EHES COPII SI >>>>TINERI

- Context
- Experienta
- Obiective
- Material si Metoda
- Organizare
- Rezultate asteptate
- Buget

CONTEXT

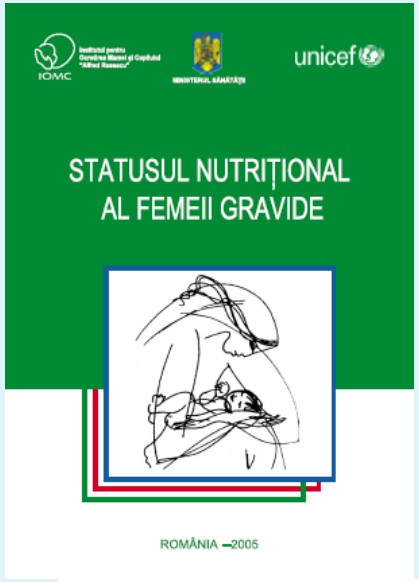
NEVOIA: La nivel national **nu exista** **date actuale privind starea de sanatate a copiilor bazata pe o metodologie de evaluare unitara si standardizata** (similara cu EHES adulti) care sa ofere informatii validate la nivel regional, national si international **in conditiile**

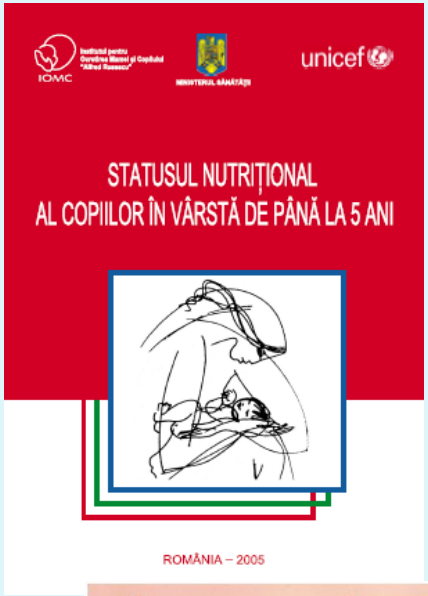
- **Evidentele stiintifice arata** ca **boli sau modificări subclinice aparute în copilarie** au **un impact negativ** de-a lungul întregii vieți (de ex. sindromul metabolic sau alte tulburari de metabolism).

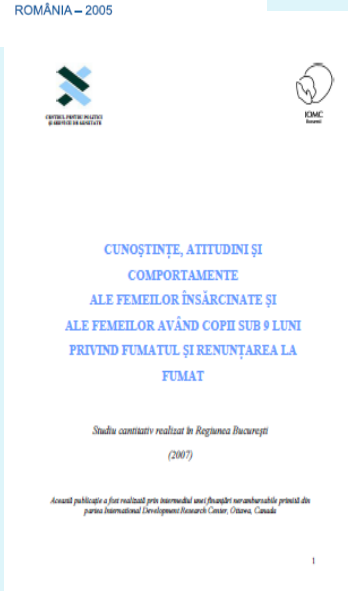
- **Politicile de sănătate,** de preventie și interventie precoce precum si **cercetarile** în domeniul sănătății copilului **necesita** **fundamentare prin date** obținute prin metode validate la nivel national si international

NU EXISTA EHES COPII

STUDII EPIDEMIOLOGIE



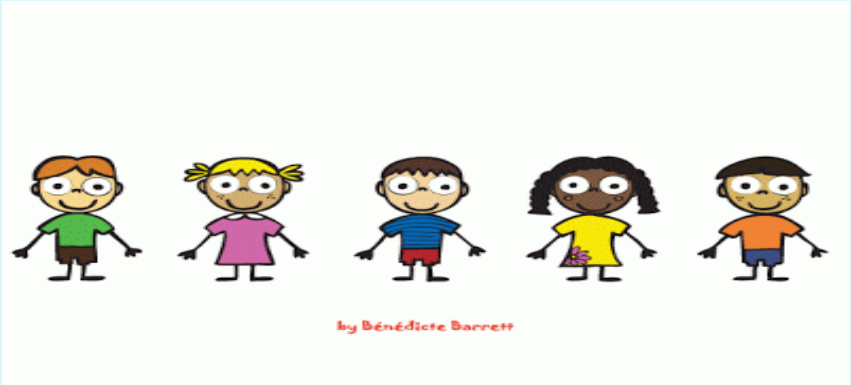




OBIECTIVE

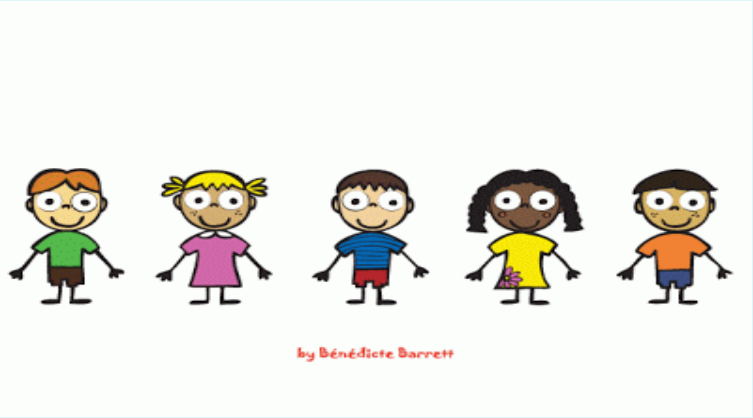
- **Elaborarea unui model de evaluare a starii de sanatate** a copiilor si tinerelor bazat pe o metodologie validata stiintific

- **Planificarea , organizarea si implementarea unui studiu de evaluare** a starii de sanatate a copiilor si tinerilor in varsta de 1-24 ani din Romania repartizat pe grupe de varsta 1-4 ani, 5-14 ani, 15-24 ani



METODOLOGIE

- **Tip studiu: observational transversal** pe un esantion probabilistic reprezentativ la nivel national
- **Populatia tinta: copii si tineri 1-24 ani**
- Perioada de desfasurare 2020-2023
- **Esantionare similara cu cea a EHES adulti**



METODOLOGIE ESANTIONARE

Esantion probabilistic marja de eroare de 5%

Baza de selectie esantion

Reteaua medicilor de familie (copii din liste)

Esantionare bi-stadiala

Copii/tineri eligibili de pe listele medicilor de familie

Unitate secundara de esantionare

Unitate primara de esantionare

Medicul de familie (120)

Urban	Total	Urban	Rural
TOTAL	120	69	51
NV	16	9	7
CENTRU	14	9	6
NE	18	8	10
SE	14	8	6
SUD-M	18	7	10
BU- IF	16	14	2
SV- O	12	6	6
VEST	11	7	4

1.

2.

Copii/ medic familie			
1-4 ani	5-14 ani	15-24 ani	Total
4	9	9	22

2.

	Nr. total sub.	Număr copii selectaţi			
		1-4 ani	5 - 14 ani	15-24 ani	0-24 ani
Total					
TOTAL	2600	515	1043	1042	2600
NV	349	71	139	138	349
CENT	309	63	127	120	309
NE	400	79	156	165	400
SE	312	58	125	129	312
SUD-M	382	69	153	160	382
BU- IF	345	84	149	111	345
SV- O	255	45	98	113	255
VEST	248	50	98	100	248

METODE DE INVESTIGARE/EVALUARE

- **Interviu chestionar semistructurat** (date socio-economice, inclusiv ocupația părinților, antecedente heredocolaterale, antecedente personale patologice, comportamente sanogene si de risc, utilizarea serviciilor de sanatate:

Ghid de interviu

standardizata

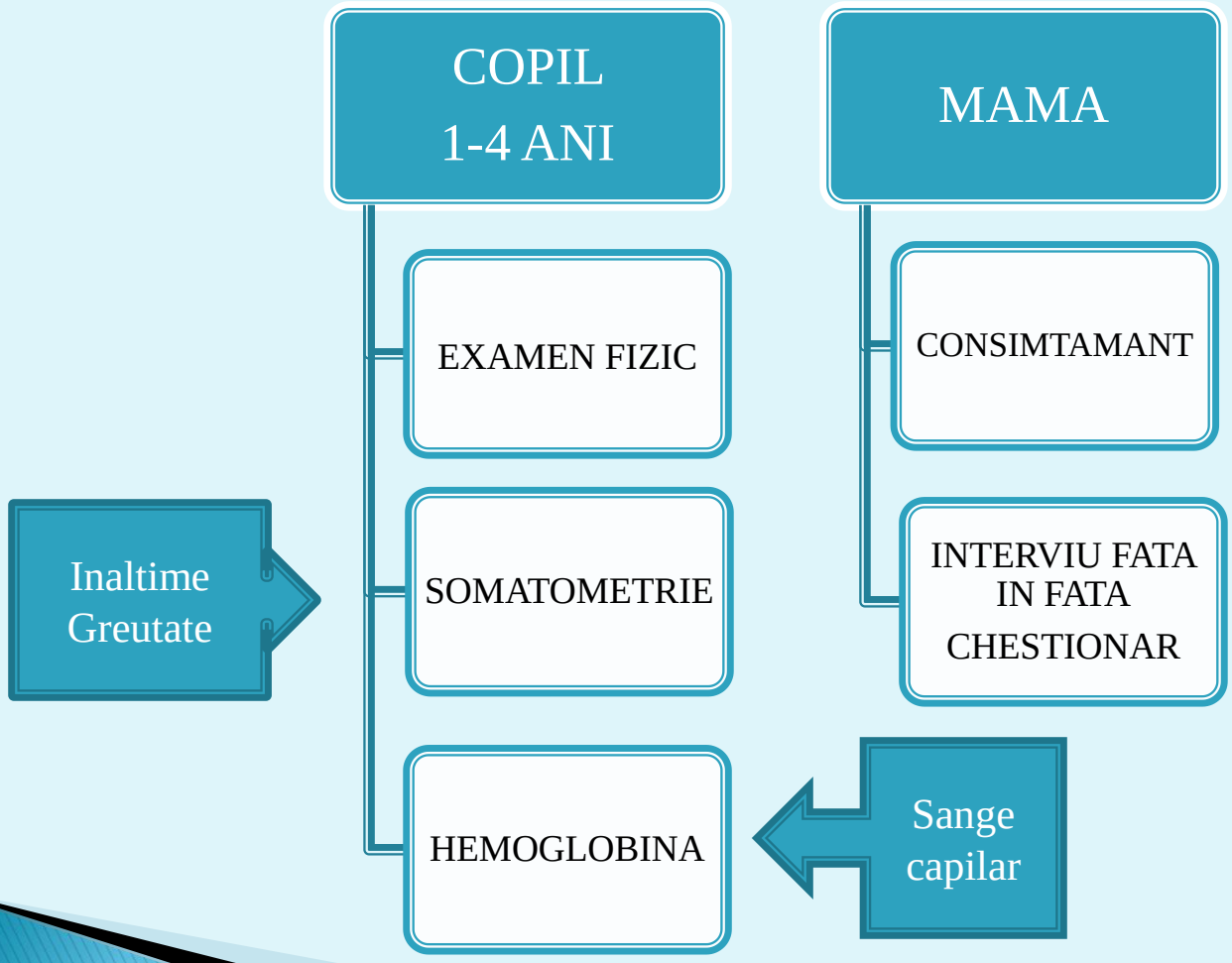
- **Examinare fizica, masuratori antropometrice**, **TA**

- **Investigatii de laborator**

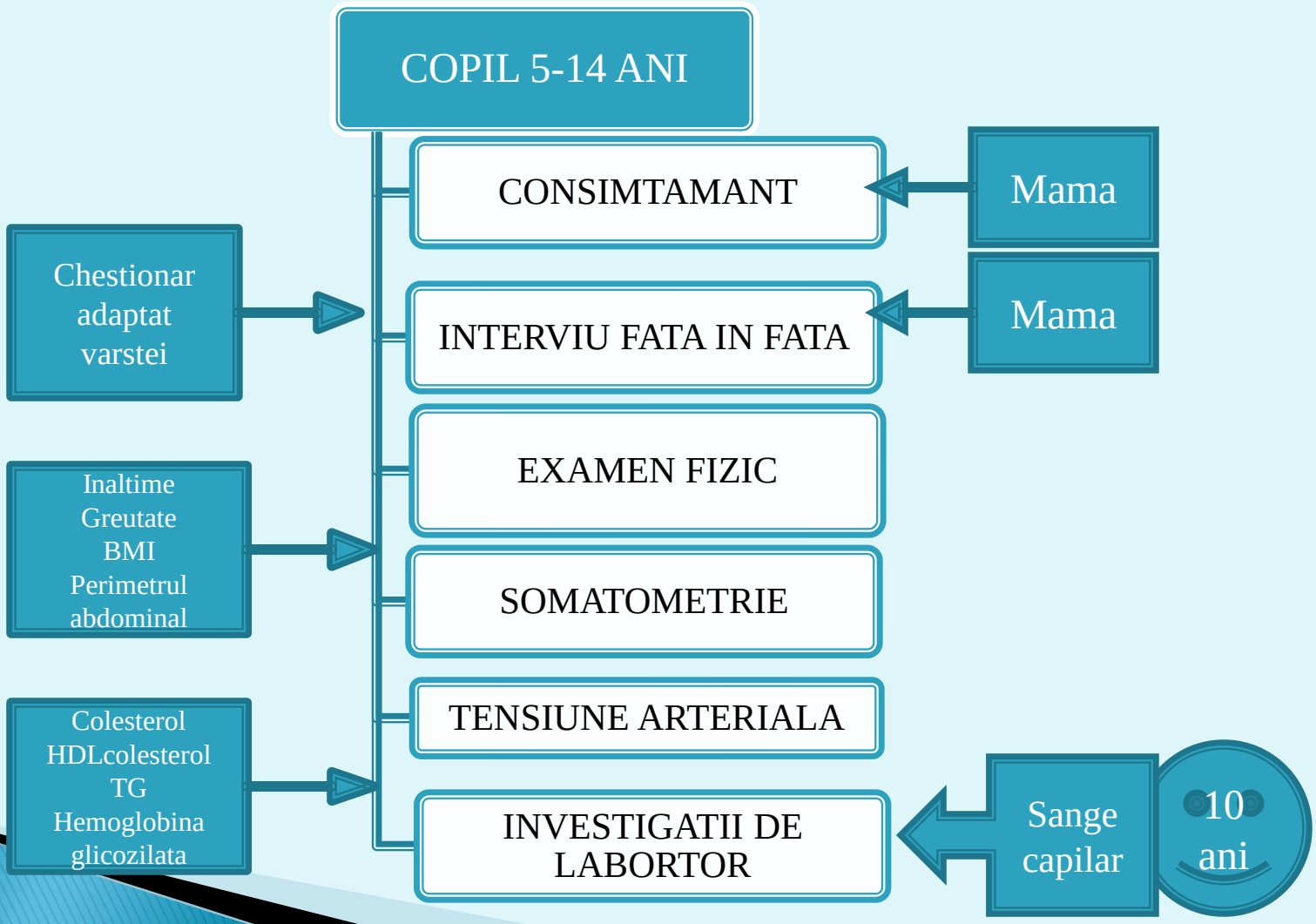
Sange capilar

Procedura copii

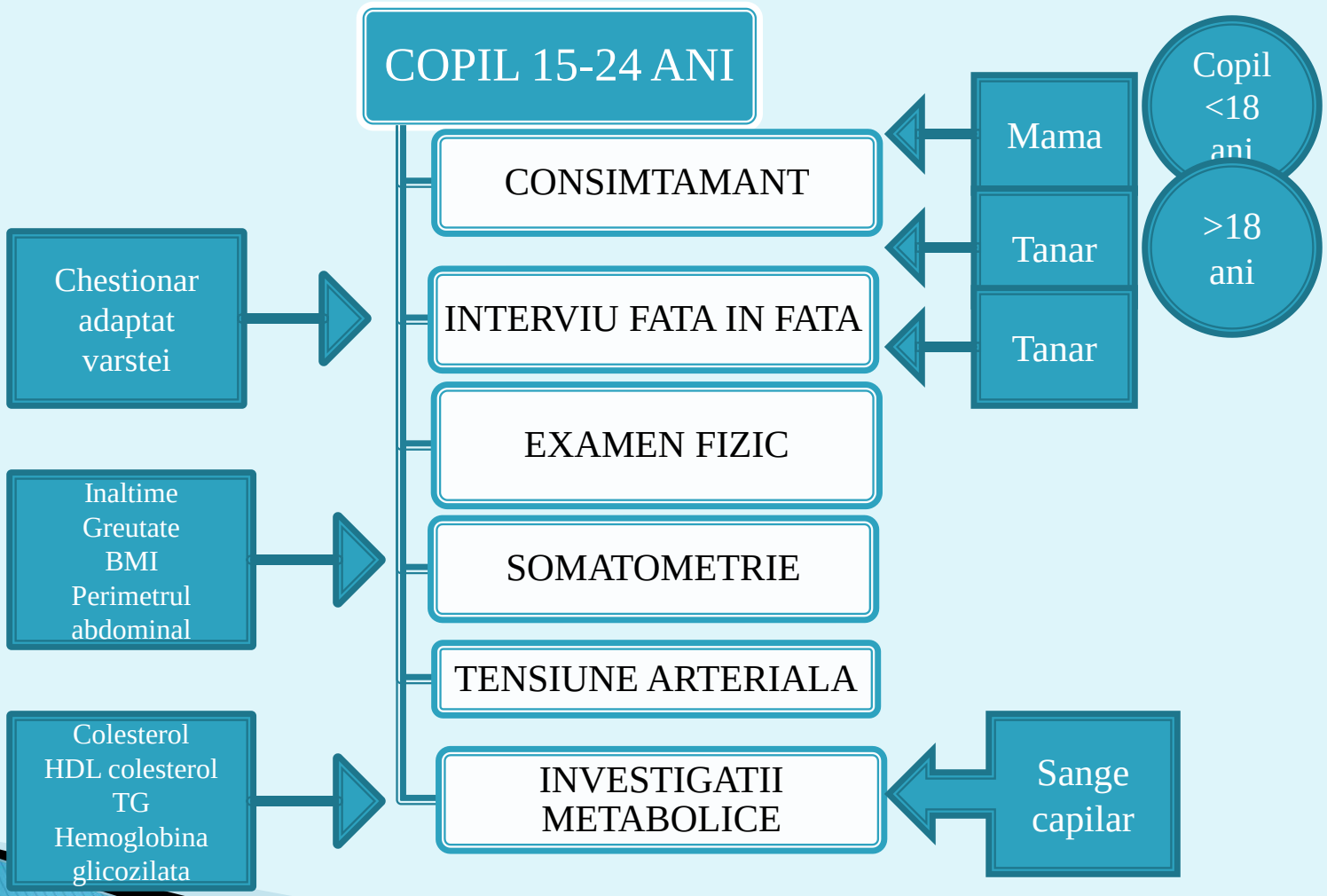
METODOLOGIE CULEGERE DE DATE



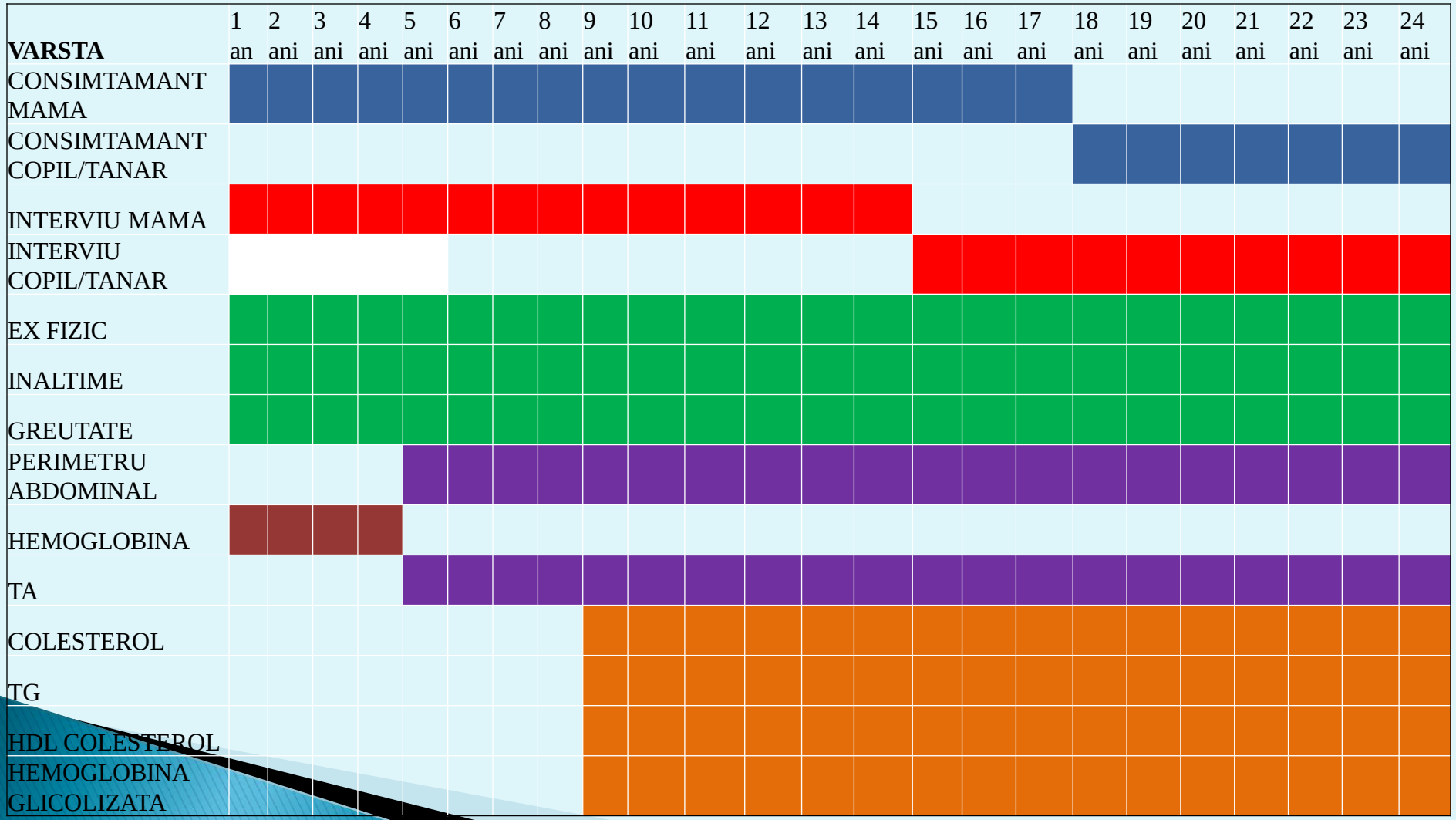
METODOLOGIE CULEGERE DATE



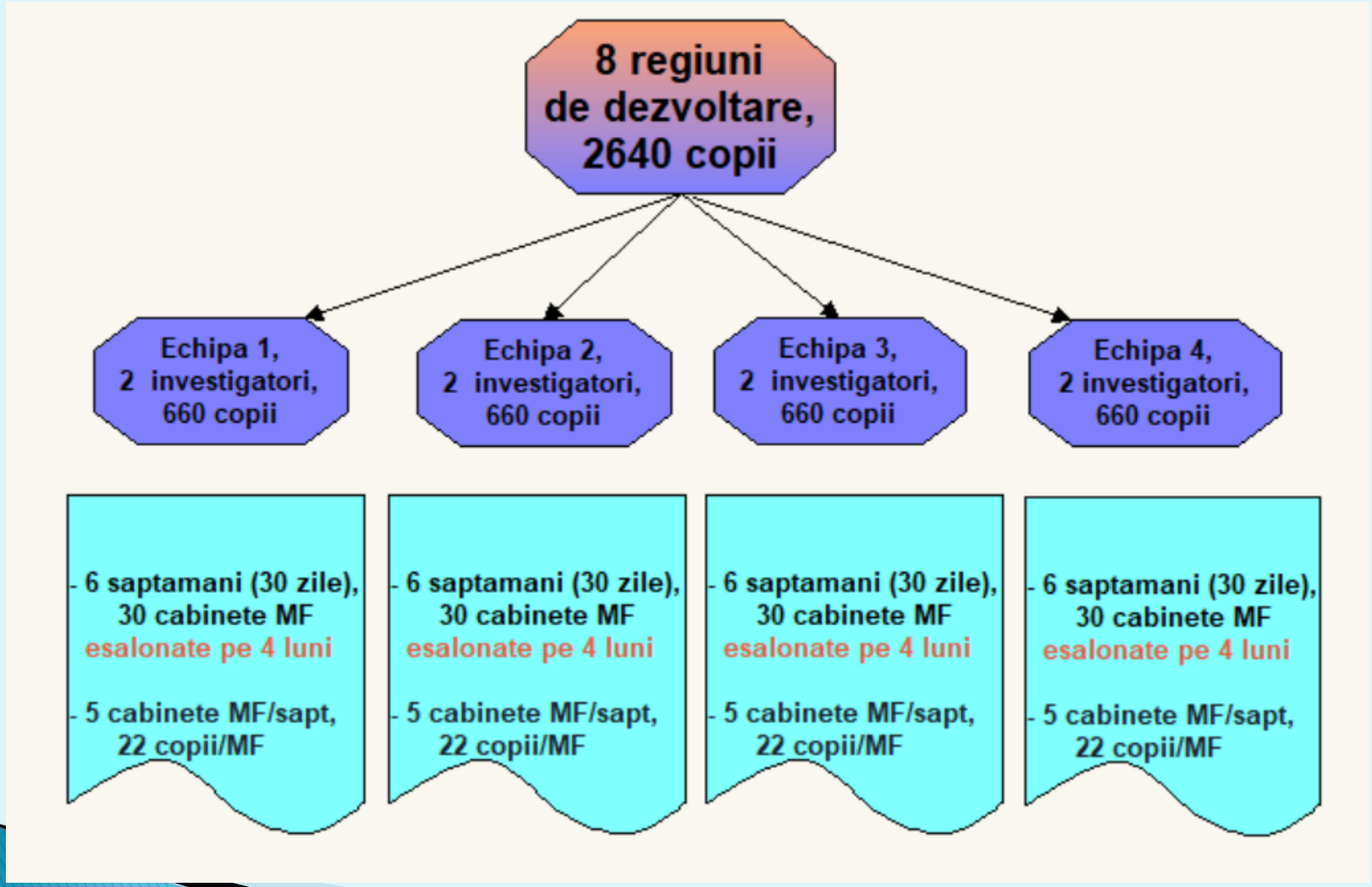
METODOLOGIE CULEGERE DATE



SYNOPSIS CULEGERE DATE



ORGANIZARE ACTIVITATE TEREN



DESFASURAREA IN TIMP A ACTIVITATILOR

1 echipa
(2 persoane)

1 ZI
22 copii
1 medic familie

X5

1saptamana
110 copii
5 medici familie

x6

6 saptamani
660 copii
30 medici de familie

4 luni

2 regiuni

REZULTATE ASTEPTATE PENTRU ÎNTREG EȘANTIONUL

Date privind privind starea de sănătate a copiilor dezagregate pe regiune, mediul de proveniență, vârsta și sex pentru a identifica:

- **Prevalența factorilor de risc familial**:
  - Antecedente familiale patologice: patologie cardiovasculara dislipidemie, obezitate, diabet zaharat, inclusiv diabet gestational, patologie tiroidiană?
  - Comportamentale: fumat
- **Prevalenta factori de risc personali** – greutatea mică la naștere, patologie cu risc metabolic și vascular
- **Prevalenta modificărilor de status ponderal**: supraponderalitate, obezitate și malnutriție (pe baza IMC)

REZULTATE ASTEPTATE SUPLIMENTARE–pe grupe de varsta

Date privind privind starea de sănătate a copiilor dezagregate pe regiune, mediul de proveniență, vârsta și sex pentru a identifica:

- **Anemia 1-4 ani**
- **Prevalenta HTA (5 ani)**
- **Prevalenta diabetului zaharat** (**10 ani)**(valori crescute ale hemoglobinei glicosilate)
- **Prevalenta dislipidemiei (10 ani**

REZULTATE ASTEPTATE la nivel institutional

- **Metodologie de evaluare** a starii de sanatate a copiilor (proceduri) replicabila la nivel national si international
- **Echipa de culegere** de date instruită
- **Baza de date** pentru analize secundare și cercetari viitoare
- **Rețea de colaborare** (medici de familie) pentru studii viitoare
- **Experiența de managment** într-un proiect de anvergura
- **Echipe de cercetare interdisciplinară** (medici diferite specialitati, sociologi, matematicieni, economiști)
- **Manual EHES copii**

ACTIVITATI REALIZATE

- Metodologie de studiu
- Proceduri–Protocoale masuratori analize medicale
- Plan de organizare echipe de teren
- Plan de analiza date

ACTIVITATI PLANIFICATE

Termen scurt

- **Recrutare personal pentru activitate teren**
- **Organizare si desfasurate instruire personal**

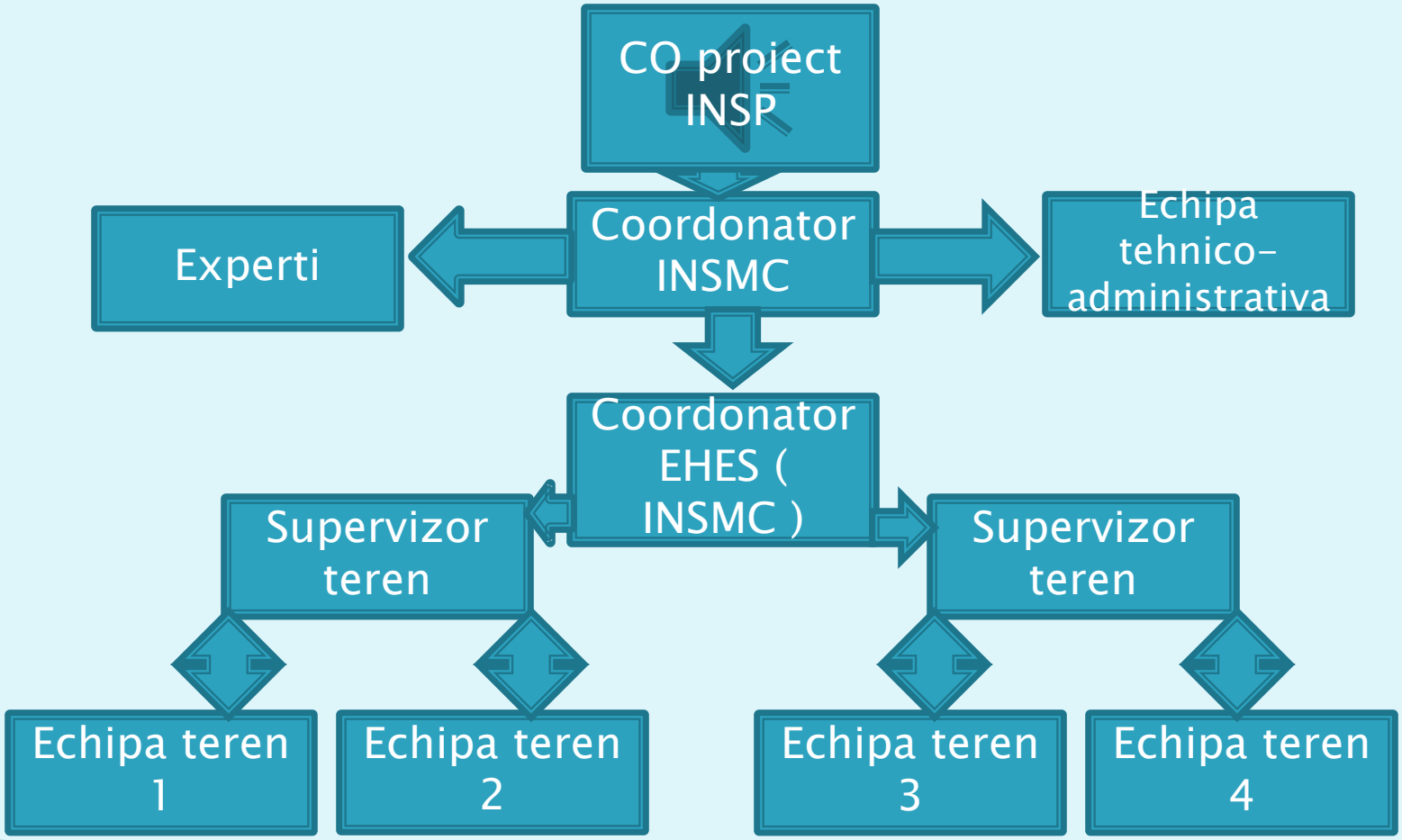
Termen mediu

- **Culegere de date**
- **Alcatuirea bazei de date**

Termen lung

- **Prelucrare si analiza date**
- **Raport**
- **Diseminare rezultate**

COORDONARE ECHIPE



ECHIPA

- Ardeleanu Ioana
- Delia Corina
- Donici Valentina
- Kozma Andrei
- Matei Laura
- Moldovanu Florentina
- Nanu Ioana
- Nanu Michaela
- Novak Cornelia
- Otelea Marina
- Stativa Ecaterina

INTREBARI PENTRU CONSENS

- CHESTIONAR STRUCTURAT ?
- CHESTIONAR SEMISTRUCTURAT ?

INTREBARE PENTRU CONSENS

- CHESTIONAR CU INTREBARI PE TEME TINTITE SIMILAR/ EHES ADULTI
- CHESTIONAR CU TEME MAI LARGI CARE SA INCLUDA SI STIL DE VIATA

VALORI DE REFERINTA

Table 2: The IDF consensus definition of metabolic syndrome in children and adolescents 2007

Age group (years)	Obesity* (WC)	Triglycerides	HDL-C	Blood pressure
6–<10	≥90th percentile	Metabolic syndrome cannot be diagnosed, but further measurements should be made if there is a family history of metabolic syndrome, T2DM, dyslipidemia, cardiovascular disease, hypertension and/or obesity.		
10–<16 Metabolic syndrome	≥90th percentile or adult cut-off if lower	≥1.7 mmol/L (≥150 mg/dL)	<1.03 mmol/L (<40 mg/dL)	Systolic ≥130/ diastolic ≥85 mm Hg

1. Tensiunea arterială

Ghidul societății europene de hipertensiune

Lurbe E, Agabiti-Rosei E, Cruickshank JK, Dominiczak A, Erdine S, Hirth A, Invitti C, Litwin M, Mancia G, Pall D, Rascher W, Redon J, Schaefer F, Seeman T, Sinha M, Stabouli S, Webb NJ, Wühl E, Zanchetti A. 2016 European Society of Hypertension guidelines for the management of high blood pressure in children and adolescents. J Hypertens. 2016 Oct;34(10):1887-920.

		SBP (mmHg) percentile of height							DBP (mmHg) percentile of height						
Age (years)	BP percentile	5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
1	90th	94	95	97	99	100	102	103	49	50	51	52	53	53	54
	95th	98	99	101	103	104	106	106	54	54	55	56	57	58	58
	99th	105	106	108	110	112	113	114	61	62	63	64	65	66	66
2	90th	97	99	100	102	104	105	106	54	55	56	57	58	58	59
	95th	101	102	104	106	108	109	110	59	59	60	61	62	63	63
	99th	109	110	111	113	115	117	117	66	67	68	69	70	71	71
3	90th	100	101	103	105	107	108	109	59	59	60	61	62	63	63
	95th	104	105	107	109	110	112	113	63	63	64	65	66	67	67
	99th	111	112	114	116	118	119	120	71	71	72	73	74	75	75
4	90th	102	103	105	107	109	110	111	62	63	64	65	66	66	67
	95th	106	107	109	111	112	114	115	66	67	68	69	70	71	71
	99th	113	114	116	118	120	121	122	74	75	76	77	78	78	79
5	90th	104	105	106	108	110	111	112	65	66	67	68	69	69	70
	95th	108	109	110	112	114	115	116	69	70	71	72	73	74	74
	99th	115	116	118	120	121	123	123	77	78	79	80	81	81	82
6	90th	105	106	108	110	111	113	113	68	68	69	70	71	72	72
	95th	109	110	112	114	115	117	117	72	72	73	74	75	76	76
	99th	116	117	119	121	123	124	125	80	80	81	82	83	84	84
7	90th	106	107	109	111	113	114	115	70	70	71	72	73	74	74
	95th	110	111	113	115	117	118	119	74	74	75	76	77	78	78
	99th	117	118	120	122	124	125	126	82	82	83	84	85	86	86
8	90th	107	109	110	112	114	115	116	71	72	72	73	74	75	76
	95th	111	112	114	116	118	119	120	75	76	77	78	79	79	80
	99th	119	120	122	123	125	127	127	83	84	85	86	87	87	88
9	90th	109	110	112	114	115	117	118	72	73	74	75	76	76	77
	95th	113	114	116	118	119	121	121	76	77	78	79	80	81	81
	99th	120	121	123	125	127	128	129	84	85	86	87	88	88	89
10	90th	111	112	114	115	117	119	119	73	73	74	75	76	77	78
	95th	115	116	117	119	121	122	123	77	78	79	80	81	81	82
	99th	122	123	125	127	128	130	130	85	86	86	88	88	89	90
11	90th	113	114	115	117	119	120	121	74	74	75	76	77	78	78
	95th	117	118	119	121	123	124	125	78	78	79	80	81	82	82
	99th	124	125	127	129	130	132	132	86	86	87	88	89	90	90
12	90th	115	116	118	120	121	123	123	74	75	75	76	77	78	79
	95th	119	120	122	123	125	127	127	78	79	80	81	82	82	83
	99th	126	127	129	131	133	134	135	86	87	88	89	90	90	91
13	90th	117	118	120	122	124	125	126	75	75	76	77	78	79	79
	95th	121	122	124	126	128	129	130	79	79	80	81	82	83	83
	99th	128	130	131	133	135	136	137	87	87	88	89	90	91	91
14	90th	120	121	123	125	126	128	128	75	76	77	78	79	79	80
	95th	124	125	127	128	130	132	132	80	80	81	82	83	84	84
	99th	131	132	134	136	138	139	140	87	88	89	90	91	92	92
15	90th	122	124	125	127	129	130	131	76	77	78	79	80	80	81
	95th	126	127	129	131	133	134	135	81	81	82	83	84	85	85
	99th	134	135	136	138	140	142	142	88	89	90	91	92	93	93
16	90th	125	126	128	130	131	133	134	78	78	79	80	81	82	82

2. Tensiunea arterială –
Ghidul Societătii Americane de Pediatrie 2017

TABLE 3 Updated Definitions of BP Categories and Stages

For Children Aged 1–13 y	For Children Aged ≥13 y
Normal BP: <90th percentile	Normal BP: <120/<80 mm Hg
Elevated BP: ≥90th percentile to <95th percentile or 120/80 mm Hg to <95th percentile (whichever is lower)	Elevated BP: 120/<80 to 129/<80 mm Hg
Stage 1 HTN: ≥95th percentile to <95th percentile + 12 mm Hg, or 130/80 to 139/89 mm Hg (whichever is lower)	Stage 1 HTN: 130/80 to 139/89 mm Hg
Stage 2 HTN: ≥95th percentile + 12 mm Hg, or ≥140/90 mm Hg (whichever is lower)	Stage 2 HTN: ≥140/90 mm Hg

Joseph T. Flynn, David C. Kaelber, Carissa M. Baker-Smith, Douglas Blowey, Aaron E. Carroll, Stephen R. Daniels, Sarah D. de Ferranti, Janis M. Dionne, Bonita Falkner, Susan K. Flinn, Samuel S. Gidding, Celeste Goodwin, Michael G. Leu, Makia E. Powers, Corinna Rea, Joshua Samuels, Madeline Simasek, Vidhu V. Thaker, Elaine M. Urbina, SUBCOMMITTEE ON SCREENING AND MANAGEMENT OF HIGH BLOOD PRESSURE IN CHILDREN. Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents. Pediatrics Sep 2017, 140 (3) e20171904

2. Profil lipidic

Societatea Americană de Cardiologie– NCEP Expert Panel on Cholesterol Levels in Children

	Acceptable, mg/dL	Borderline, mg/dL	Abnormal, mg/dL
TC	<170 (<4.3 mmol)	170-199 (4.3-5.1 mmol)	≥200 (≥5.1 mmol)
Triglycerides (0-9 y)	<75 (<0.8 mmol)	75-99 (0.8-1.1 mmol)	≥100 (≥1.1 mmol)
Triglycerides (10-19 y)	<90 (<1.0 mmol)	90-129 (1.0-1.5 mmol)	≥130 (≥1.4 mmol)
HDL-C	>45 (>1.2 mmol)	40-45 (1.0-1.2 mmol)	<40 (<1.0 mmol)
LDL-C	<110 (<2.8 mmol)	110-129 (2.8-3.3 mmol)	≥130 (≥3.4 mmol)
Non-HDL-C	<120 (<3.1 mmol)	120-144 (3.1-3.7 mmol)	≥145 (≥3.7 mmol)

2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. JACC VOL. 73, NO. 24, 2019

2. Profil lipidic _studiul IDEFICS
Colesterol total

Table 2. Age-specific reference values for blood lipids in boys

Percentile:	1st	3rd	10th	25th	50th	75th	90th	97th	99th
TC ($mmol\,l^{-1}$)									
2–2.5 years	2.471	2.694	3.030	3.416	3.906	4.465	4.797	5.408	5.664
2.5–3 years	2.484	2.707	3.041	3.427	3.913	4.470	4.799	5.405	5.662
3–3.5 years	2.499	2.720	3.054	3.437	3.921	4.476	4.802	5.405	5.657
3.5–4 years	2.512	2.732	3.067	3.447	3.929	4.481	4.804	5.403	5.654
4–4.5 years	2.525	2.748	3.080	3.458	3.937	4.486	4.807	5.403	5.651
4.5–5 years	2.538	2.761	3.090	3.468	3.947	4.491	4.812	5.400	5.646
5–5.5 years	2.554	2.774	3.103	3.481	3.955	4.494	4.815	5.400	5.644
5.5–6 years	2.567	2.787	3.116	3.491	3.963	4.499	4.817	5.398	5.641
6–6.5 years	2.580	2.800	3.126	3.502	3.970	4.504	4.820	5.398	5.638
6.5–7 years	2.593	2.813	3.139	3.512	3.981	4.509	4.823	5.395	5.636
7–7.5 years	2.608	2.826	3.152	3.522	3.989	4.514	4.825	5.395	5.631
7.5–8 years	2.621	2.839	3.165	3.533	3.996	4.522	4.830	5.395	5.628
8–8.5 years	2.634	2.852	3.175	3.543	4.004	4.527	4.833	5.392	5.625
8.5–9 years	2.650	2.865	3.188	3.553	4.015	4.533	4.836	5.392	5.623
9–9.5 years	2.663	2.877	3.201	3.566	4.022	4.538	4.838	5.392	5.620
9.5–10 years	2.675	2.893	3.212	3.577	4.030	4.543	4.843	5.390	5.618
10–10.5 years	2.691	2.906	3.225	3.587	4.038	4.548	4.846	5.390	5.618
10.5–10.9 years	2.704	2.919	3.238	3.598	4.046	4.553	4.848	5.390	5.615

De Henauw, S., Michels, N., Vyncke, K. et al. Blood lipids among young children in Europe: results from the European IDEFICS study. Int J Obes 38, S67–S75 (2014). https://doi.org/10.1038/ijo.2014.137

Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabete Diabetes Care 2021;44(Suppl. 1):S15–S33 | https://doi.org/10.2337/dc21-S002

De Henauw, S., Michels, N., Vyncke, K. et al. Blood lipids among young children in Europe: results from the European IDEFICS study. Int J Obes 38, S67–S75 (2014). https://doi.org/10.1038/ijo.2014.137

Guideline on the Management of Blood Cholesterol A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. JACC VOL. 73, NO. 24, 20192018, aHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA, EXPERT PANEL ON INTEGRATED GUIDELINES FOR CARDIOVASCULAR HEALTH AND RISK REDUCTION IN CHILDREN AND ADOLESCENTS Pediatrics December 2011, 128 (Supplement 5) S213-S256; DOI: https://doi.org/10.1542/peds.2009-2107Chttps://pediatrics.aappublications.org/content/128/Supplement_5/S213?ijkey=0e7f7a5560e39e2819b1ac0429cee13de6440475&keytype2=tf_ipsecsha#T16

Haney EM, Huffman LH, Bougatsos C, et al. Rockville (MD): Screening for Lipid Disorders in Children and Adolescents [Internet].Evidence Syntheses, No. 47.): Agency for Healthcare Research and Quality (US); 2007 Jul. https://www.ncbi.nlm.nih.gov/books/NBK33481/table/A42495/?**report=objectonly**

Lurbe E, Agabiti-Rosei E, Cruickshank JK, Dominiczak A, Erdine S, Hirth A, Invitti C, Litwin M, Mancia G, Pall D, Rascher W, Redon J, Schaefer F, Seeman T, Sinha M, Stabouli S, Webb NJ, Wühl E, Zanchetti A. 2016 European Society of Hypertension guidelines for the management of high blood pressure in children and adolescents. J Hypertens. 2016 Oct;34(10):1887-920 978 92 4 159922 1 (NLM classification: WB 381) © World Health Organization 2010

National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents. The fourth report on the diagnosis, evaluation, and treatment of high blood pressure in children and adolescents. Pediatrics. 2004 Aug;114(2 Suppl 4th Report):555-76. PMID: 15286277

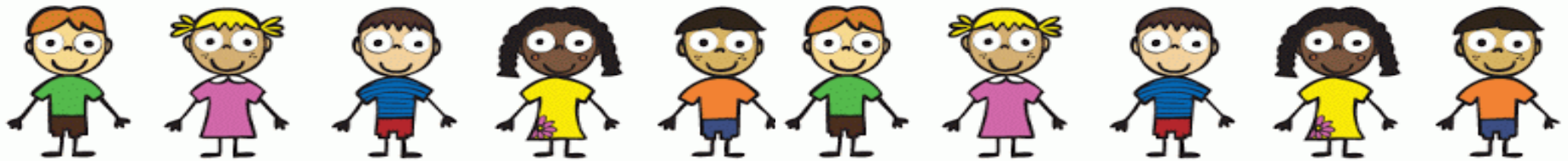
Peplies J, Jiménez-Pavón D, Savva SC, Buck C, Günther K, Fraterman A, Russo P, Iacoviello L, Veidebaum T, Tornaritis M, De Henauw S, Mårild S, Molnár D, Moreno LA, Ahrens W; IDEFICS consortium. Percentiles of fasting serum insulin, glucose, HbA1c and HOMA-IR in pre-pubertal normal weight European children from the IDEFICS cohort. Int J Obes (Lond). 2014 Sep;38 Suppl 2:S39-47. doi: 10.1038/ijo.2014.134. PMID: 25376219

WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy. Bloodletting – standards. 2.Phlebotomy – standards. 3.Needlestick injuries – prevention and control. 4.Guidelines. I.World Health Organization. ISBN, https://www.ncbi.nlm.nih.gov/books/NBK138654/

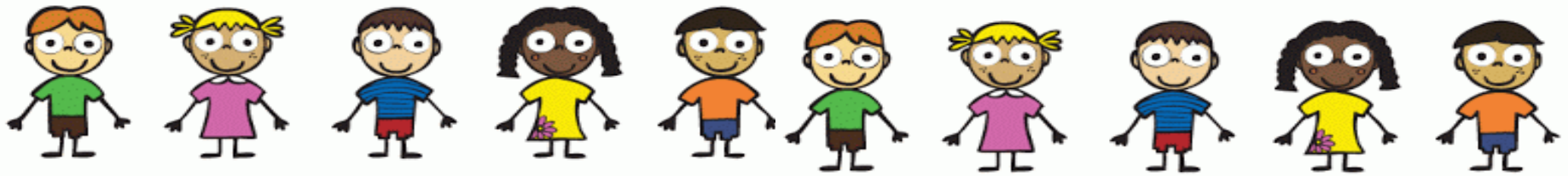
ECHIPA

- Ardeleanu Ioana
- Delia Corina
- Donici Valentina
- Kozma Andrei
- Matei Laura
- Moldovanu Florentina
- Nanu Ioana
- Nanu Michaela
- Novak Cornelia
- Otelea Marina
- Stativa Ecaterina

MULTUMESC



by Bénédicte Barrett



by Bénédicte Barrett