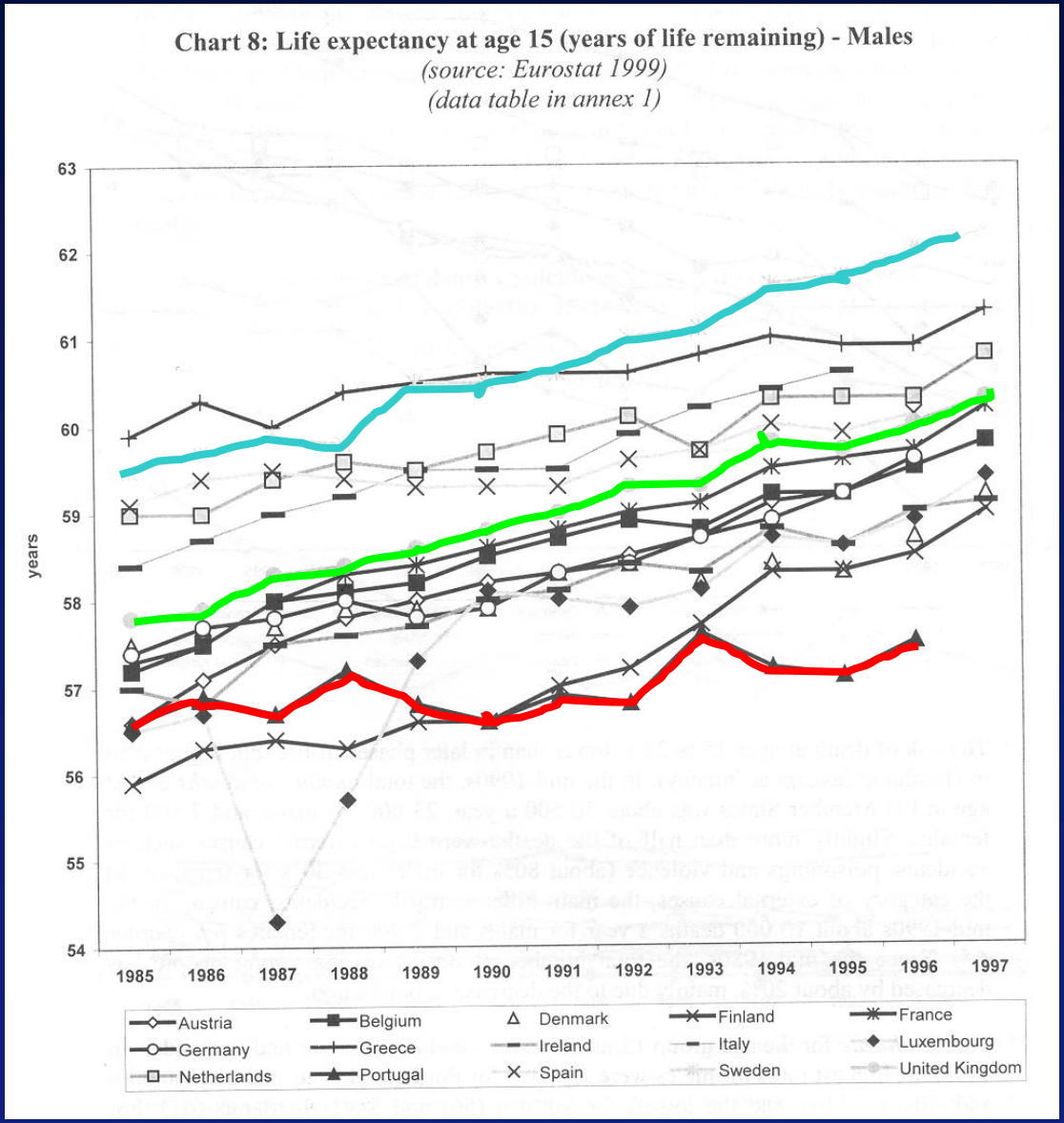
Child Health Indicators – development and uses

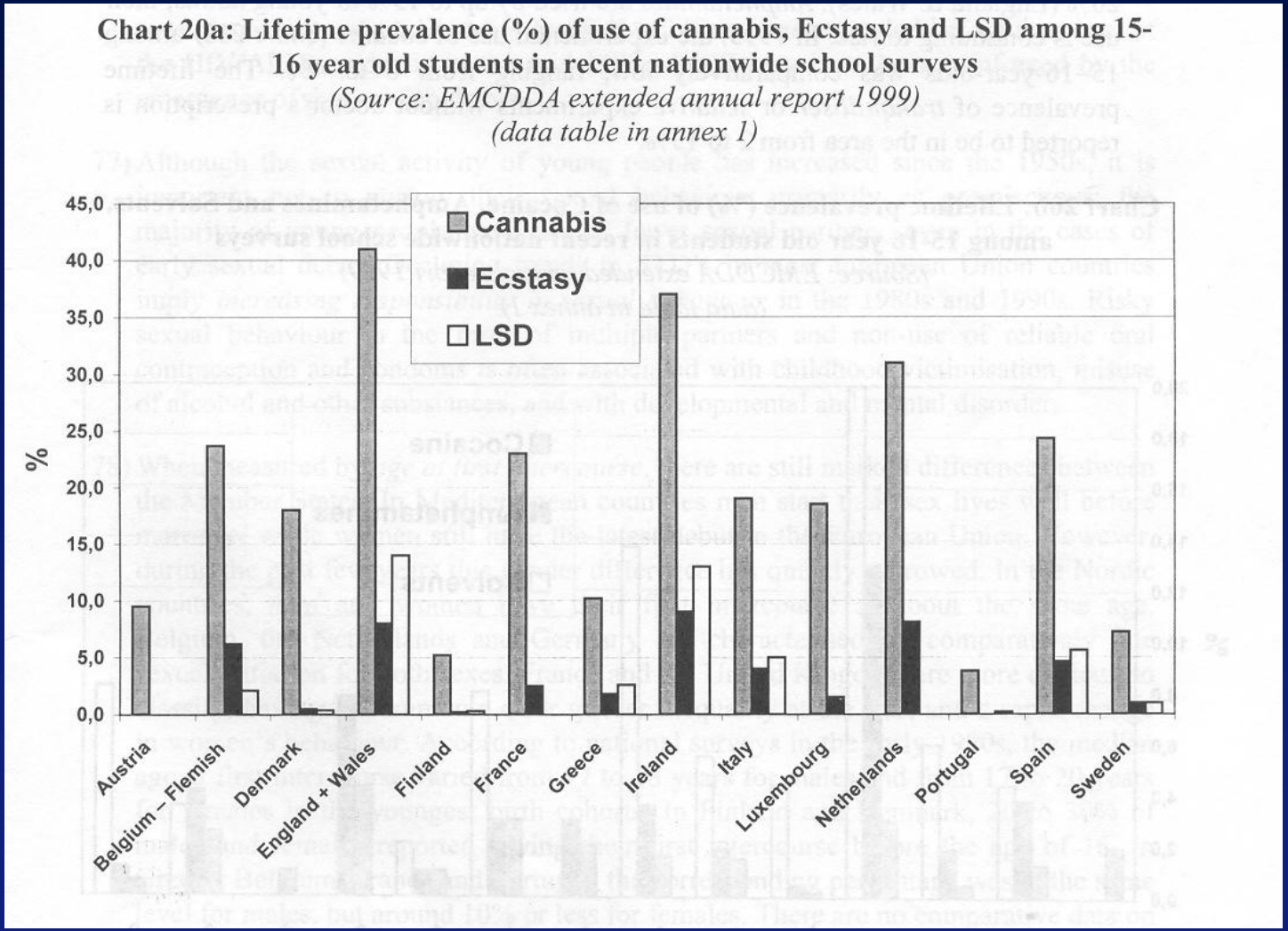
Hong Kong Sept 2012

Prof.Mitch Blair
North West London Hospitals
Imperial College London and
Royal College of
Paediatrics and Child Health

Imagine….you are the Portugal health minister



Imagine….you are the Portugal health minister



What are indicators, and why are they so important?

- Indicators are **succinct** measures that aim to **describe** as much about a system as possible in as few points as possible (*L. indicare*)

- indicators help us **understand** a system, **compare** it and **improve** it.

The three key roles of measurement

1. for **understanding**: to know how a system works and how it might be improved (research role)

2. for **performance**: monitoring if and how a system is performing to an agreed standard (performance/managerial/improvement role)

The three key roles of measurement

3. for **accountability**: allowing us to hold ourselves up to patients, the government and taxpayers and be openly scrutinised as individuals, teams and organisations (accountability/democratic role).

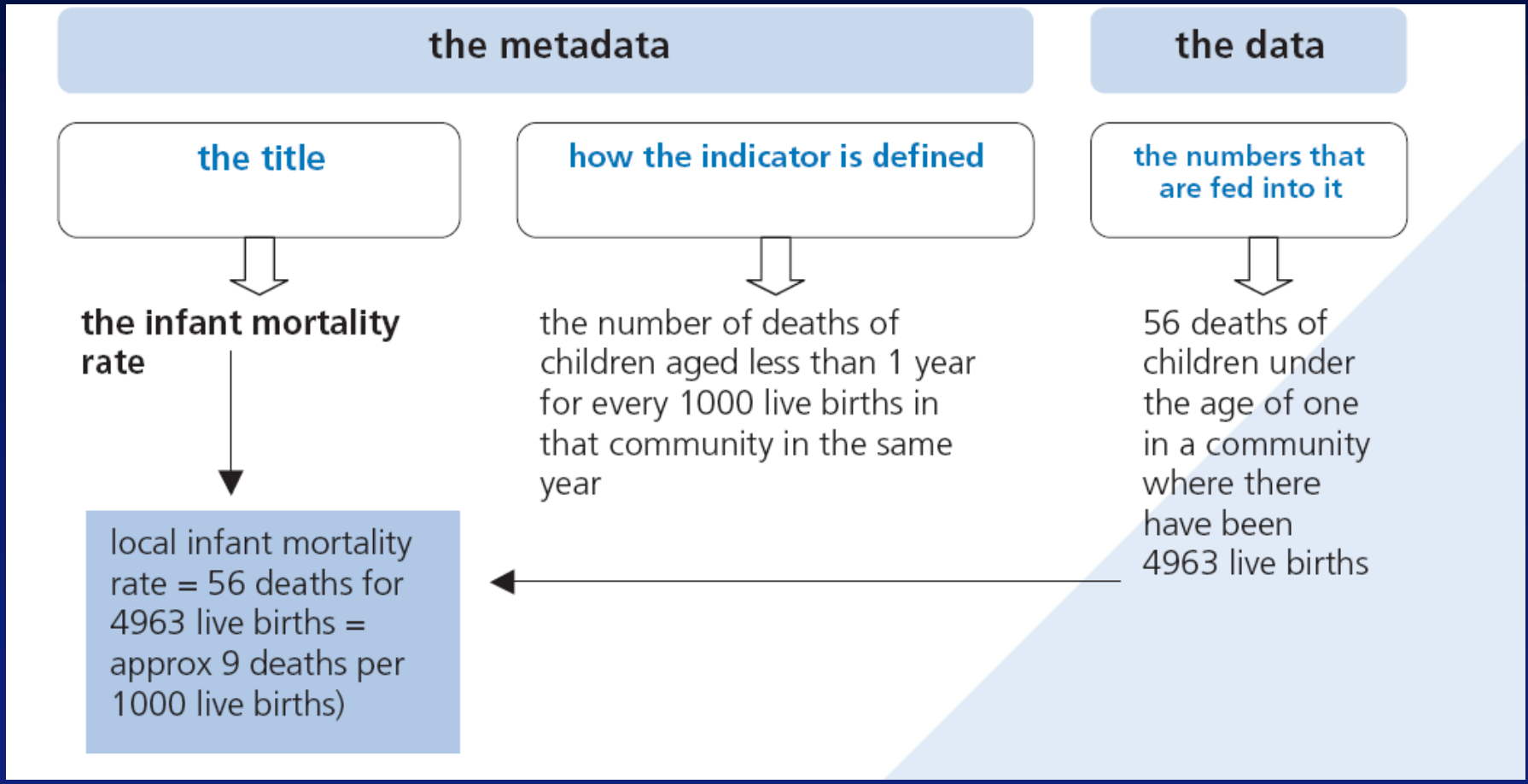
Why are people suspicious and mistrustful towards indicators?

- indicators very often make people and organisations feel vulnerable, exposed and defensive.

Four things to know and accept about indicators

- Indicators only indicate
- Indicators encourage explicitness
- Indicators usually rely on numbers and numerical techniques
- Indicators should not just be associated with fault-finding

How is an indicator constructed? -the basic anatomy

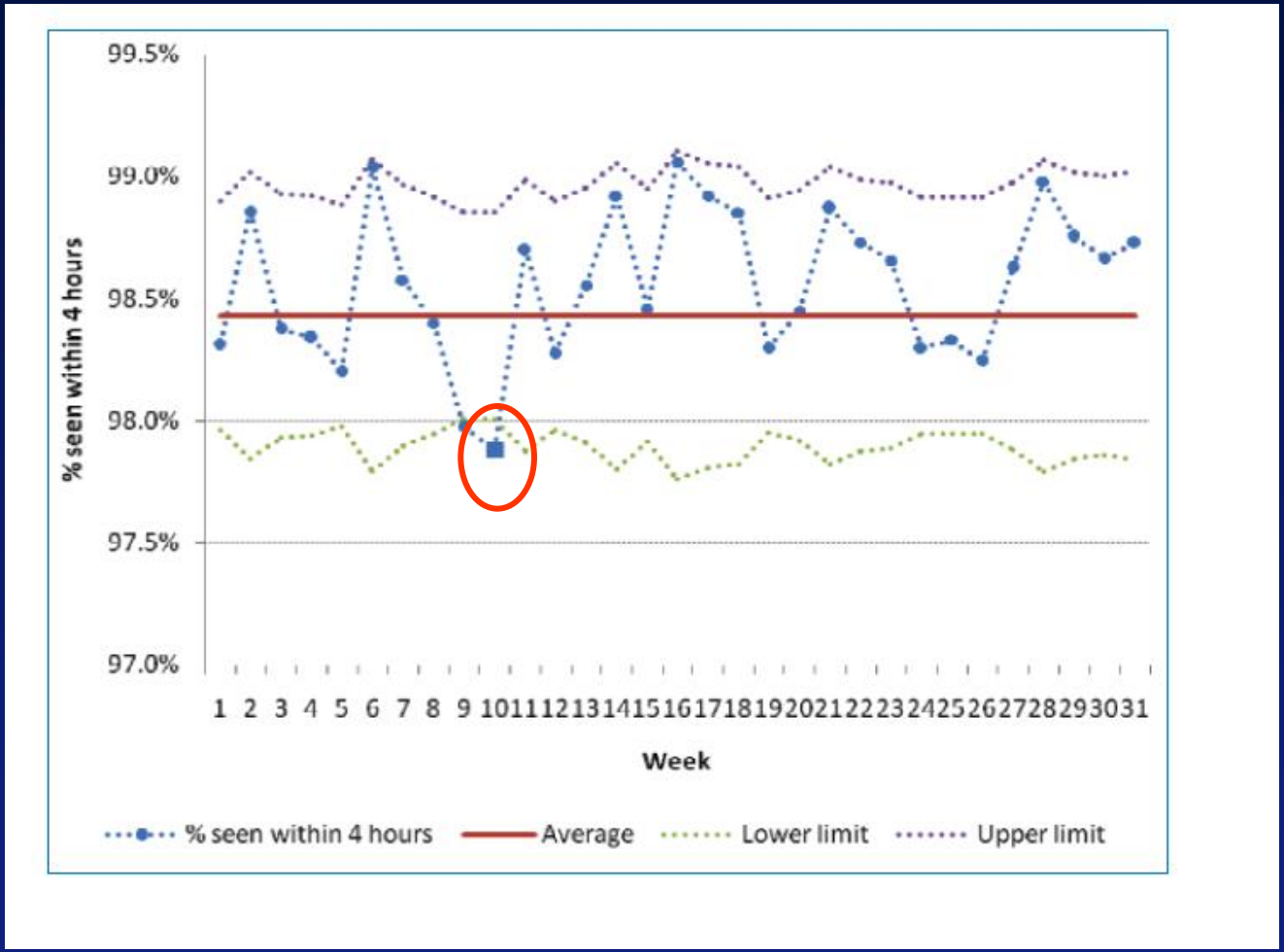


Display of indicator data

- the normal, everyday, *inevitable* (and usually unimportant), variation which is intrinsic and natural to any system – **'common cause variation'**
- and the more important variation which is indicative of something special happening and which calls for a fuller understanding and often action – **'special cause variation'.**

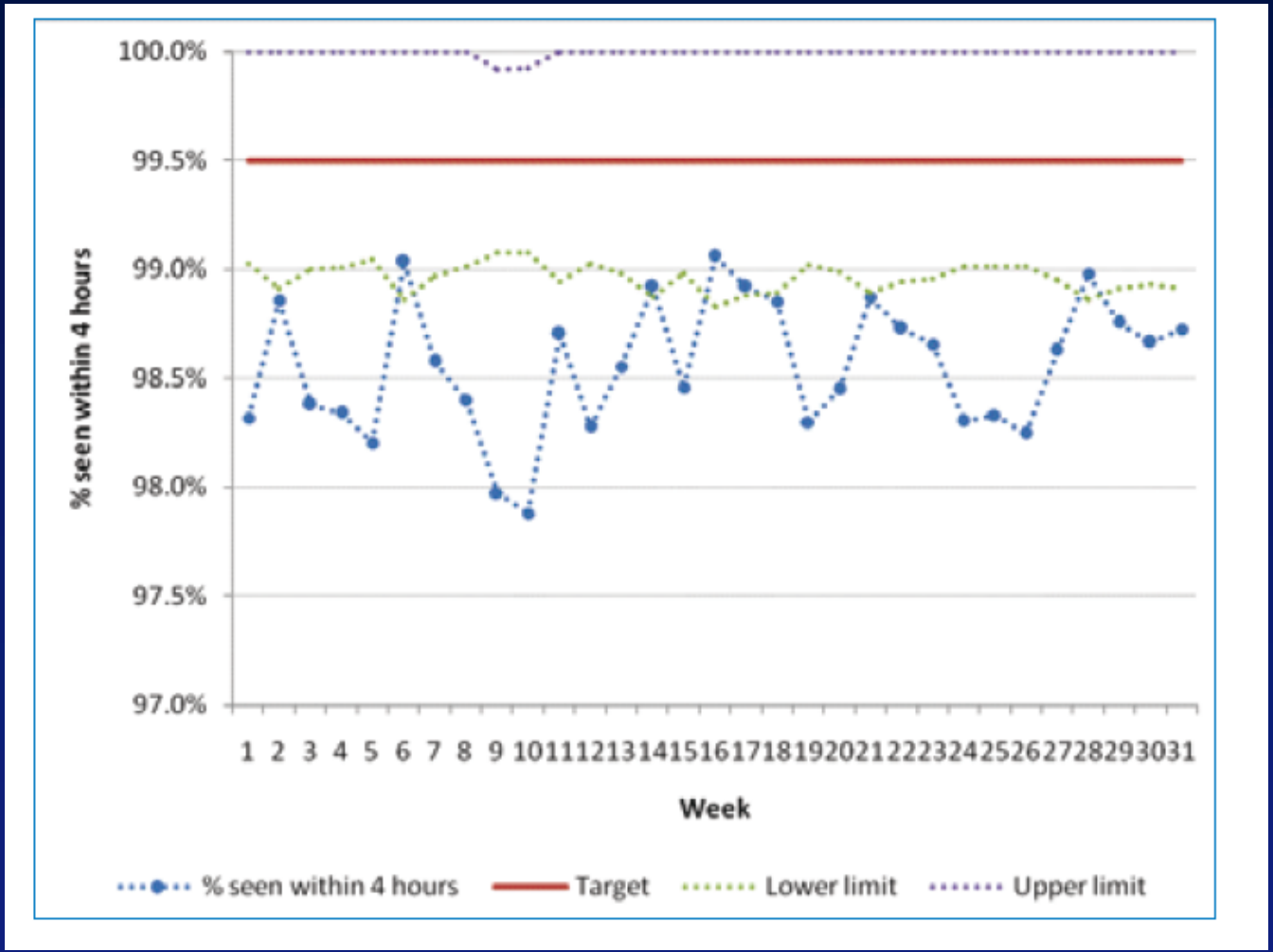
Display of indicator data-

accident and emergency attendance in a hospital



Display of indicator data-

accident and emergency attendance in a hospital



'Ultimately, the ability to lead depends on one's ability to understand variation'.

W Edwards Deming

*'I am not interested in measurement per se. I am obsessed by improvement and the role measurement has in **that** process.'*

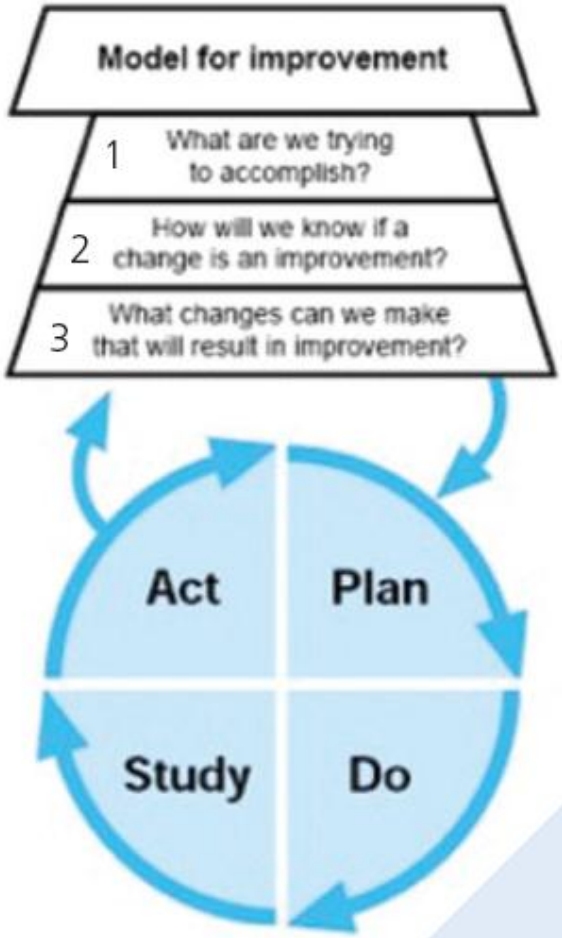
Don Berwick, Institute for Healthcare Improvement

'People change what they do less because they are given analysis that shifts their thinking, than because they are shown a truth that influences their feelings'.

Prof John Kotter,
Harvard Business School

For instance… It is usually more powerful to say that "half of all smokers will die early because they smoke" than "over 100,000 smokers die prematurely each year".

Figure 1: The Model for improvement



1. The conversation leading to agreed, measurable objectives

2. Well-designed indicators that measure the right data; in the right parts of the system; at the right time

3. Indicators that help you **understand** what part of the system to change and how

Development of Child Health Indicators of Life and Development (CHILD) in Europe

Origins of CHILD
Child Health Indicators of Life and Development

- EU Post Maastricht Treaty
  - Interest in public health
  - Information and Measurement key first steps
  - Health Monitoring Programme
  - CHILD as a third wave project

CHILD Project

- 2000 – 2002
- 17 Countries
  - 15 Member States; + Norway, Iceland
- Integrated Membership Structure
  - All national members considered experts
  - Project Chair - balancing role
  - Expert Panel - European critical review

CHILD Remit

- Recommend indicators at National level
- Appraisal of evidence base
- Results to be implemented as EU directive
- Covers full spectrum of Child Health

Topics

- Demography
- Socio-Economic
- Marginalised Children
- Well-being, Quality of Life
- Mental Health
- Lifestyles
- Nutrition and Physical Growth
- Development (inc. Intellectual and Social
- Mortality, Morbidity, Injuries
- Environment
- Health Promoting Policies
- Access and Utilisation of Services

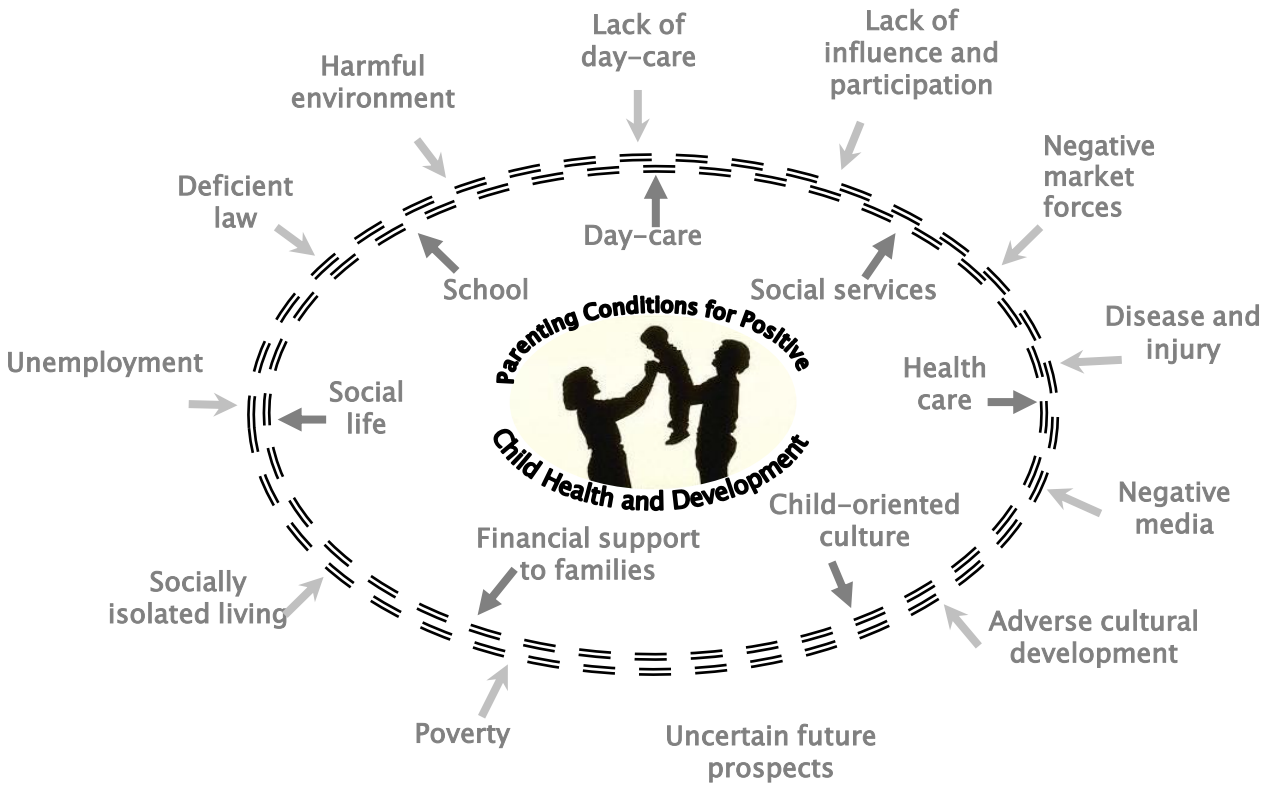
CHILD Phases

- Phase 1 - Topic Analysis
  - Literature review of topics
- Phase 2 - Drafting Potential Indicators
  - Developed from the topic analyses
- Phase 3 - The Recommendations
  - Finalisation of Indicator Proposals
  - Final Reports

CHILD Philosophy

- Health Status, Outcome
  - Death, illness, etc. - important, too late
- Health Determinants
  - Preventive, more important
- Burden of Ill health
  - Illness, social cost, loss of education
  - Determining Priority

Breadth of Determinants



Adapted by Gunnlaugsson G and Rigby M from Skolhälsovården 1998. Underlag för egen kontroll och tillsyn. Stockholm: Socialstyrelsen, 1998.

Scientific principles and quality criteria

- Validity
  - Face-, Content-, Construct Validity
- Reliability
  - refers to data consistency over time
- Sensitivity

Short-Listing Criteria

1. Significance of Burden to Society
2. Significance of Burden to Family
3. Significance of Burden to Individual
4. Objective, based on research
5. Representative of Large Population Groups
6. Regularity and Repeatability (trend analysis)
7. Amenable to Effective Action
8. Data Availability
9. Understandable to broad audience

Presentation of Indicators

- Rationale/ justification
- Operational definition
- Technical criteria and formulae
- Data sources and availability
- References

CHILD Results

41 indicators - some traditional
some novel
thematic spread

17 areas need research
current evidence not adequate

CHILD Indicators www.europa.eu.int

A. Demographic & Socio-Economic

A 1 Socio-economic Circumstances
A 2 Children in Poverty
A 3 Parental Educational Attainment
A 4 Child in Single Parent Households
A 5 Asylum Seekers

B. Child Health Status, Well-being

Child Mortality

B 1 Child Mortality Rates
B 2 Selected Cause-specific Mortality

Child Morbidity

B 3 Cancer
B 4 Diabetes
B 5 Asthma
B 6 Infectious Diseases
B 7 Dental Morbidity

Injuries to Children

B 8 Burns Necessitating Admission
B 9 Poisoning Necessitating Admission
B 10 Fracture of Long-bones

Mental Health of Children

B 11 Attempted Suicide

CHILD Indicators www.europa.eu.int

C. Health Determinants, Risk, and Protective Factors

Parental Determinants

C 1 Breastfeeding
C 2 Household Environmental Tobacco
C 3 Parental Support

Child Lifestyle Determinants

C 4 Physical Activity
C 5 Tobacco Smoking
C 6 Alcohol Abuse
C 7 Substance Misuse

Other Factors

C 8 Overweight and Obesity
C 9 Children in Care
C 10 Early School Leavers
C 11 Educational Enrolment
C 12 Air Pollution Exposure

CHILD Indicators www.europa.eu.int

D. Child Health Systems & Policy

Health Systems Policy

D 1 Marginalised Children's Health Care
D 2 Parental Inpatient Accompaniment

Health System Quality

D 3 Immunisation Coverage
D 4 Leukaemia 5-year Survival

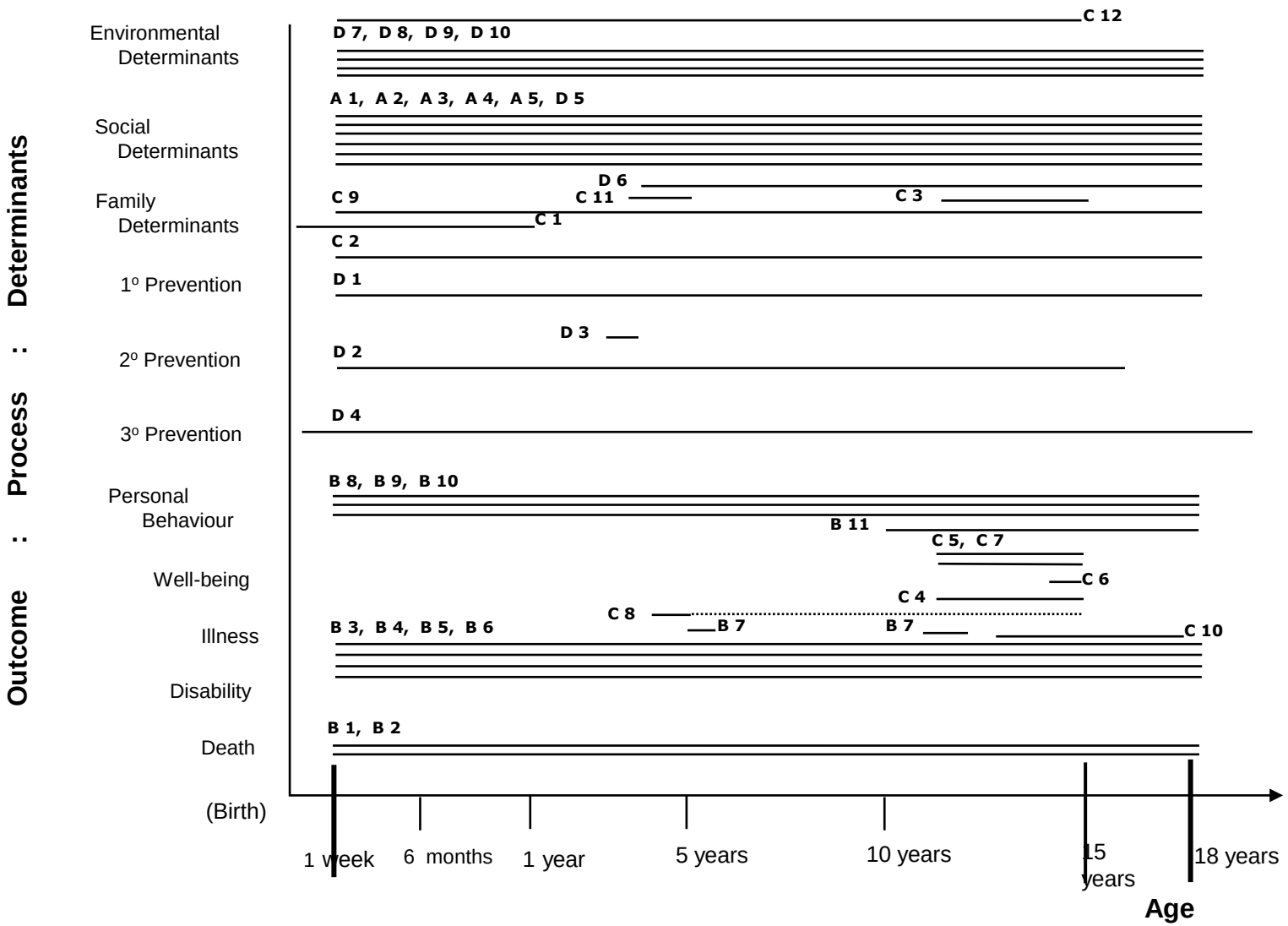
Social Policy Indicators

D 5 Physical Punishment
D 6 Anti-bullying policies in schools

Physical Protection Policy

D 7 Child Transportation Safety
D 8 Exposure to Lead
D 9 Exposure to Hazardous Noise
D 10 Environmental Tobacco Smoke

Spread of CHILD Indicators



CHILD Further Research Areas

- Child Abuse
- Childhood Behaviour Disorders
- Learning Disorders/Intellectual Disability
- Educational Development
- Perceived Well-being, Quality of Life and Positive Mental Health
- Children with Permanent or Severe Disability
- Family Cohesion and Social Cohesion
- Nutritional Habits
- Health Care Access
- Inpatient Service Quality
- Health Service Access for Socially Restricted Children
- Medication
- Play and Leisure
- Assessment of Children with Special Needs
- Integration of Children with Special Needs
- Healthy Parenting
- Mental Health Education

Conclusion

- CHILD reached consensus on a broad remit
- A spread of indicators was achieved (routine and survey)
- This has been used within an overall set of EU Health Monitoring Indicators and as part of WHO Child and Youth Health Strategy
- CHILD results have started to increase profile of children's health issues in UK and Europe

Acknowledgements

- Austria Dr. Reli MechtlerJohannes Kepler University, Linz
- Belgium Prof. Sophie Alexander*from December 2001*Free University of Brussels
- Denmark Dr. Anne NielsenDanish Institute for Clinical Epidemiology
- France Prof. Marc BrodinUniversity of Paris V; Hôpital Robert Debré, Paris
- Finland Prof. Matti Rimpela*to September 2001*STAKES, Helsinki
- Germany Dr. Gerhard BrennerZentralinstitut für die kassenärztliche Versorgung
- Greece Prof. Andreas Constantopoulos*to May 2001*Prof. Chryssa Bakoula*from June 2001*Dept. of Paediatrics, Athens UniversityAthens University - "Aghia Sophia" Children's Hospital
- Italy Dr. Giorgio TamburliniIstituto per l' Infanzia IRCCS Burlo Garofolo, Trieste
- Ireland Dr. Orlaith O'ReillySouth Eastern Health Board, Kilkenney
- Luxembourg Dr. Yolande WagenerDirection de la Santé, Luxembourg
- Netherlands Prof. Dr. S.P. Verloove-Vanhorick *to June 2001*TNO Prevention and Health, Leiden
- Portugal Prof. Dr. Mário Cordeiro*to November 2001*General Directorate of HealthHead, Portuguese Health Observatory
- Spain Prof. Julio Moreno GonzálezPreventive Medicine Service, Public Health Unit, University Hospital "Virgen Macarena", U. Sevilla
- Sweden Prof. Claes Sundelinalternative Dr. Anders HjernUniversity Hospital, Uppsala
- UK Dr. Mary Cotter*to June 2001* Dr. Ruth Parry*from December 2001*Health Solutions WalesNorth Wales Health Authority
- Iceland Dr. Matthias Halldorsson*to June 2001*Dr. Geir Gunnlaugsson*from June 2001*Deputy Director of Health, IcelandCentre for Child Health Services, Reykjavik
- Norway Dr. Rannveig NordhagenNorwegian Institute of Public Health

What indicators are being used now for school aged children?

Examples

- UNICEF / WHO HBSC Health Behaviour of Schoolchildren

The true measure of a nation's standing is how well it attends to its children – their health and safety, their material security, their education and socialization, and their sense of being loved, valued, and included in the families and societies into which they are born.

How was wellbeing defined?

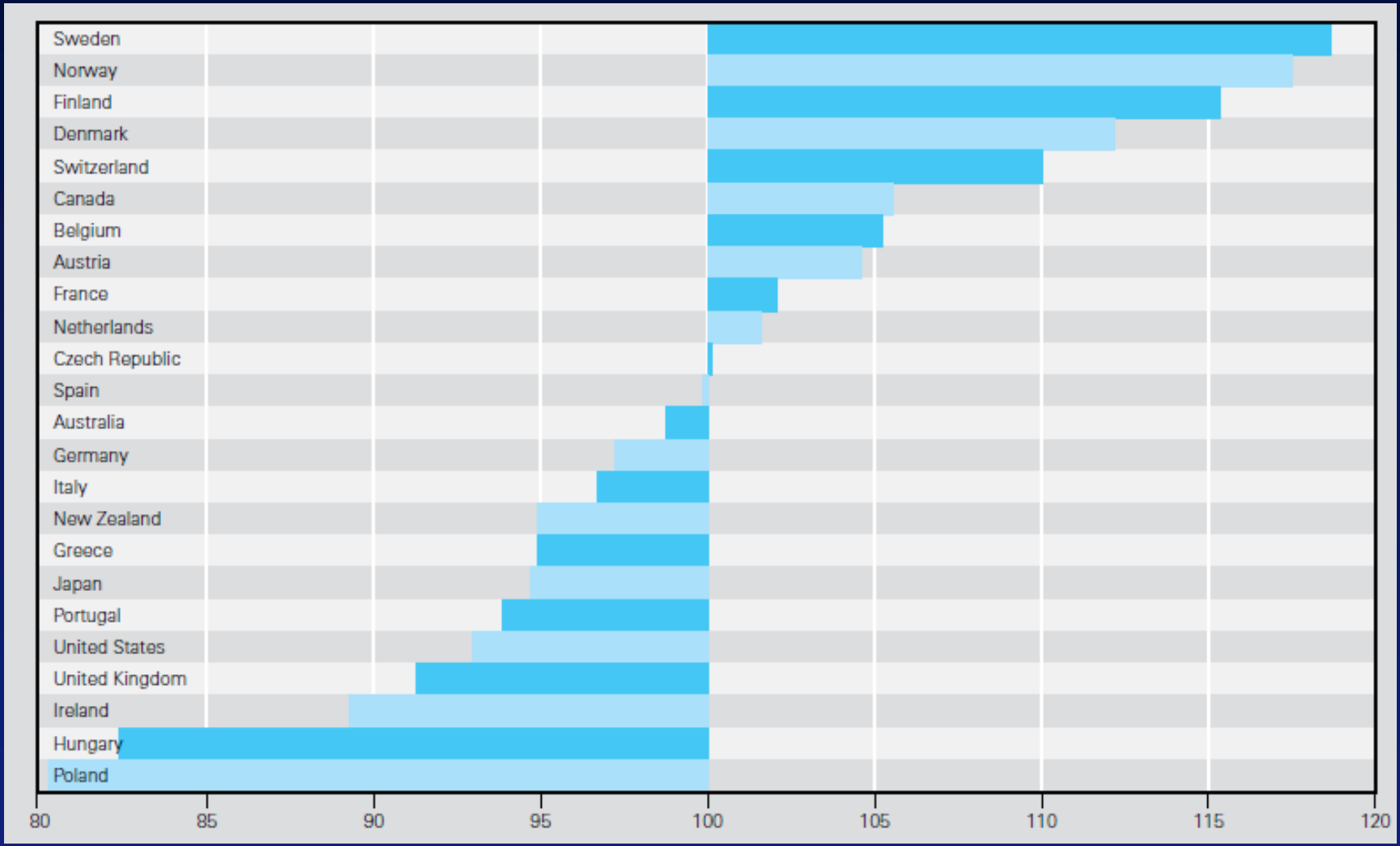
		Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5	Dimension 6
Dimensions of child well-being	Average ranking position (for all 6 dimensions)	Material well-being	Health and safety	Educational well-being	Family and peer relationships	Behaviours and risks	Subjective well-being
Netherlands	4.2	10	2	6	3	3	1
Sweden	5.0	1	1	5	15	1	7
Denmark	7.2	4	4	8	9	6	12
Finland	7.5	3	3	4	17	7	11
Spain	8.0	12	6	15	8	5	2
Switzerland	8.3	5	9	14	4	12	6
Norway	8.7	2	8	11	10	13	8
Italy	10.0	14	5	20	1	10	10
Ireland	10.2	19	19	7	7	4	5
Belgium	10.7	7	16	1	5	19	16
Germany	11.2	13	11	10	13	11	9
Canada	11.8	6	13	2	18	17	15
Greece	11.8	15	18	16	11	8	3
Poland	12.3	21	15	3	14	2	19
Czech Republic	12.5	11	10	9	19	9	17
France	13.0	9	7	18	12	14	18
Portugal	13.7	16	14	21	2	15	14
Austria	13.8	8	20	19	16	16	4
Hungary	14.5	20	17	13	6	18	13
United States	18.0	17	21	12	20	20	–
United Kingdom	18.2	18	12	17	21	21	20

OECD countries with insufficient data to be included in the overview: Australia, Iceland, Japan, Luxembourg, Mexico, New Zealand, the Slovak Republic, South Korea, Turkey.

Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5	Dimension 6
Material well-being	Health and safety	Educational well-being	Family and peer relationships	Behaviours and risks	Subjective well-being

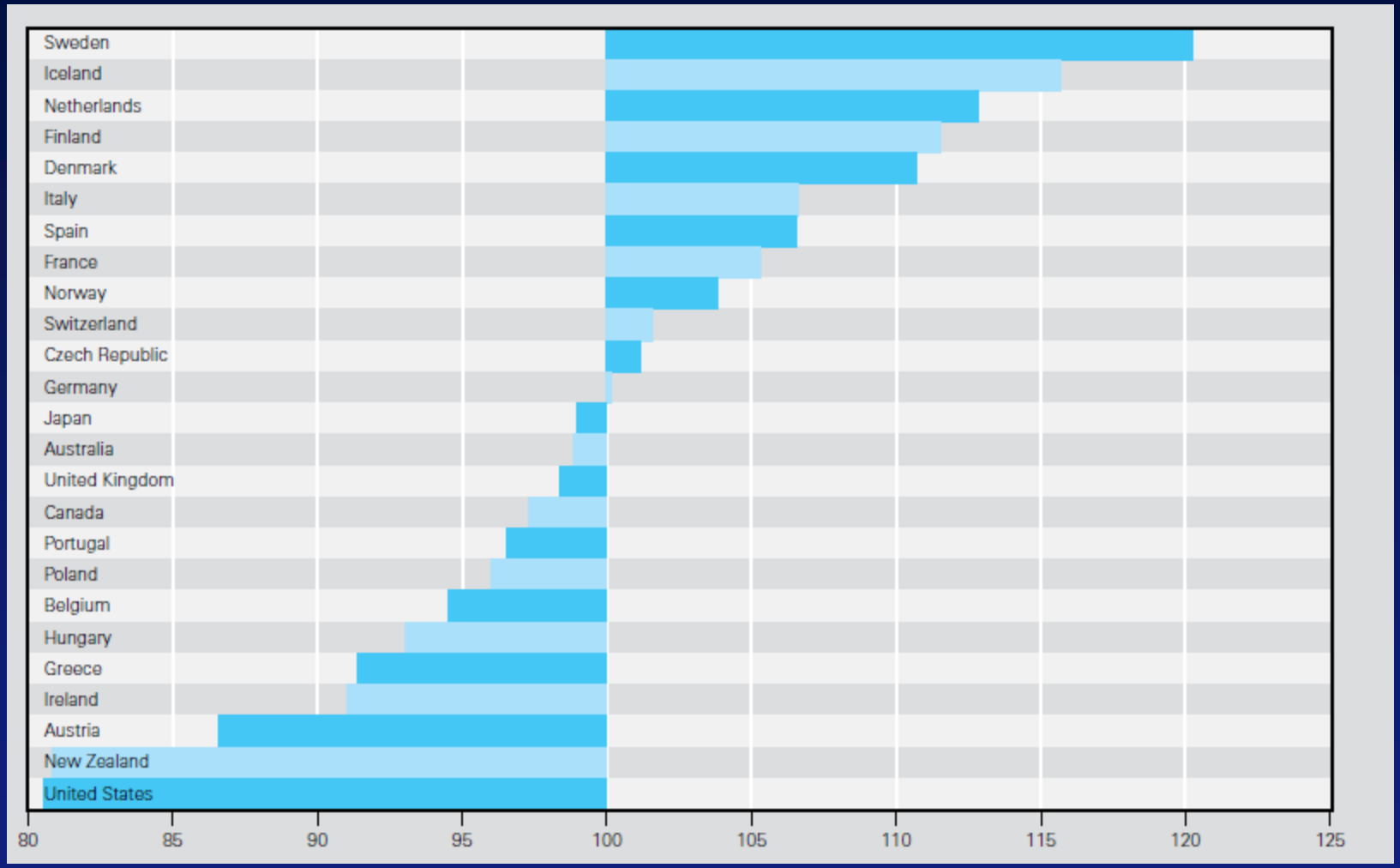
Material well-being

COMPONENTS	INDICATORS
relative income poverty	– percentage of children living in homes with equivalent incomes below 50% of the national median
households without jobs	– percentage of children in families without an employed adult
reported deprivation	– percentage of children reporting low family affluence – percentage of children reporting few educational resources – percentage of children reporting fewer than 10 books in the home


Sweden
Norway
Finland
Denmark
Switzerland
Canada
Belgium
Austria
France
Netherlands
Czech Republic
Spain
Australia
Germany
Italy
New Zealand
Greece
Japan
Portugal
United States
United Kingdom
Ireland
Hungary
Poland
80
85
90
95
100
105
110
115
120

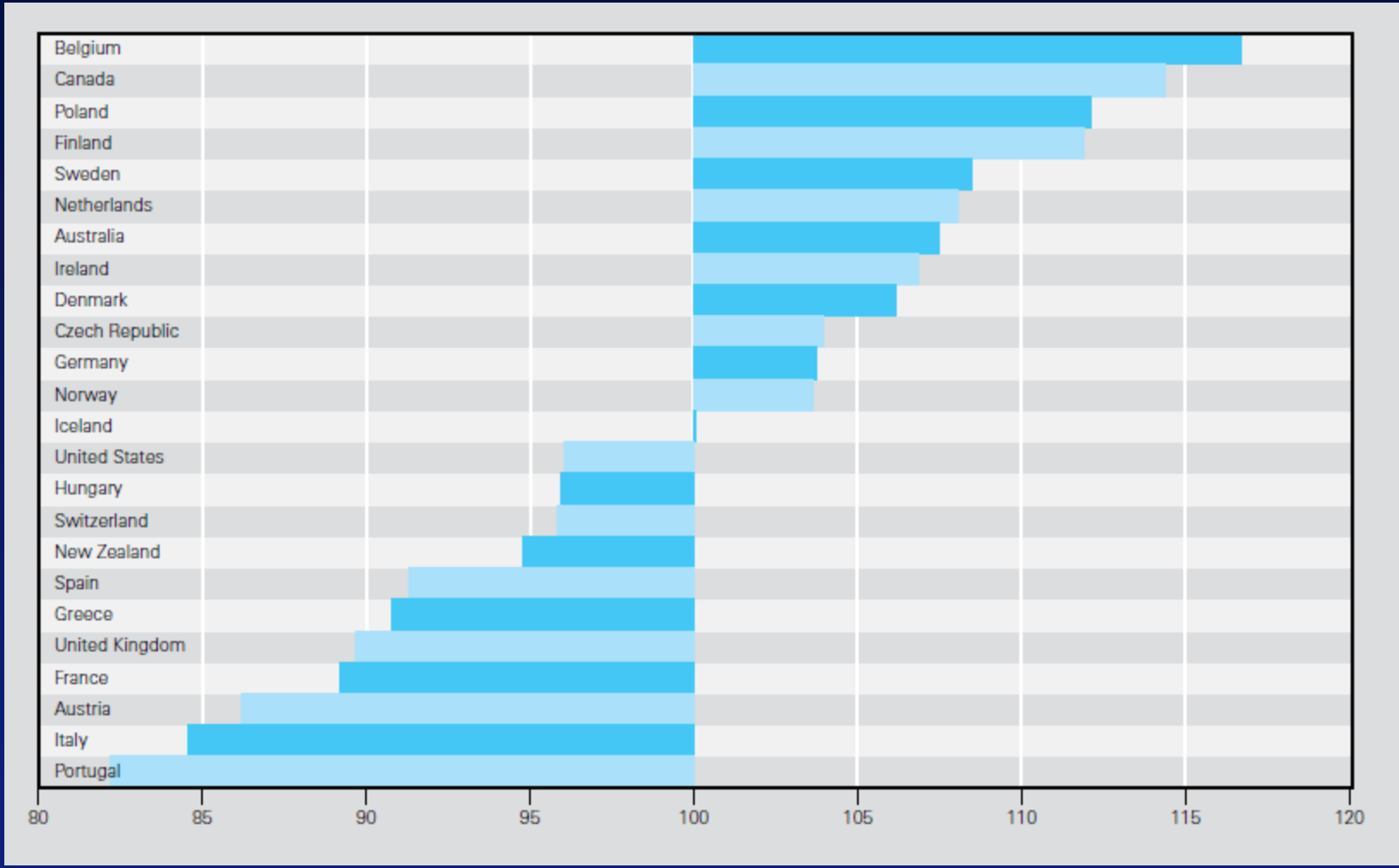
Health and Safety

COMPONENTS	INDICATORS
health at age 0-1	– number of infants dying before age 1 per 1,000 births – percentage of infants born with low birth weight (<2500g.)
preventative health services	– percentage of children age 12 to 23 months immunized against measles, DPT, and polio
safety	– deaths from accidents and injuries per 100,000 aged 0 – 19


Sweden
Iceland
Netherlands
Finland
Denmark
Italy
Spain
France
Norway
Switzerland
Czech Republic
Germany
Japan
Australia
United Kingdom
Canada
Portugal
Poland
Belgium
Hungary
Greece
Ireland
Austria
New Zealand
United States
80
85
90
95
100
105
110
115
120
125

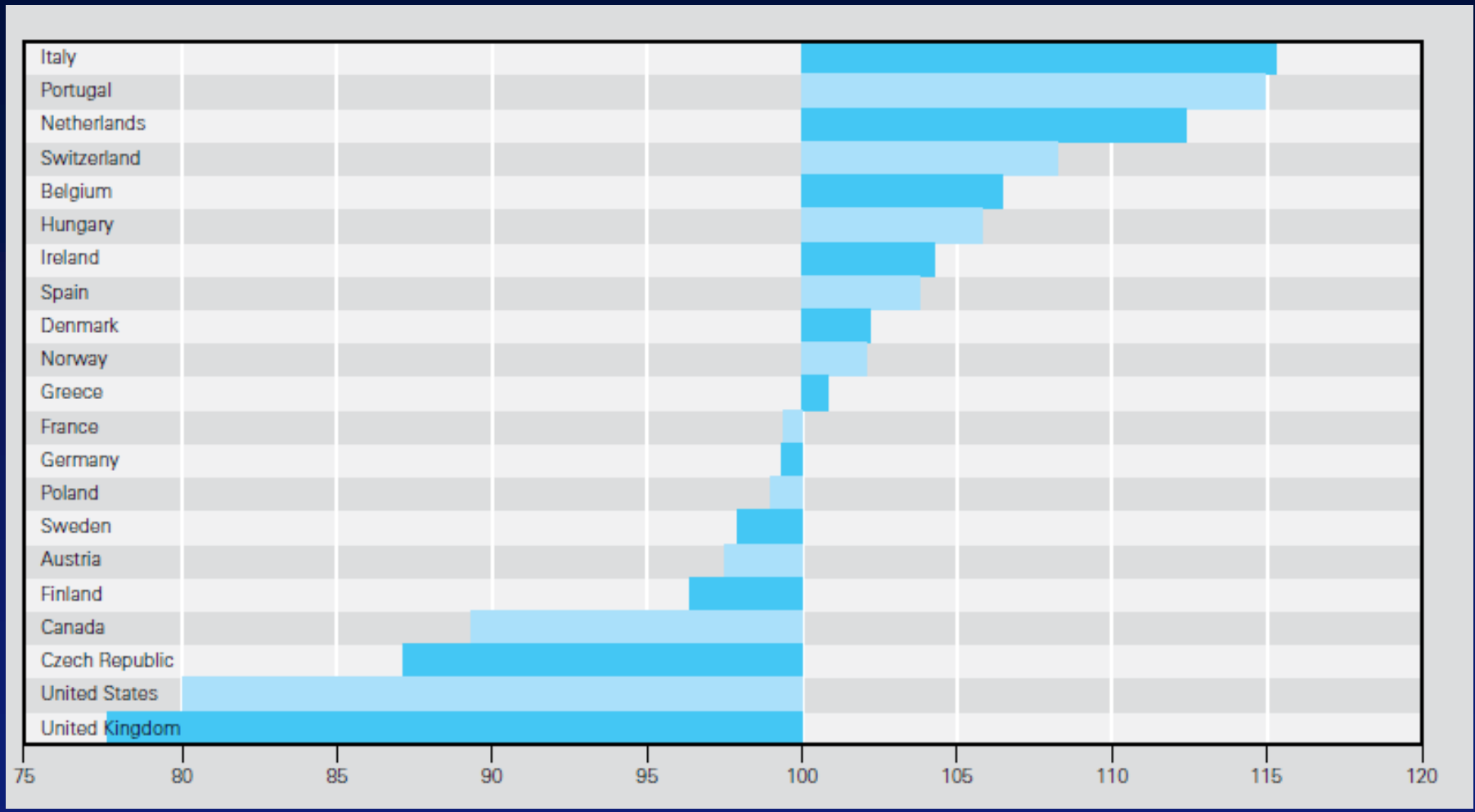
Educational well-being

COMPONENTS	INDICATORS
school achievement at age 15	– average achievement in reading literacy – average achievement in mathematical literacy – average achievement in science literacy
beyond basics	– percentage aged 15-19 remaining in education
the transition to employment	– percentage aged 15-19 not in education, training or employment – percentage of 15 year-olds expecting to find low-skilled work

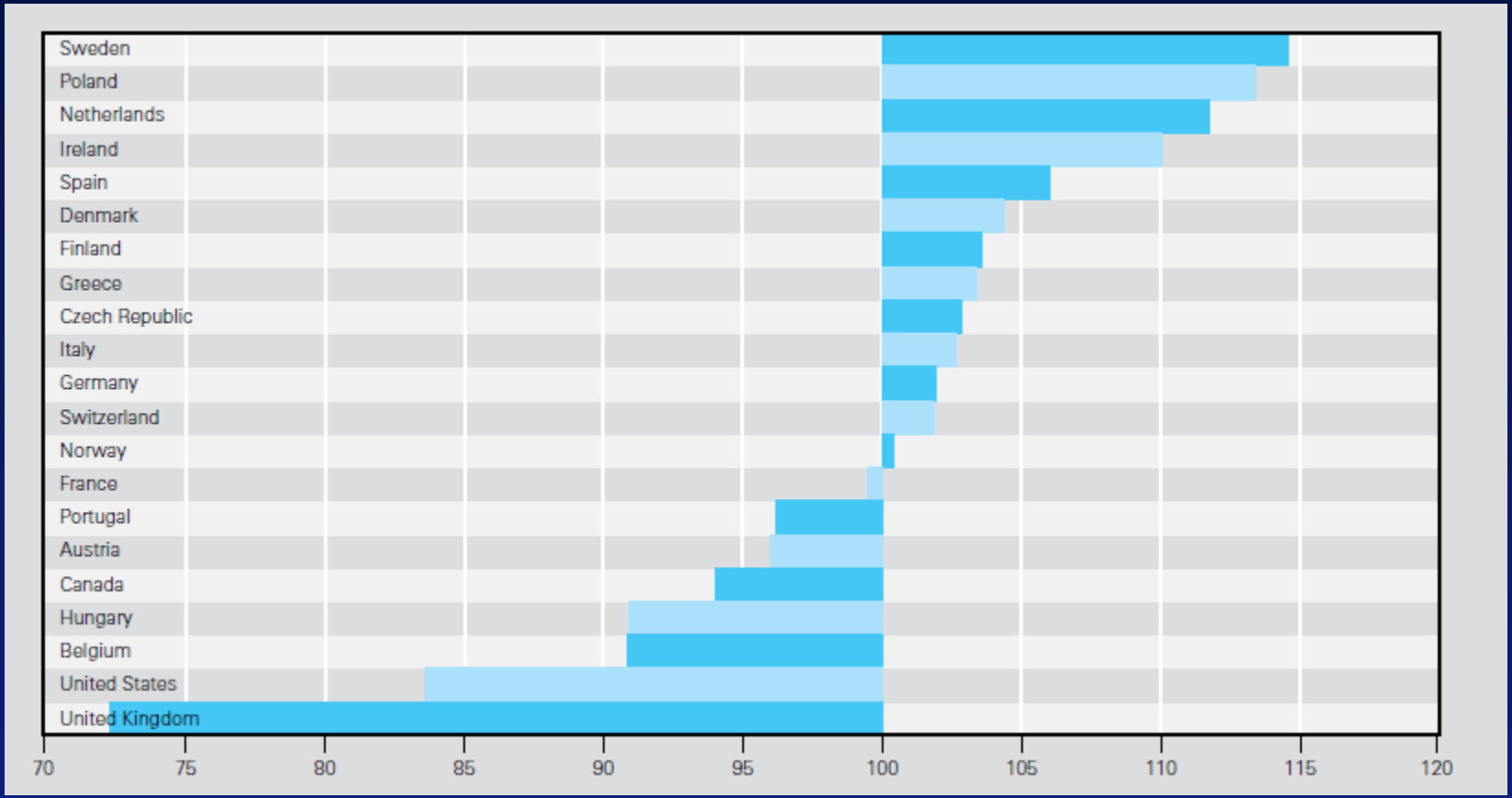

Belgium
Canada
Poland
Finland
Sweden
Netherlands
Australia
Ireland
Denmark
Czech Republic
Germany
Norway
Iceland
United States
Hungary
Switzerland
New Zealand
Spain
Greece
United Kingdom
France
Austria
Italy
Portugal
80
85
90
95
100
105
110
115
120

Relationships

COMPONENTS	INDICATORS
family structure	– percentage of children living in single-parent families – percentage of children living in stepfamilies
family relationships	– percentage of children who report eating the main meal of the day with parents more than once a week – percentage of children who report that parents spend time 'just talking' to them
peer relationships	– percentage of 11, 13 and 15 year-olds who report finding their peers 'kind and helpful'

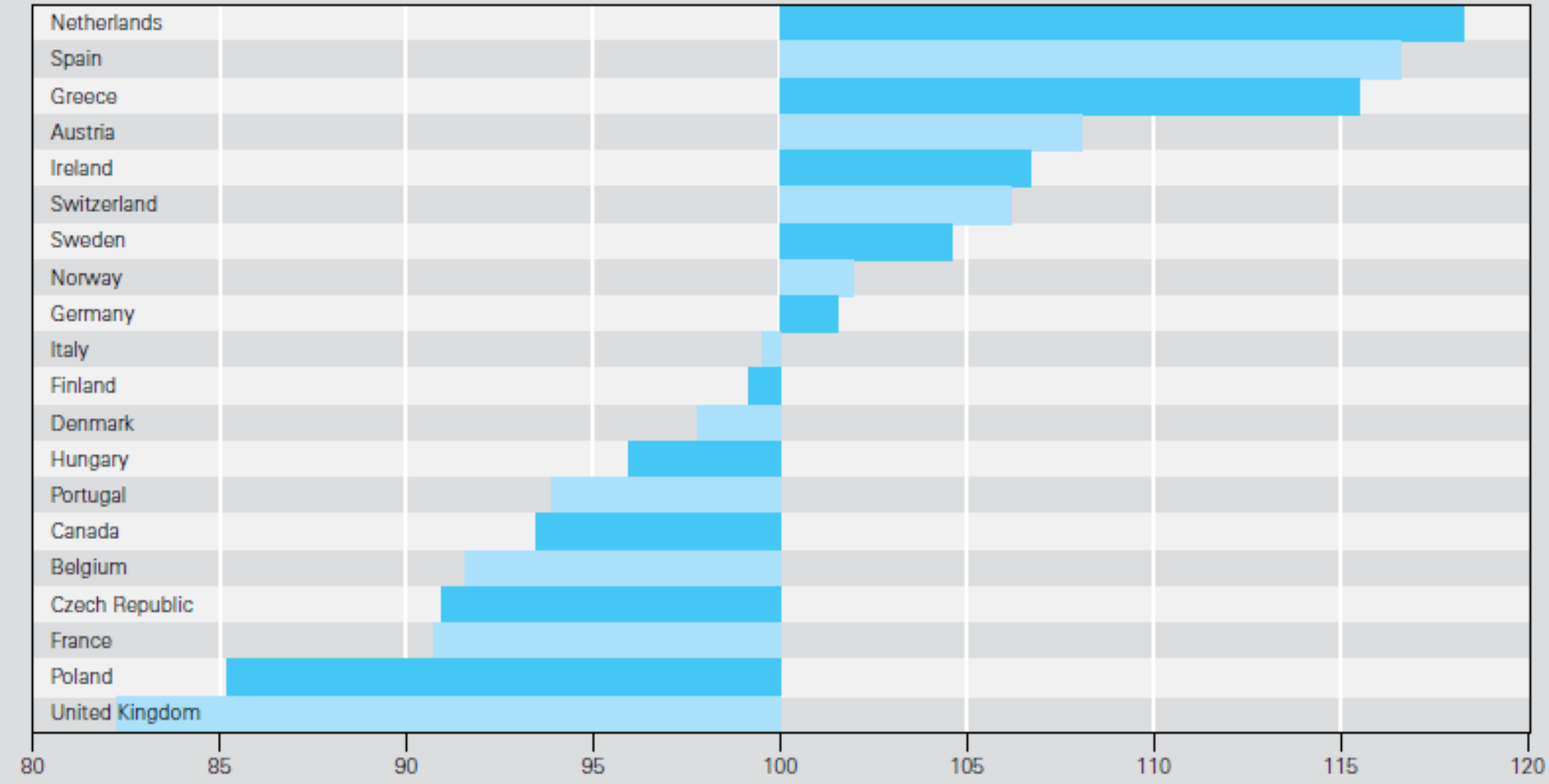

Italy
Portugal
Netherlands
Switzerland
Belgium
Hungary
Ireland
Spain
Denmark
Norway
Greece
France
Germany
Poland
Sweden
Austria
Finland
Canada
Czech Republic
United States
United Kingdom
75
80
85
90
95
100
105
110
115
120

Behaviours and risk	COMPONENTS	INDICATORS
	health behaviours	– percentage of children who eat breakfast – percentage who eat fruit daily – percentage physically active – percentage overweight
	risk behaviours	– percentage of 15 year-olds who smoke – percentage who have been drunk more than twice – percentage who use cannabis – percentage having sex by age 15 – percentage who use condoms – teenage fertility rate
	experience of violence	– percentage of 11, 13 and 15 year-olds involved in fighting in last 12 months – percentage reporting being bullied in last 2 months

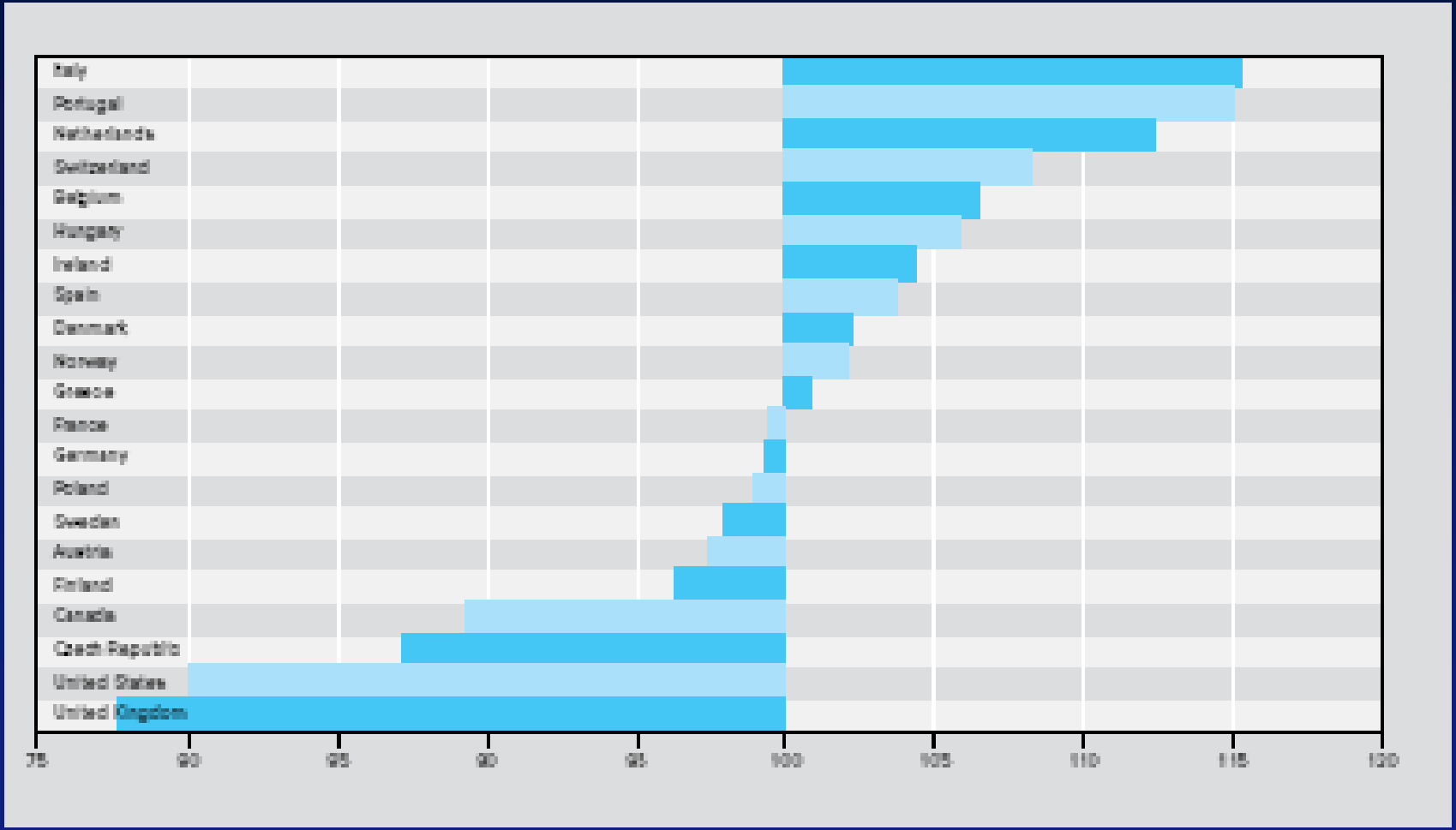

Sweden
Poland
Netherlands
Ireland
Spain
Denmark
Finland
Greece
Czech Republic
Italy
Germany
Switzerland
Norway
France
Portugal
Austria
Canada
Hungary
Belgium
United States
United Kingdom
70
75
80
85
90
95
100
105
110
115
120

Subjective well-being

COMPONENTS	INDICATORS
health	– percentage of young people rating their own health no more than 'fair' or 'poor'
school life	– percentage of young people 'liking school a lot'
personal well-being	– percentage of children rating themselves above the mid-point of a *'Life Satisfaction Scale'* – percentage of children reporting negatively about personal well-being


Netherlands
Spain
Greece
Austria
Ireland
Switzerland
Sweden
Norway
Germany
Italy
Finland
Denmark
Hungary
Portugal
Canada
Belgium
Czech Republic
France
Poland
United Kingdom
80
85
90
95
100
105
110
115
120

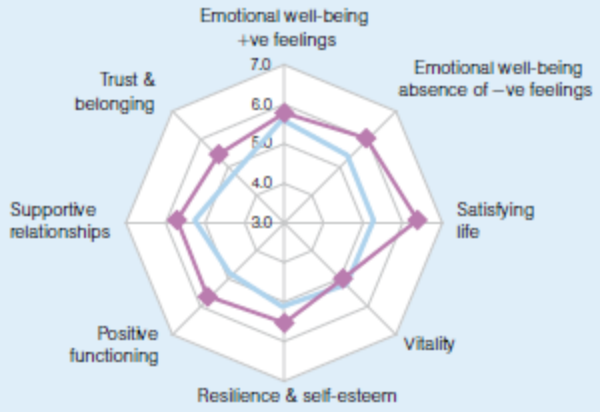
Quality of Childrens reported Relationships in OECD countries



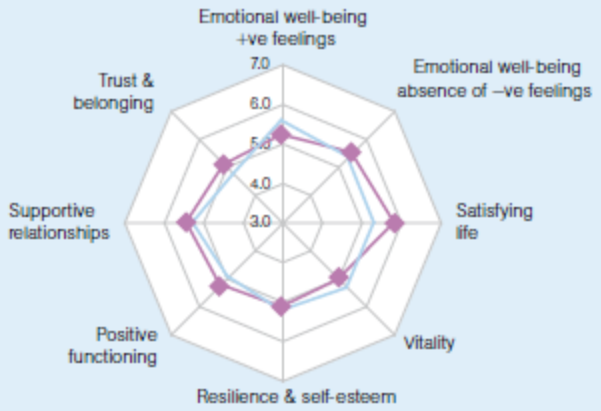
A different way of displaying data

Figure 8. Well-being profiles among 16–24-year-olds

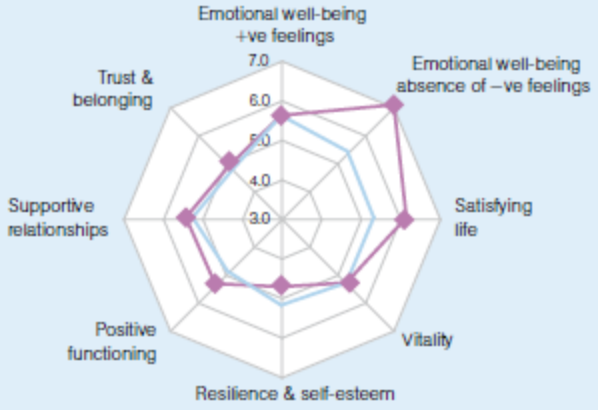
Denmark



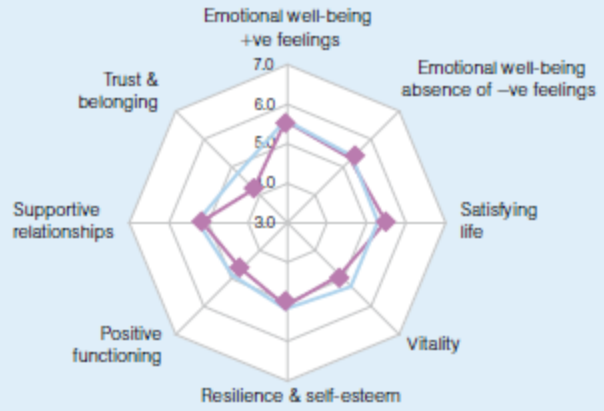
Sweden



Finland



UK



unicef

Child well-being in the UK, Spain and Sweden:

The role of inequality and materialism

- Time
- Materialism
- Inequalities

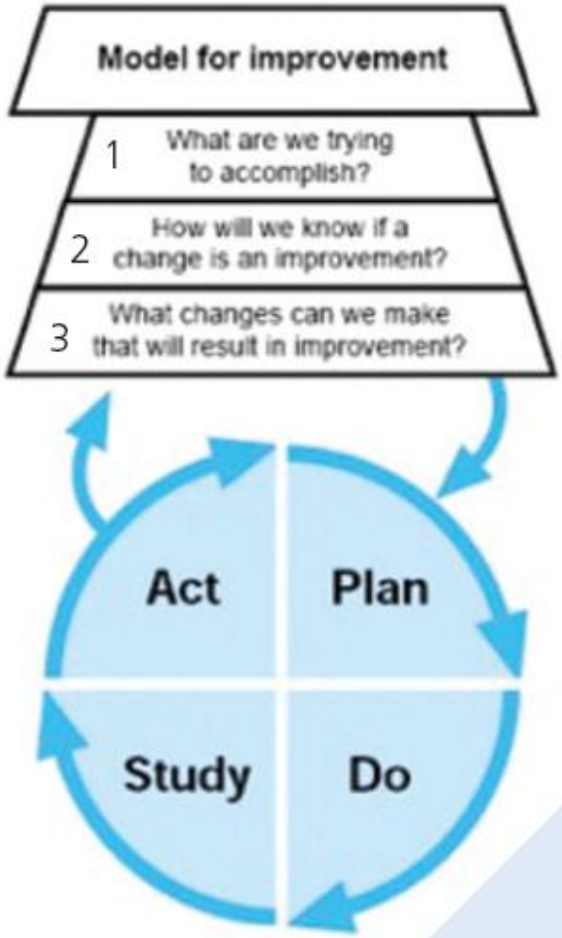
- *“Well-being is about friends, also being healthy, independent and having a job, feeling safe and secure. We live in a very unequal society where some people have a lot, and too many people have too little. More well-being brings benefits to us as individuals and to society as a whole.”*
- Young Person’s Reference Group, 2009

- “Children’s wellbeing indicators are on the move from concentrating only on trends of dying , distress, disability and discomfort , to tackling the issue of indicators of sparkle, satisfaction and wellbeing”
- Resnick 1995

Indicators-shifts in focus

- Negative to positive
- Incorporation of children's rights
- Well becoming to subjective well being
- Professionally determined to cutting across professions
- Adult perspective to child perspective as well
- National to smaller geographical units
- Move to composite indicators
- Efforts guided by policy relevance
- www.childindicators.org

Figure 1: The Model for improvement



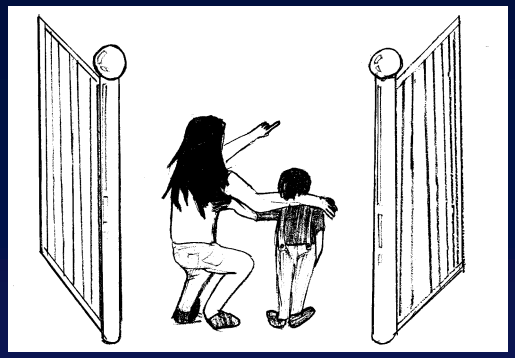
1. The conversation leading to agreed, measurable objectives

2. Well-designed indicators that measure the right data; in the right parts of the system; at the right time

3. Indicators that help you **understand** what part of the system to change and how

The “conversation” around school entrants in the UK

C.H.A.S.E.



AIMS

- To develop a **multi-professional consensus** on the components of children's health and well being.

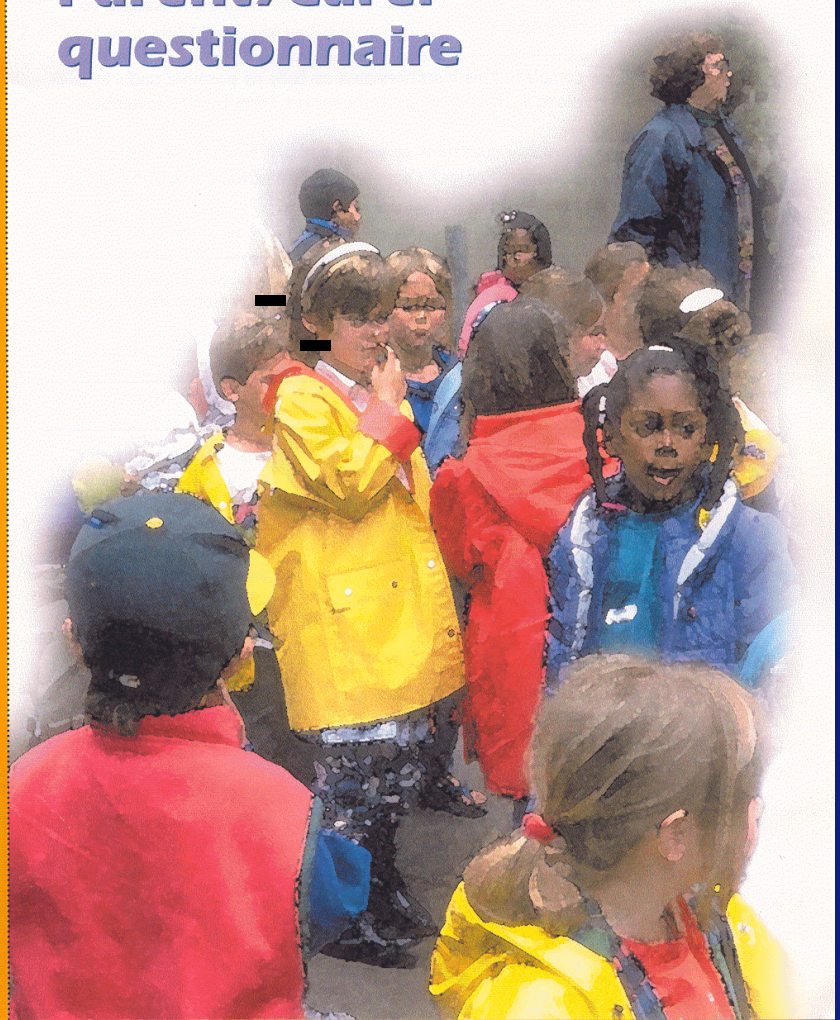
- To use this consensus to develop a comprehensive **questionnaire to capture the multiple dimensions of health** in London's children.

- To assess the **feasibility, data quality, reliability and validity** of the questionnaire.

CHASE

The Child Health Assessment at School Entry project

Parent/Carer questionnaire



Child Health Assessment at School Entry Project

The Royal College of Paediatrics and Child Health

Indicator	*Response*	*School 1 n (%)*	*Total n*	*School 2 n (%)*	*Total n*	*Norm (%)*
Response rate		23 (82)	28	36 (74)	49	-
Longstanding illness or disability	Yes	3 (14)	21	6 (17)	36	13
Immunisations: MMR 1	Uptake	16(70)	23	35 (97)	34	84
Temporary accommodation in last 2 years	Yes	1 (5)	22	1 (3)	36	2
BMI	Overweight (>85th centile)	4 (17)	23	15 (44)	34	18.7
SDQ Hyperactivty	Borderline Abnormal	1 (5) 4 (18)	22	1 (3) 2 (6)	34	7.7 16
CHQ-PF28 self-esteem		Mean 83	22	Mean 93	35	Mean 87

Action?

- Pastoral care support/counsellor
- Special educational needs /school nurse support
- Obesity prevention
- Immunisation campaign
- Outreach to temporary accomodation

Child Health and Maternity Information (CHIMAT) www.chimat.org.uk

Domain	Indicator	Local No. Per Year	Local Value	Eng Avg	Eng Worst	England Range	Eng Best
Our communities	1 Income deprivation	25625	12.2	12.9	31.1		3.3
	2 Ecological footprint	n/a	5.346	5.470	6.430		4.904
	3 Homelessness	96	1.9	7.8	35.8		0.0
	4 Children in poverty	7845	18.8	21.3	58.8		5.2
	5 GCSE achievement *	1389	64.3	57.5	33.6		81.9
	6 Violent crime	3028	14.3	19.8	41.1		5.0
Giving children and young people a healthy start	7 Smoking in pregnancy						
	8 Breast feeding						
	9 Obese children						
	10 Physically active children *						
	11 Teenage pregnancy (under 18) *	122	29.4	42.1	95.3		12.8
The way we live	12 Adults who smoke *	n/a	17.6	26.0	37.3		15.5
	13 Binge drinking adults	n/a	10.0	18.2	29.2		8.8
	14 Healthy eating adults	n/a	31.9	23.8	11.4		38.1
	15 Physically active adults	n/a	11.2	11.6	7.5		17.2
	16 Obese adults	n/a	19.3	21.8	31.0		14.6
How long we live and what we die of	17 Life expectancy - male *	n/a	78.7	76.9	72.5		82.2
	18 Life expectancy - female *	n/a	82.6	81.1	78.1		86.2
	19 Deaths from smoking	269	186.0	234.4	366.5		147.6
	20 Early deaths: heart disease & stroke *	161	78.7	90.5	151.3		44.9
	21 Early deaths: cancer *	208	102.8	119.0	168.0		81.6
	22 Infant deaths *	20	7.1	5.1	9.9		1.2
	23 Road injuries and deaths	79	37.6	59.9	214.1		20.2
Health and ill health in our community	24 Feeling 'in poor health'	14286	6.3	7.8	15.4		4.2
	25 Mental health	2720	19.9	27.4	72.0		8.5
	26 Hospital stays due to alcohol	274	126.3	247.7	652.4		85.6
	27 Drug misuse	742	5.2	9.9	34.9		1.3
	28 People with diabetes	11248	5.3	3.7	5.9		2.1
	29 Children's tooth decay	n/a	2.0	1.5	3.2		0.4
	30 Sexually transmitted infections						
	31 Older people: hip fracture	214	557.8	565.3	936.8		259.7

- Significantly better than England average
- Significantly worse than England average
- Not significantly different from England average

* PSA Target Measure 2005-2008

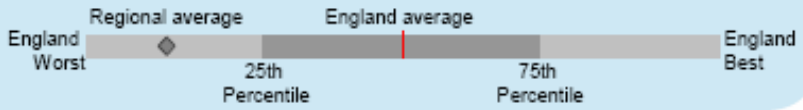


Table E2: Local indicators known to have a positive impact on infant mortality by London PCTs

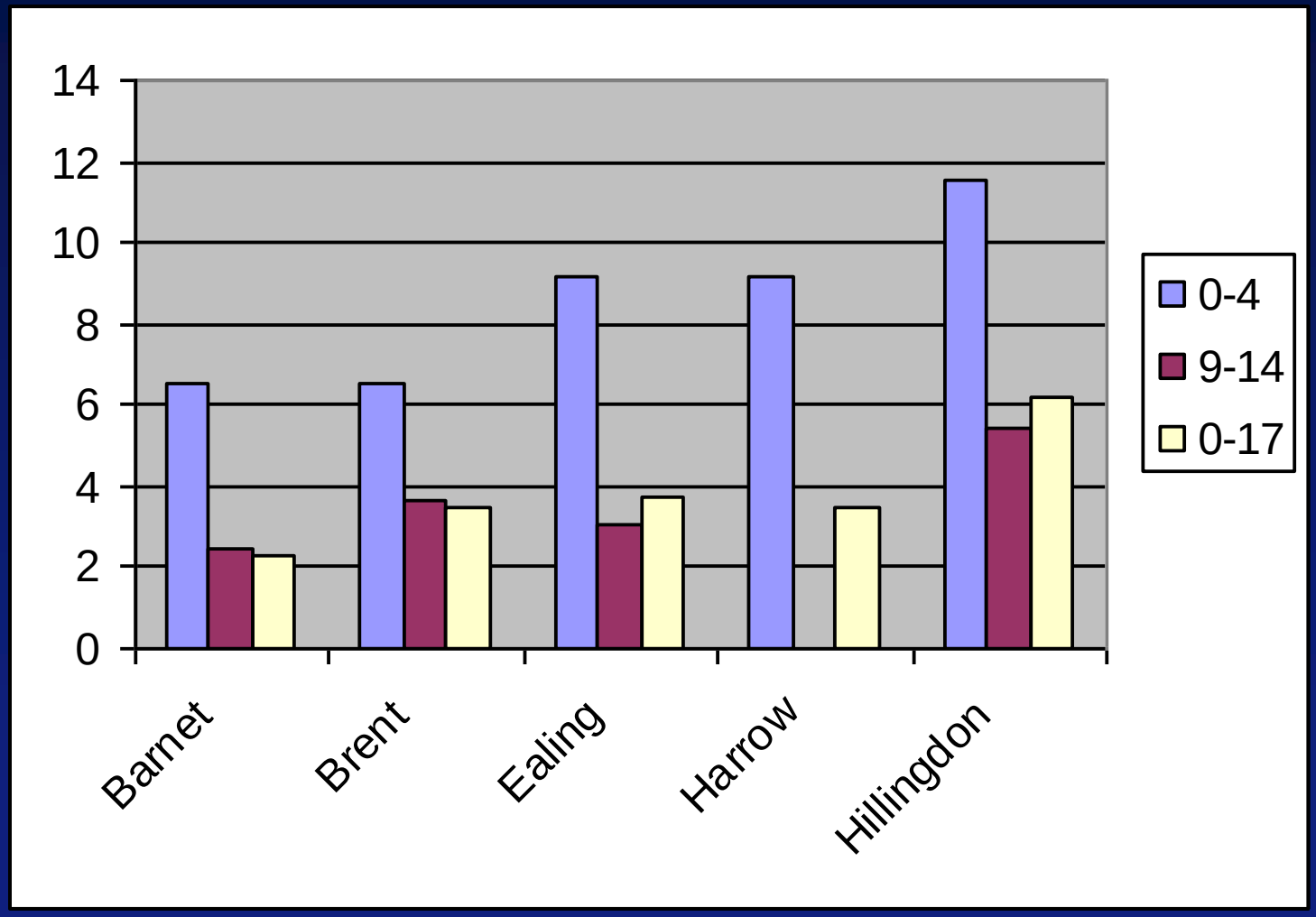
PCTs	% mothers smoking in pregnancy*	% smoking in pregnancy unknown	Projected to meet year end 2007/08 Q4**	% mothers initiating breastfeeding ***	% initiating breastfeeding unknown	Projected to meet year end 2007/08 Q4**	% early book (less than 12 weeks)		% of deliveries coded with gestational age at first antenatal booking		% of deliveries coded with ethnicity	
Year	2006	2006		2006	2006		2004/05	2005/06	2004/05	2005/06	2004/05	2005/06
Barking & Dagenham	9.4	2	YES	66.3	2.2	YES	27.6	25.1	96.3	96.4	71.1	75.0
Barnet	14.4	1.7	YES	89.1	1.2	YES	4.6	7.2	83.7	83.5	86.8	88.7
Bexley	16.1	0	YES	72.1	0	YES	0.4	4.0	8.1	10.6	88.5	86.2
Brent	6.6	5.4	YES	67.8	6.8	PDR	10.7	14.1	65.3	71.8	72.8	84.3
Bromley	6.1	5.6	YES	72.3	0	PDR	0.1	16.7	0.7	0.6	64.8	65.4
Camden	7	1.5	NO	79.1	9.8	PDR	6.7	10.9	72.3	58.2	82.2	91.4
City & Hackney	7.5	2.8	NO	82.1	6.2	YES	8.4	24.2	72.5	7.9	78.1	83.3
Croydon	9	3.5	NO	80.6	3.2	YES	0.1	14.3	0.6	0.6	92.9	91.9
Ealing	6.5	2	YES	84	3.2	PDR	8.2	10.3	62.4	65.4	90.7	93.7
Enfield	17.5	0.5	NO	84.1	1.1	YES	14.2	19.3	77.6	63.0	93.5	96.3
Greenwich	12.4	2.1	YES	71.9	0	NO	2.0	3.7	38.5	36.6	95.8	94.0
Hammersmith & Fulham	7.2	2.7	NO	81.2	1.3	PDR	6.4	19.7	46.7	76.4	83.7	85.8
Haringey	12.3	1.5	NO	86.1	3.5	YES	5.7	13.7	42.3	28.6	87.0	90.8
Harrow	8.8	2.5	YES	66.6	7.4	YES	18.5	19.9	80.3	57.1	64.0	81.1
Havering	6.1	2.4	YES	63.6	3	NO	18.5	18.8	95.0	96.5	94.1	95.3
Hillingdon	13.5	0	YES	51.1	0	NO	3.8	5.2	65.4	82.8	62.0	78.6
Hounslow	11.1	1.3	YES	82.3	2.1	YES	10.5	22.6	82.7	24.0	97.1	98.5
Islington	12.6	1.8	NO	81.7	5	YES	5.4	15.7	41.2	14.8	80.7	89.6
Kensington & Chelsea	3.5	15.5	YES	87.7	1.1	PDR	2.2	18.4	16.3	73.1	80.2	74.6
Kingston	6.5	0	NO	89.5	0	PDR	0.1	8.6	1.8	1.6	91.0	95.6
Lambeth	5.5	2.3	YES	89.6	1.6	PDR	9.4	36.0	43.0	42.1	93.8	94.8
Lewisham	8.8	11.6	YES	83.9	6.6	PDR	2.4	26.4	10.2	11.2	81.1	71.2
Newham	5.8	3.9	NO	70.9	5.2	NO	11.1	19.3	81.8	23.9	94.2	91.4
Redbridge	5.1	4.5	NO	80.7	2.7	YES	42.1	43.1	97.5	96.4	90.4	89.8
Richmond & Twickenham	5.3	0	YES	91	0	PDR	4.2	23.1	33.2	13.5	91.0	94.1
Southwark	6.8	2.2	YES	86.8	1.4	PDR	7.2	27.9	38.7	38.3	94.0	94.7
Sutton & Merton	5.2	29.5	YES	71.4	19	YES	0.0	25.3	0.6	1.7	90.0	82.2
Tower Hamlets	4.4	0.9	NO	76.8	3	YES	54.8	64.1	92.8	89.1	93.0	94.3
Waltham Forest	9.9	13.6	NO	82.2	3.5	PDR	18.0	39.6	96.6	91.4	81.8	82.1
Wandsworth	6.5	2.7	YES	80.9	0.9	NO	0.9	24.0	7.5	28.4	83.8	83.7
Westminster	6.8	1.7	NO	80	5.4	PDR	2.2	12.4	14.5	77.4	79.7	83.1

PDR poor data recording in earlier years 03/04 and 04/05, unable to work out growth using this data

	>10%	>5%	NO	<75%	>5%	NO	<10%	<50%	<80%
	5-10%	1-5%		75-85%	1-5%	PDR	10-50%	50-80%	80-90%
	<5%	<1%	YES	>85%	<1%	YES	>50%	>80%	>90%

*this is based on mothers known to have been smoking at time of delivery
**this is based on LHO performance report data projected trends
***within 48 hours of birth

Burns compared 2006/7 per 10,000 children



- A single severe burn from a scalding cup of tea can result in several operations for plastic surgery and cost up to £250,000

…..PREVENTABLE

Conclusions

- Indicators of child health and wellbeing are powerful tools for policy makers and clinicians to use when highlighting service needs and progress towards a common aim