

ECPCP



European Confederation of Primary Care Paediatricians
Confédération Européenne de Pédiatrie Ambulatoire - CEPA

Research group meeting

LYON 9 november 2019

2017

VIENA

OMA STUDY
WAS BORN

VELENJE

FIRST QUESTIONNAIRES

2018

3 march 15 July

QUESTIONNAIRE WAS OPENED
2109 ANSWERS 14 COUNTRIES

TOLEDO

FIRST DATA COLLECTED

VILNIUS

FINAL DATE

2019

LYON

FIST DRAFT

2017

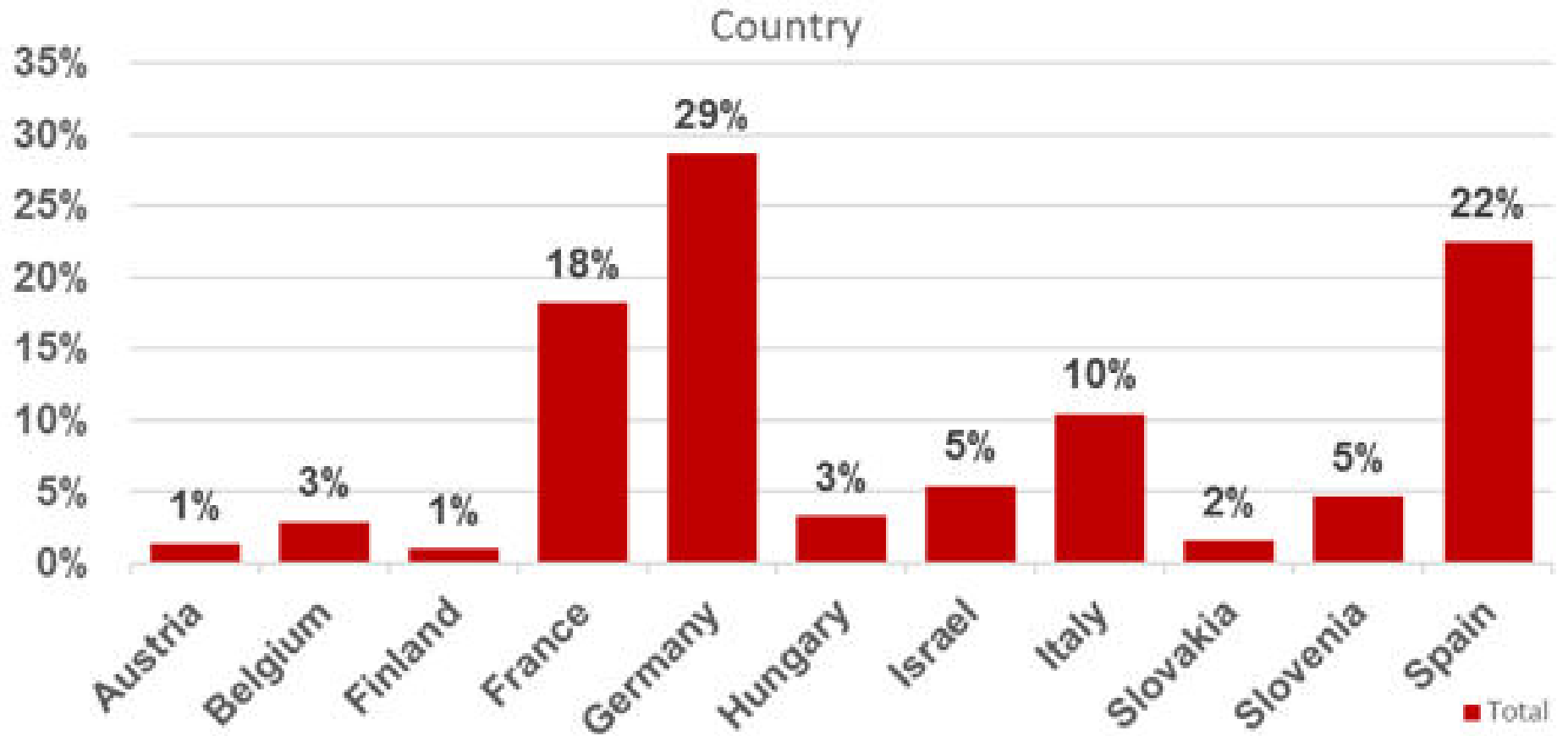
2018

2019



2100 answers

2 answers
from **Luxembourg**
1 answer from **Sweden**
6 answers from **Switzerland**
Excluded because of the
low number of responses



A survey on the diagnosis and management of acute otitis media by primary care paediatricians in Europe

Acute Otitis Media (AOM) is a frequent consultation for Primary Care Paediatrician (PCP) and it is the first cause to prescribe antibiotics in children.

This questionnaire aims to look into the diagnosis, treatment, and follow-up of AOM by PCP in Europe. It can be answered in 7-10 minutes, consists of 33 questions and is divided into 9 sections.

We kindly ask you to contribute with your anonymous answer to increase our common knowledge about OMA current management and try to improve it. We appreciate your cooperation.

Título de la imagen



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1. Age (in years) *

Less and 35 years

36-45 years

Professionals characteristics

Table 1: Main characteristics of the professionals who responded to the survey, by country

Item	Austria	Belgium	Finland	France	Germany	Hungary	Israel	Italy	Slovakia	Slovenia	Spain	Total
Participants	28(1.3%)	61 (2.9%)	21 (1%)	383(18.2%)	602(28.7%)	69(3.3%)	114(5.4%)	220(10.5%)	33(1.6%)	98(4.7%)	471(22.4%)	2100 (100%)
Gender Female Male	18 (64.3%) 10 (35.7)	45 (73.8%) 16 (26.2%)	19(90.5) 2 (9.5%)	283 (73.9%) 100 (26.1%)	297 (49.3%) 305 (50.7%)	51 (73.9%) 18 (26.1%)	57 (50%) 57 (50%)	149 (67.7%) 71 (32.3%)	30 (90.9%) 3 (9.1%)	92 (93.9%) 6 (6.1%)	367(77.9%) 104 (22.1%)	1408(67%) 692(33%)
Age: <35 years 36-45 46-55 56-65 >65	2 (7.1%) 10 (35.7%) 11 (39.3%) 5 (17.9%) 0	13 (21.3%) 12 (19.7%) 13 (21.3%) 9 (14.7%) 14 (22.9%)	1 (4.8%) 4 (19%) 9 (42.9%) 4 (19%) 3 (14.3%)	25 (6.5%) 70 (18.3%) 84 (21.9%) 173 (45.2%) 31 (8.1%)	10 (1.7%) 157 (26.1%) 234 (38.8%) 178 (29.6%) 23 (3.8%)	2 (2.9%) 11 (15.9%) 19 (27.5%) 24 (34.8%) 13 (18.8%)	3 (2.6%) 30 (26.3%) 34 (29.8%) 38 (33.3%) 9 (7.9%)	13 (5.9%) 17 (7.7%) 46 (20.9%) 121 (55%) 23 (10.4%)	1 (3%) 7 (21.2%) 10 (30.3%) 10 (30.3%) 5 (15.1%)	9 (9.2%) 35 (35.7%) 26 (26.5%) 23 (23.5%) 5 (5.1%)	98 (20.8%) 93 (19.7%) 147 (31.2%) 130 (27.6%) 3 (0.6%)	177 (8.4%) 446(21.2%) 633(30.1%) 715(34.1%) 129(6.1)
Years of profes- sional practice 0-9 10-19 20-29 ≥30	8 (28.6%) 10 (35.7%) 7 (25%) 3 (10.7%)	16 (26.2%) 13 (21.3%) 11 (18%) 21 (34.4%)	5 (23.8%) 8 (38.1%) 5 (23.8%) 3 (14.3%)	51 (13.3%) 85 (22.2%) 96 (25.1%) 151 (39.4%)	47 (7.8%) 202 (33.5%) 238 (39.5%) 115 (19.1%)	3 (4.3%) 12 (17.4%) 23 (33.3%) 31 (44.9%)	17 (14.9%) 32 (28.1%) 33 (28.9%) 32 (28.1%)	18 (8.2%) 17 (7.7%) 80 (36.4%) 105 (47.7%)	2 (6.1%) 10 (30.3%) 6 (18.2%) 15 (45.4%)	28 (28.6%) 31 (31.6%) 17 (17.3%) 22 (22.4%)	115 (24.4%) 96 (20.4%) 158 (33.5%) 102 (21.7%)	310(14.8%) 516(24.6%) 674(32.1%) 600(28.6%)
Inhabitants in the vicinity of the clinic <10 000 10 a 50 000 > 50 000	3 (10.7%) 9 (32.1%) 16 (57.4%)	2 (3.3%) 13 (21.7%) 45 (75%)	0 2 (9.5%) 19(90.5%)	39 (10.2%) 141 (36.8%) 203 (53%)	61 (10.1%) 217 (36%) 324 (53.8%)	10 (14.5%) 19 (27.5%) 40 (58%)	4 (3.5%) 36 (31.6%) 74 (64.9%)	29 (13.2%) 69 (31.4%) 122 (55.4%)	4 (12.1%) 8 (24.2%) 21 (63.6%)	15 (15.5%) 40 (41.2%) 42 (43.3%)	74 (15.7%) 118 (25%) 279 (59.2%)	241(11.5%) 672(32%) 1185(56.5%)
Minutes/child: <10 10-15 >15	6 (21.4%) 17 (60.7%) 5 (17.9%)	0 (0%) 13 (21.3%) 48 (78.7%)	0 (0%) 8 (10.7%) 13(61.9%)	0 (0%) 49 (12.8%) 334 (87.2%)	358 (59.5%) 231 (38.4%) 13 (2.2%)	48 (69.6%) 19 (27.5%) 2 (2.9%)	72 (63.2%) 41 (36%) 1 (0.8%)	10 (4.5%) 128 (58.2%) 82 (37.3%)	13 (39.4%) 17 (51.5%) 3 (9.1%)	62(63.3%) 35 (35.7%) 1 (1%)	304 (64.5%) 157 (33.3%) 10 (2.1%)	873(41.6%) 715(34%) 512(24.4%)

- Women higher percentage answers except for Israel and Germany were ratio was similar
- Belgium and Spain had the highest number of answers from younger paediatricians



- Hungary, Italy and Slovakia more than 40% of professionals have more than 30 years of professional practice



- Hungary and Spain less time spent per patient, Belgium, Finland and France dedicate more time to each patient



AOM diagnosis clinical history

Table 2. Diagnosis of AOM: Clinical history: How important are the following variables in making the diagnosis? (1=not important 5=very important). Average and standard deviation.

How important is?	Parameter	Austria	Belgium	Finland	France	Germany	Hungary	Israel	Italy	Slovakia	Slovenia	Spain	Total
Acute Onset Otitis (1-5)	Average	3.4	3.7	3.6	3.8	3.9	4.3	3.7	3.9	4.2	4.1	4.2	3.9
	SD	1.6	1.1	0.8	1.1	1.3	0.9	1.1	1.1	0.9	1	1	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Crying/ irritability/ ear tugging (1-5)	Average	3.5	3.8	2.9	3.7	3.8	4	3.7	3.9	3.8	4	4	3.8
	SD	1.2	1	0.8	1.1	1.2	1	1	1	1.2	1	1	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Fever (1-5)	Average	3.2	3.9	2.7	3.5	3.6	3.9	3.6	3.4	4.3	3.4	3.2	3.5
	SD	1.6	1	1.3	1.1	1.3	1	1.1	1.2	1	1.1	1.2	1.2
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Tympanic redness importance (1-5)	Average	3.5	3.5	2.5	2.8	4	4	3.2	3.2	3.7	3.8	3.1	3.4
	SD	1.4	1.2	1.1	1.3	1.2	1	1.3	1.2	1.1	1	1.1	1.3
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Bulging tympanic membrane (1-5)	Average	3.6	4.2	4	4.1	4.1	4.4	4.5	4.3	4.3	4.4	4.2	4.2
	SD	1.3	0.9	1.1	1.1	1.1	1	0.8	0.9	1.1	0.9	0.9	1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Discharge in the ear canal (1-5)	Average	3.7	4.2	3.7	4.2	4.1	4.4	4	4.4	4.4	4.4	4.4	4.2
	SD	1.4	1	1.3	1.1	1.3	1	1.2	1	1	0.9	0.8	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Any type of liquid behind the ear drum (1-5)	Average	2,32	2,36	2,43	2,32	2,48	3,61	2,26	3,09	3,52	3,09	2,79	2,65
	SD	1,19	1,14	1,16	1,13	1,14	1,24	0,94	1,26	1,18	1,27	1,13	1,20
	n	28	61	21	383	602	69	114	220	33	98	471	2100

AOM diagnosis clinical history

Table 2. Diagnosis of AOM: Clinical history: How important are the following variables in making the diagnosis? (1=not important 5=very important). Average and standard deviation.

How important is?	Parameter	Austria	Belgium	Finland	France	Germany	Hungary	Israel	Italy	Slovakia	Slovenia	Spain	Total
Acute Onset Otitis (1-5)	Average	3.4	3.7	3.6	3.8	3.9	4.3	3.7	3.9	4.2	4.1	4.2	3.9
	SD	1.6	1.1	0.8	1.1	1.3	0.9	1.1	1.1	0.9	1	1	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Crying/ irritability/ ear tugging (1-5)	Average	3.5	3.8	2.9	3.7	3.8	4	3.7	3.9	3.8	4	4	3.8
	SD	1.2	1	0.8	1.1	1.2	1	1	1	1.2	1	1	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Fever (1-5)	Average	3.2	3.9	2.7	3.5	3.6	3.9	3.6	3.4	4.3	3.4	3.2	3.5
	SD	1.6	1	1.3	1.1	1.3	1	1.1	1.2	1	1.1	1.2	1.2
	n	28	61	21	3.8	602	69	114	220	33	98	471	2100
Tympanic redness importance (1-5)	Average	3.5	3.5	2.5	2.8	4	4	3.2	3.2	3.7	3.8	3.1	3.4
	SD	1.4	1.2	1.1	1.3	1.2	1	1.3	1.2	1.1	1	1.1	1.3
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Bulging tympanic membrane (1-5)	Average	3.6	4.2	4	4.1	4.1	4.4	4.5	4.3	4.3	4.4	4.2	4.2
	SD	1.3	0.9	1.1	1.1	1.1	1	0.8	0.9	1.1	0.9	0.9	1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Discharge in the ear canal (1-5)	Average	3.7	4.2	3.7	4.2	4.1	4.4	4	4.4	4.4	4.4	4.4	4.2
	SD	1.4	1	1.3	1.1	1.3	1	1.2	1	1	0.9	0.8	1.1
	n	28	61	21	383	602	69	114	220	33	98	471	2100
Any type of liquid behind the ear drum (1-5)	Average	2,32	2,36	2,43	2,32	2,48	3,61	2,26	3,09	3,52	3,09	2,79	2,65
	SD	1,19	1,14	1,16	1,13	1,14	1,24	0,94	1,26	1,18	1,27	1,13	1,20
	n	28	61	21	383	602	69	114	220	33	98	471	2100

Diagnostic tools

Table 3. Diagnostic tools used more frequently.

		Austria n = 28	Belgium n=61	Finland n= 21	France n= 383	Germany n= 602	Hungary n= 69	Israel n=114	Italy n=220	Slovakia n= 33	Slovenia n=98	Spain n=471	Total n=2100
Conventtionnel otoscope usually use	Yes	100 %	93,4 %	66,7 %	59,3%	96 %	94 %	94,7 %	90,4 %	97 %	99 %	96,9 %	89 %
Pneumatic otoscope usually use	Yes	0 %	0 %	90,5 %	4,2 %	1,2 %	0 %	8,8 %	15,4 %	0 %	1 %	3,4 %	4,9 %
Tympanometer usually use	Yes	3,6 %	1,6 %	19 %	9,4 %	17,1 %	1,4 %	0 %	4,5 %	0 %	4,1 %	4,7 %	8,7 %
Fibre-optique otoscope usuelle use	Yes	3,6 %	26,2 %	4,8 %	59,8%	12,1 %	10,1 %	8,8 %	20 %	3 %	8,2 %	1,5 %	19 %
Take of bacterial culture	Never Sometimes Usually	28,6 % 46,4 % 25%	11,5 % 50,8 % 37,7 %	14,3 % 52,4 % 33,3 %	59,5 % 35,8 % 4,7 %	15,4 % 57 % 27,6 %	59,4 % 39,1 % 1,4 %	44,7 % 42,1 % 13,2 %	69,5 % 28,2 % 2,3 %	33,3 % 36,4 % 30,3 %	58,2 % 36,7 % 5,1 %	27 % 56,5 % 16,6 %	37 % 47,1 % 15,9 %

- Finnish paediatricians give less importance to **fever** compared with Slovak paediatricians



- **Conventional otoscope** used by 89% of the total only 59% of the French paediatricians



- Finnish paediatricians use more **pneumatic otoscope** (4,9% total / 90,5% Finns Paediatricians)



- **Tympanometry** is made only by 8,7% respondents

- **Optical Fiber otoscope** 19% total **France** 59,8% **Belgium** 26% **Italy** 20%



Inmediately, delayed, not recommended antibiotic use

Table 4. Different clinical situations and treatment with immediate antibiotic, delayed or not recommended, by countries.

Item	Antibiotic therapy	Austria n=28	Belgium n=61	Finland n=21	France n=383	Germany n=602	Hungary n=69	Israel n=114	Italy n=220	Slovakia n=33	Slovenia n=98	Spain n=471	Total n=2100
6 month old Otalgy 38,5 ^a	Inmediately	53.6%	55.7%	80.9%	87.7%	43.5 %	63.8%	49.1%	79.1%	63.6%	67.4%	85.1%	67.9%
	Delayed	46.4%	39.3%	19.1%	11.2%	51.5%	30.4%	48.3%	20.9%	27.3%	32.6%	14.7%	29.8%
	Not recommended	0.0%	4.9%	0.0%	1.1%	5.0%	5.8%	2.6%	0.0%	9.1%	0.0%	0.2%	2.3%
6 months old Bilateral AOM	Inmediately	78.6%	72.1%	90.5%	90.1%	63.8%	82.6 %	71.9%	82.7%	66.7%	74.5%	86.8%	78.1%
	Delayed	21.4%	26.2%	9.5%	9.4%	33.2%	15.9%	26.3%	16.8%	30.3%	24.5%	12.1%	20.4%
	Not recommended	0.0%	1.6%	0.0%	0.5%	3.0%	1.5%	1.8%	0.5%	3.0%	1.0%	1.1%	1.5%
25 months Bilateral AOM	Inmediately	7.1%	14.8%	52.4%	28.5%	7.1 %	40.6%	19.3%	17.3 %	39.4%	26.5%	25.9%	20.1%
	Delayed	82.1%	75.4%	47.6%	64.7%	82.9%	50.7%	72.8%	79.1%	48.5%	67.3%	71.6%	73.2%
	Not recommended	10.7%	9.8%	0.0%	6.8%	10.0%	8.7%	7.9%	3.6%	12.1%	6.2%	2.5%	6.7%
First episode AOM 3 years old	Inmediately	57.1%	29.5%	33.3%	38.1%	40.7%	55.1 %	10.5%	69.1%	66.7%	75.5%	68.8%	50.2%
	Delayed	17.9%	29.5%	47.6%	37.1%	38.0%	33.3%	32.5%	22.3%	27.3%	19.4%	25.5%	31.5%
	Not recommended	25.0%	41.0%	19.1%	24.8%	21.3%	11.6%	57.0%	8.6%	6.0%	5.1%	5.7%	18.3%
AOM Chronic associated pathology	Inmediately	92.8%	98.4%	90.5%	95.0%	86.5%	84.1%	93.0%	95.9%	84.9%	99.0%	97.5%	94.8%
	Delayed	3.6%	1.6%	9.5%	4.7%	12.3%	14.5%	7.0%	4.1%	12.1%	1.0%	2.3%	6.6%
	Not recommended	3.6%	0.0%	0.0%	0.3%	1.2%	1.4%	0.0%	0.0%	3.0%	0.0%	0.2%	0.6%

Antibiotic treatment of first choice, dose, dose number, topical treatment

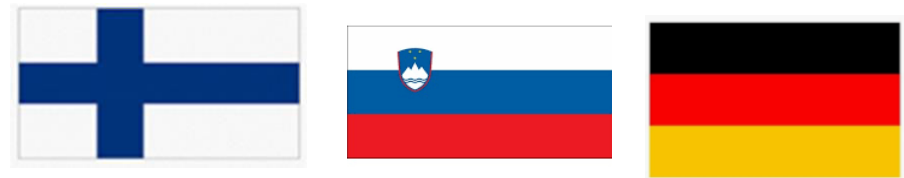
Table 5. Different clinical situations and antibiotic treatment of first choice, dose and number of doses, by country. Use of topical treatment.

Item	Antibiotic therapy	Austria n=28	Belgium n=61	Finland n=21	France n=383	Germany n=602	Hungary n=69	Israel n=114	Italy n=220	Slovakia n=33	Slovenia n=98	Spain n=471	Total n=2100
First choice antibiotic treatment for AOM	Amoxicillin	75.0%	100%	95.2%	95.0%	89.8%	52.2%	99.1%	64.5%	12.1 %	99.0%	97.6%	88.5%
	Amoxicilline/clav	10.7%	0.0%	4.8 %	3.7%	2.0%	39.1%	0.9%	30.5%	81.8%	1.0%	2.4%	7.8%
	Cephalosporine	14.3%	0.0%	0.0%	1.0%	7.7%	7.3%	0.0%	5.0%	6.1%	0.0%	0.0%	3.4%
	Macrolide	0.0%	0.0%	0.0%	0.3%	0.5%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Amoxicillin dose per day	40-50 mg/kg/d	67.9%	14.8%	100%	4.4%	76.3%	29.0%	12.3%	30.9%	51.5%	90.8%	3.2%	35.6%
	80-100 mg/kg/d	32.1%	85.2%	0.0%	95.6%	23.7%	71.0%	87.7%	69.1%	48.5%	9.2%	96.8%	64.4%
Amoxicillin times per day	Two	21.1%	5.6%	93.0%	58.5%	22.3%	30.0%	83.8%	12.9%	44.4%	9.3%	16.9%	28.4%
	Three	78.9%	94.4%	7.0%	41.5%	77.7%	70.0%	16.2%	87.1%	55.6%	90.7%	83.1%	71.6%
Duration treatment case 2 (6 m billateral AOM)	5 days	17.9%	8.2%	60.0%	1.3%	9.4%	7.2%	2.6%	2.7 %	0.0%	1.0%	0.9%	4.9 %
	7-8 days	60.7%	72.1%	40.0%	70.9%	71.4%	50.7%	73.7%	48.4%	27.3%	47.4%	51.3%	61.6%
	10 days	21.4%	19.7%	0.0%	27.8%	18.9%	40.6%	22.8%	47.9%	60.6%	51.6%	47.2%	32.9%
	12 days	0.0%	0.0%	0.0%	0.0%	0.3%	1.5%	0.9%	1.0%	12.1%	0.0%	0.6%	0.6%
Duration treatment case 3 (24 m billateral AOM)	5 days	40.7%	19.7%	95.2%	58.3%	31.7%	8.7%	12.5%	15.1%	0%	20.6%	11.1%	27.7%
	7-8 days	55.6%	75.4%	4.8%	40.1%	64.2%	65.2%	79.5%	63.9%	56.3%	72.2%	74.2%	62.8%
	10 days	3.7%	4.9%	0.0%	1.6%	4.2%	26.1%	8.0%	21.0%	43.7%	7.2%	14.7%	9.5%
Use of topical treatment	Analgesic drops	0.0%	44.3%	33.3%	44.4%	10.0%	38.2%	29.8%	10.3%	54.5%	2.0%	5.1%	5.1%
	Antibiotic drops in all	0.0%	4.9%	0.0%	1.8%	0.8%	8.8%	5.3%	1.4%	15.6%	0.0%	1.1%	1.1%
	Antib. drops in some	17.9%	60.7%	61.9	56.7%	39.8%	17.6%	41.2%	21.0%	42.4%	71.4%	61.6%	61.6%
	No	82.1%	18.0%	28.6%	20.5%	56.5%	44.1%	8.8%	69.2%	12.1%	30.6%	35.0%	35.0%

- Amoxicillin is the first-choice antibiotic
- But Amoxicillin/clavulanic acid is more frequently used as first choice antibiotic in Slovakia, Italy and Hungary



- Lower doses of amoxicillin are used in Finland, Slovenia and Germany



- Recommend influenza vaccination



Referral criteria and prevention recommendations

Table 6. Follow-up, referral criteria to the specialist and recommendations for prevention.

		Austria n=28	Belgium n=61	Finland n=21	France n=383	Germany n=602	Hungary n=69	Israel n=114	Italy n=220	Slovakia n=33	Slovenia n=98	Spain n=471	Total n=2100
Follow up after treatment for AOM	- Yes, selected patients.	53.6%	54.10%	61.9%	70.1%	64.4%	30.4%	57.5%	57.7%	51.5%	63.3%	70.3%	63.8%
	- To all children	28.6%	16.39%	38.1%	11.4%	22.7%	59.4%	12.4%	30.9%	48.5%	31.6%	21.8%	22.9%
	- No	17.9%	29.51%	0.0%	18.6%	12.9%	10.1%	30.1%	11.7%	0,0%	5.1%	7.9%	13.3%
REFERRAL CRITERIA TO THE SPECIALIST													
Suppuration more than 3 months	Yes	96.4%	88.5%	100.0%	90.3%	95.2%	98.5%	80.7%	89.1%	93.9%	95.9%	95.1%	92.8%
Drug allergies	Yes	14.3%	16.4%	9.5%	22.3%	11.3%	26.1%	15.9%	9.5%	21.2%	11.2%	21.8%	16.5%
Intolerance to amoxicillin	Yes	3.6%	1.6%	0.0%	3.7%	1.7%	4.3%	0.9%	0.5%	0.0%	0.0%	0.6%	1.6%
Suspicion of complication	Yes	96.4%	98.4%	100.0%	92.4%	90.4%	92.7%	93.0%	88.5%	93.9%	95.9%	95.9%	92.7%
- Tympanostomy tubes	Yes	28.6%	39.3%	4.8%	33.6%	32.8%	73.5%	27.4%	68.9%	93.9%	36.1%	24.6%	36.9%
- No improvement after antibiotic	Yes	85.7%	86.9%	76.2%	72.6%	81.2%	85.5%	79.6%	72.2%	87.9%	94.9%	70.3%	77.2%
PREVENTION													
Recommend influenza vaccines	Yes	39.3%	6.6%	61.9%	43.6%	26.9%	56.5%	65.8%	30.9%	27.3%	30.6%	36.5%	35.7%
Recommend anti pneumococcal vaccines	Yes	96.4%	73.8%	66.7%	89.6%	85.5%	95.6%	78.1%	79.5%	97.0%	100.0%	85.4%	86.0%
Recommend breast feeding	Yes	60.7%	57.4%	52.4%	50.4%	59.3%	94.2%	73.7%	81.4%	87.9%	77.5%	81.3%	68.1%
Recommend smoke free home	Yes	92.7%	86.9%	85.7%	90.7%	81.2%	89.9%	72.8%	94.1%	84.8%	77.6	90,9%	86.5%
Recommend bottle feeding supine position	Yes	7.1%	32.8%	28.6%	15.9%	9.5%	47.8%	84.2%	38.6%	30.3%	53.1%	33.8%	27.7%
Recommend using pacifier	Yes	17.9%	16.4%	4.8%	15.4%	11.1%	24.6%	7.0%	30.4%	27.3%	24.5%	28.0%	19.0%

- Recommend influenza vaccination 39, 3%
all responders

Israel Finland, Hungary



- Recommended antipneumococcal
vaccination 96,4% of all responders

Slovenia, Austria and Hungary



- Excessive and unjustified variability in the criteria and diagnostic tools
- Variability in immediate antibiotic therapy/deference/vigilance
- Desirable to elaborate a clinical practice guide to improve antibiotic prescription

