuori provincia

Malformazioni non segnalate alla nascita sì no

Altro

Alimentazione

Latte materno <input type="checkbox"/> sì <input type="checkbox"/> no	6° mese <input type="checkbox"/> esclusivo <input type="checkbox"/> predominante <input type="checkbox"/> complementare <input type="checkbox"/> artificiale	Attuale <input type="checkbox"/> complementare <input type="checkbox"/> artificiale
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Sospeso per:

Ipgalattia lavoro malattia

altro

Latti ipoallergenici sì no

Latte di soia/riso sì no

Latte di proseguimento, primo uso a mesi _____

Latte vaccino, primo uso a mesi _____

Prima minestrina a mesi _____

Vitamina D sì no per mesi _____

Vitamina K sì no per mesi _____

Fluoro sì no _____

Firma del pediatra

Data

COPIA PER IL DISTRETTO



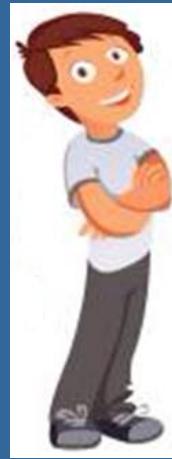
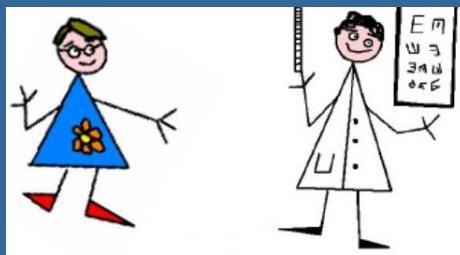
At 6 years:



BMI: Overweight & Obesity

Oral Health: Tooth decay





At 13 years:

BMI



Sight and hearing



Oral Health

**Smoking, alcohol
and physical activity**



LINFA Project



12-months health evaluation form

	INTERCURRENT DISEASES
BREASTFEEDING & WEANING	6-years health evaluation form
13-years health evaluation form	BMI: Overweight & Obesity
Sight and hearing	Oral Health: tooth decay
Oral Health	INTERCURRENT DISEASES
Smoking, alcohol and physical activity	Congenital anomalies Registry
Rare diseases Registry	Cancer Registry
Hospitalization Informative Flow	Record linkage

6-years health evaluation form

	INTERCURRENT DISEASES
BMI: Overweight & Obesity	Oral Health: tooth decay
Sight and hearing	INTERCURRENT DISEASES
Oral Health	Congenital anomalies Registry
Smoking, alcohol and physical activity	Rare diseases Registry
Cancer Registry	Hospitalization Informative Flow
Record linkage	Record linkage

13-years health evaluation form

	BMI: Overweight & Obesity
Sight and hearing	Oral Health: tooth decay
Oral Health	INTERCURRENT DISEASES
Smoking, alcohol and physical activity	Congenital anomalies Registry
Rare diseases Registry	Cancer Registry
Hospitalization Informative Flow	Record linkage



Results

Potential of
LINFA Project:



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ORIGINAL ARTICLE

Breastfeeding during the first year of life: estimates using records generated in general pediatrics

Riccardo PERTILE *, Lucia BOMBarda,
Mariangela PEDRON, Elena CLIVATI, Silvano PIFFER

Birth cohort 2007-2009 in Trentino region (n=8,367)

Citizenship of mother	Foreign vs. Italian	1.19	1.08	1.30
Maternal education level	University degree vs. primary school diploma	1.41	1.09	1.84
Area of residence of mother	Urban vs. rural	1.61	1.50	1.72
Parity	Pluriparous vs. primiparous	1.10	1.03	1.18
Multiple birth	No vs. yes	2.23	1.69	2.95
Birth method	Vaginal vs. caesarean	1.14	1.06	1.24
Feeding method upon discharge from hospital	Exclusive breastfeeding vs. formula	24.53	14.12	42.60
	Predominant breastfeeding vs. formula	14.59	8.17	26.05
	Mixed feeding vs. formula	9.50	5.41	16.68
Infant exposure to passive smoke	No vs. yes	1.22	1.12	1.33

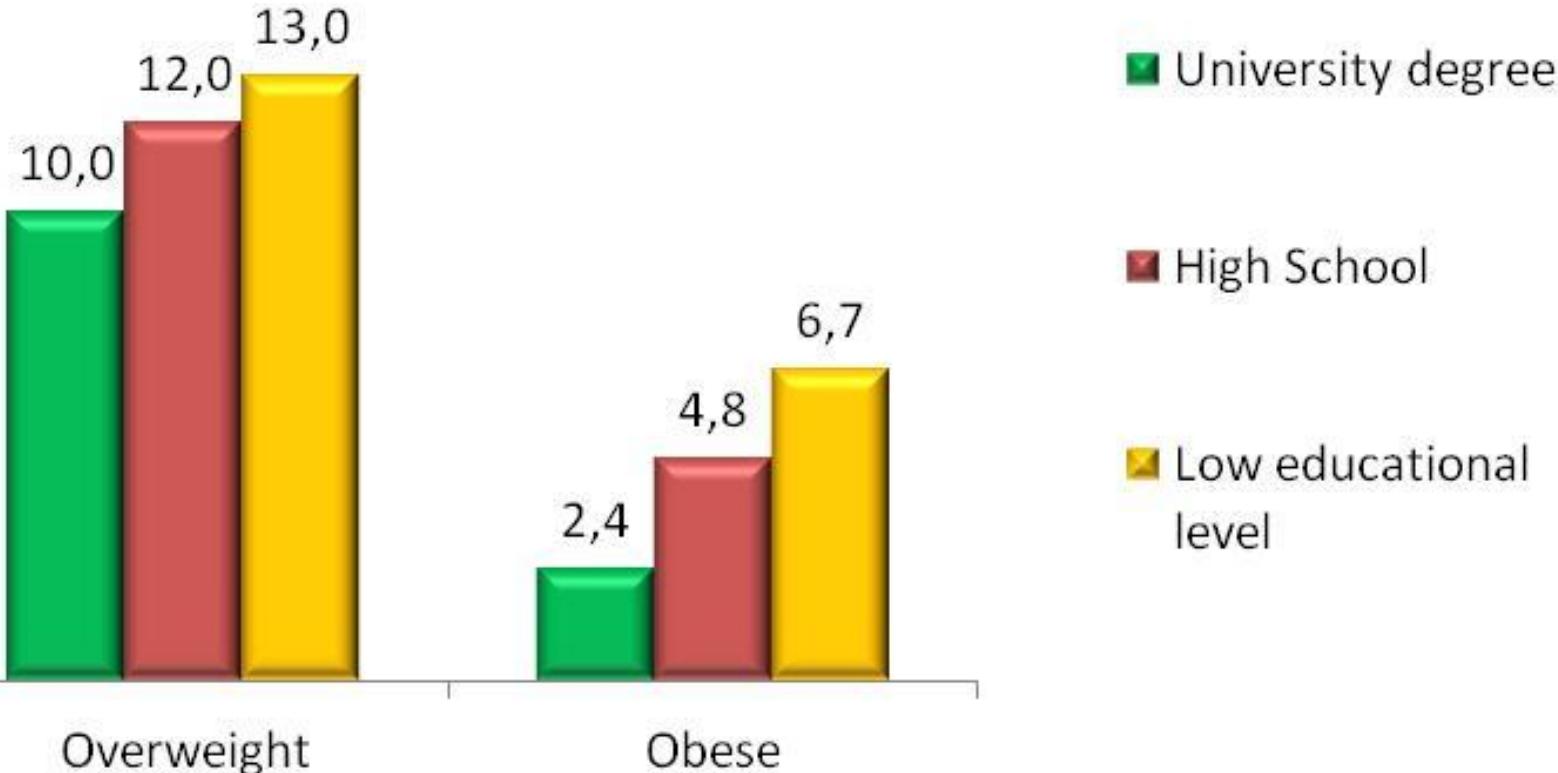
*Other work situations, including housewife, unemployed, student, retired, disabled or first-time job seeker.



Potential of LINFA Project:



Percentage of overweight and obese children (6 years), by maternal educational level



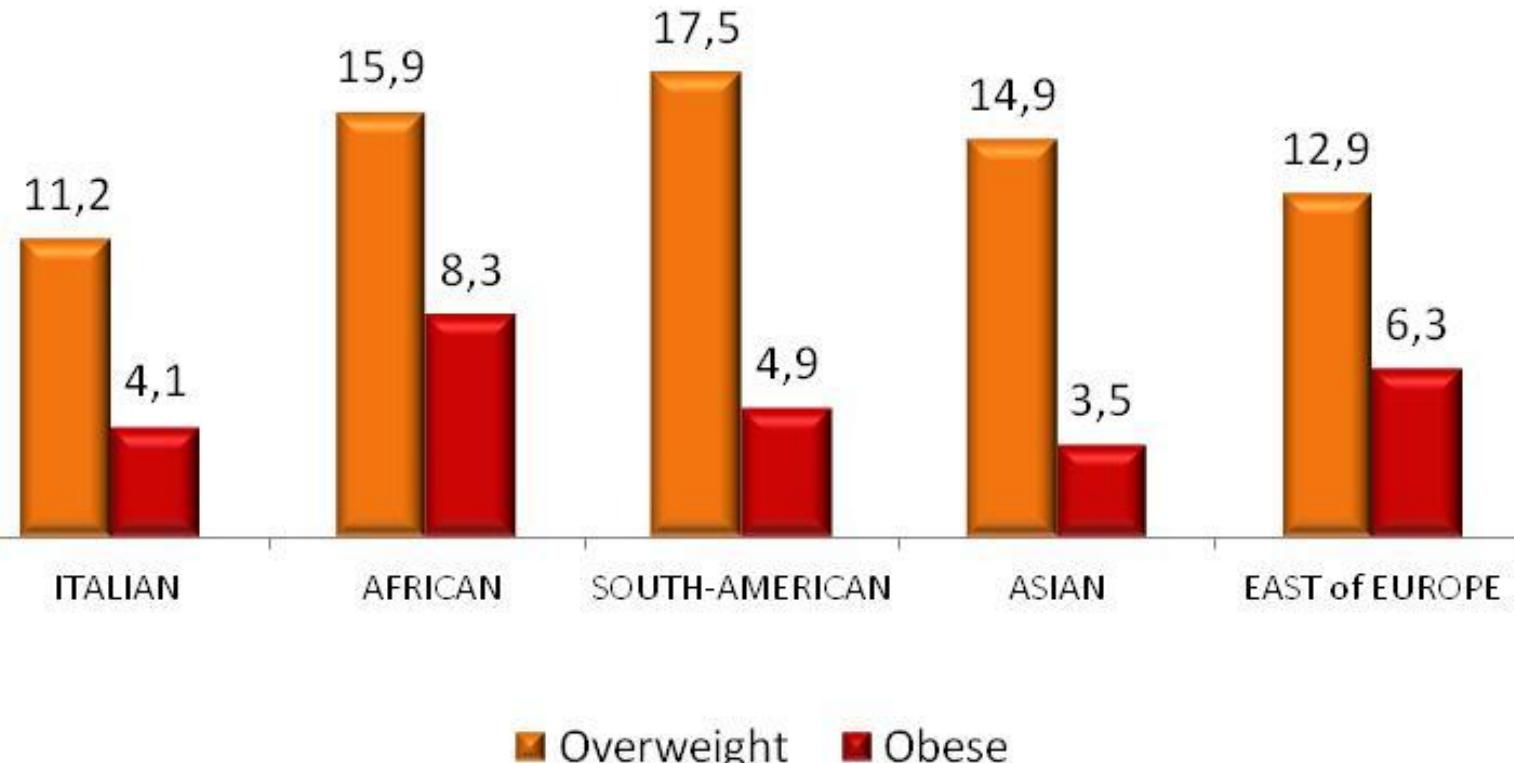
Birth cohort 2007-2009 in Trentino region (n=8,367)



Potential of LINFA Project:



Percentage of overweight and obese children (6 years), by maternal citizenship



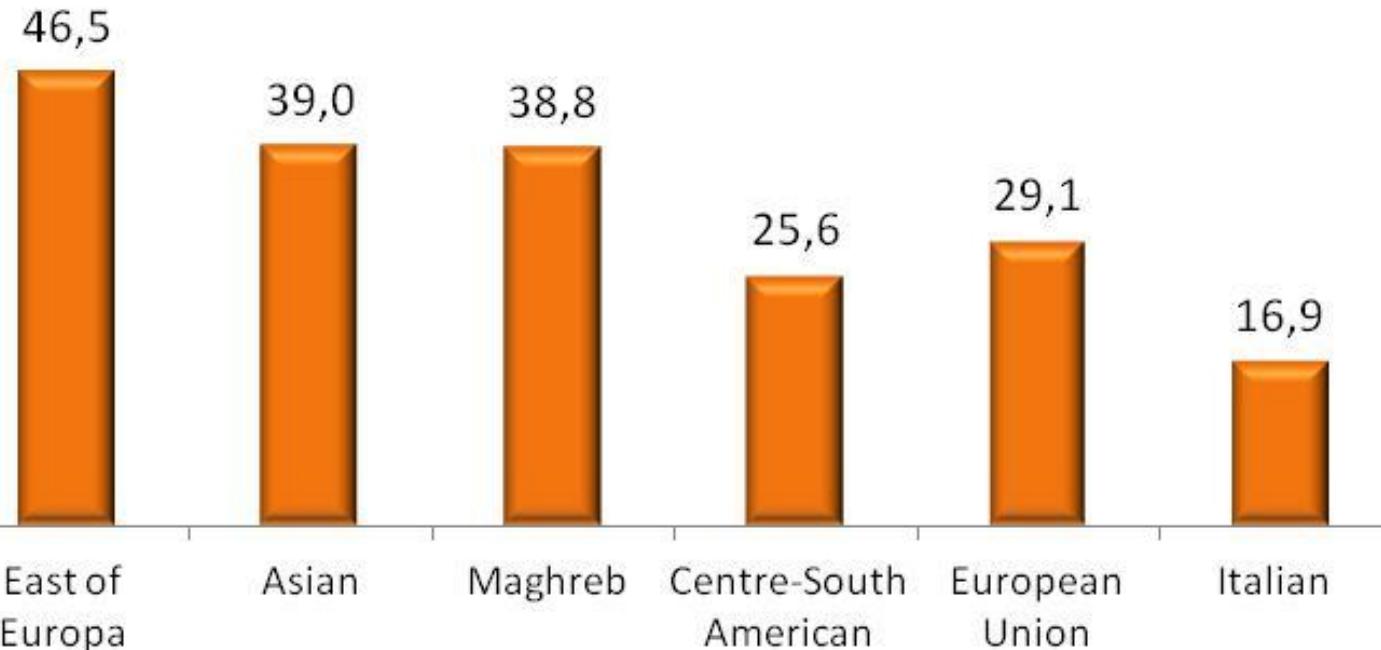
Birth cohort 2007-2009 in Trentino region (n=8,367)



Potential of LINFA Project:



Percentage of children (13-years) with caries on deciduous teeth, by maternal citizenship



Birth cohort 2007-2009 in Trentino region (n=6,733)



Conclusions

The experience of using Pediatric Health Evaluation Forms is limited in Italy ➔ Problems of comparison between Regions

Organizational system needs to be optimized - pediatricians should complete the Pediatric Health Evaluation Forms directly on their PC with a specific computer link to the Epidemiology Service.

LINFA Project is optimal for Health planning and research activities: it adapts very well to the needs for surveillance, access evaluation to services, the performance of professionals and the effects of social inequalities



Thanks for your attention



The health of children means the health
of adults