

Acute Otitis Media and the New Doctor's Dilemma: Should You Plan to See the Child Again?

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Outline of talk

- A typical otitis ‘script’ (story)
- What does the evidence say should I do?
- New ‘AOM evidence’
- Yet another question.....

Trust me, I'm a doctor



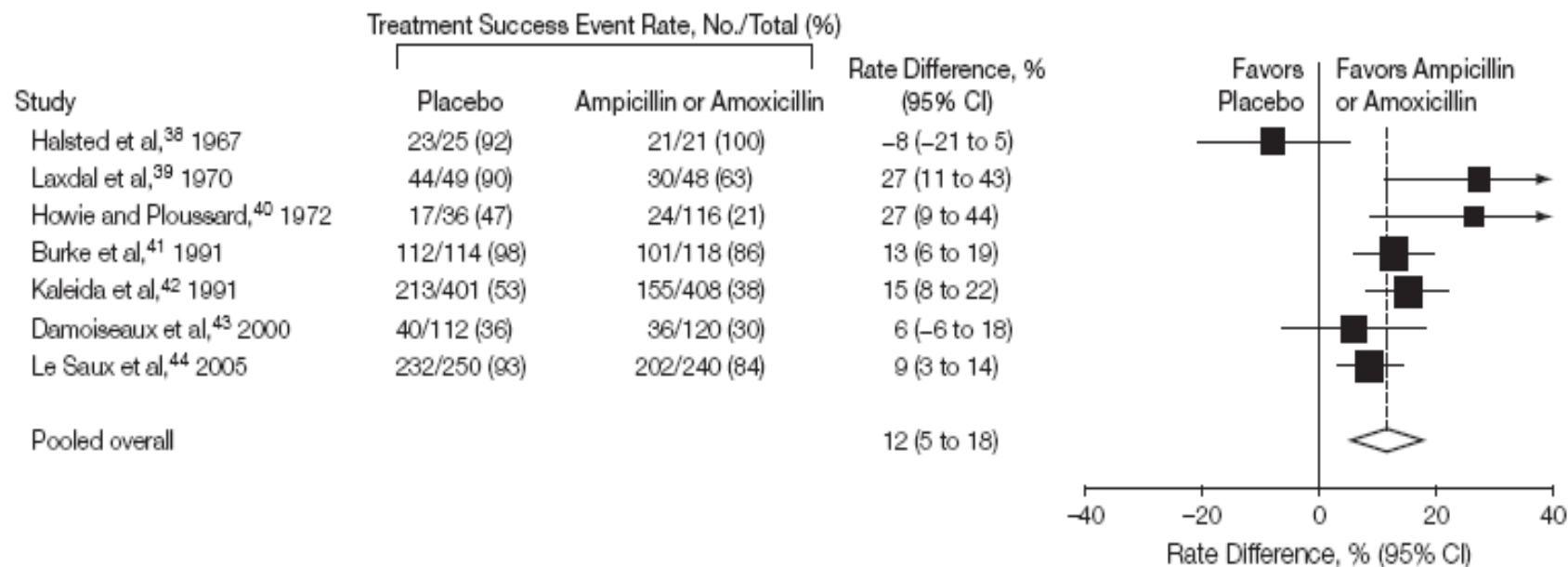
Case scenario

A 12mo boy comes to the clinic with 3 days of cough and runny nose. His mother noticed that he has been more irritable and pulling at his left ear. He has a low grade fever but he is not too unwell.

His right eardrum is white and in the neutral position. The left side is red and bulging.



Figure 2. Treatment Success by Day 14 for Ampicillin/Amoxicillin vs Placebo



Sizes of data markers are proportional to the sample size of each study in the analysis. CI indicates confidence interval.

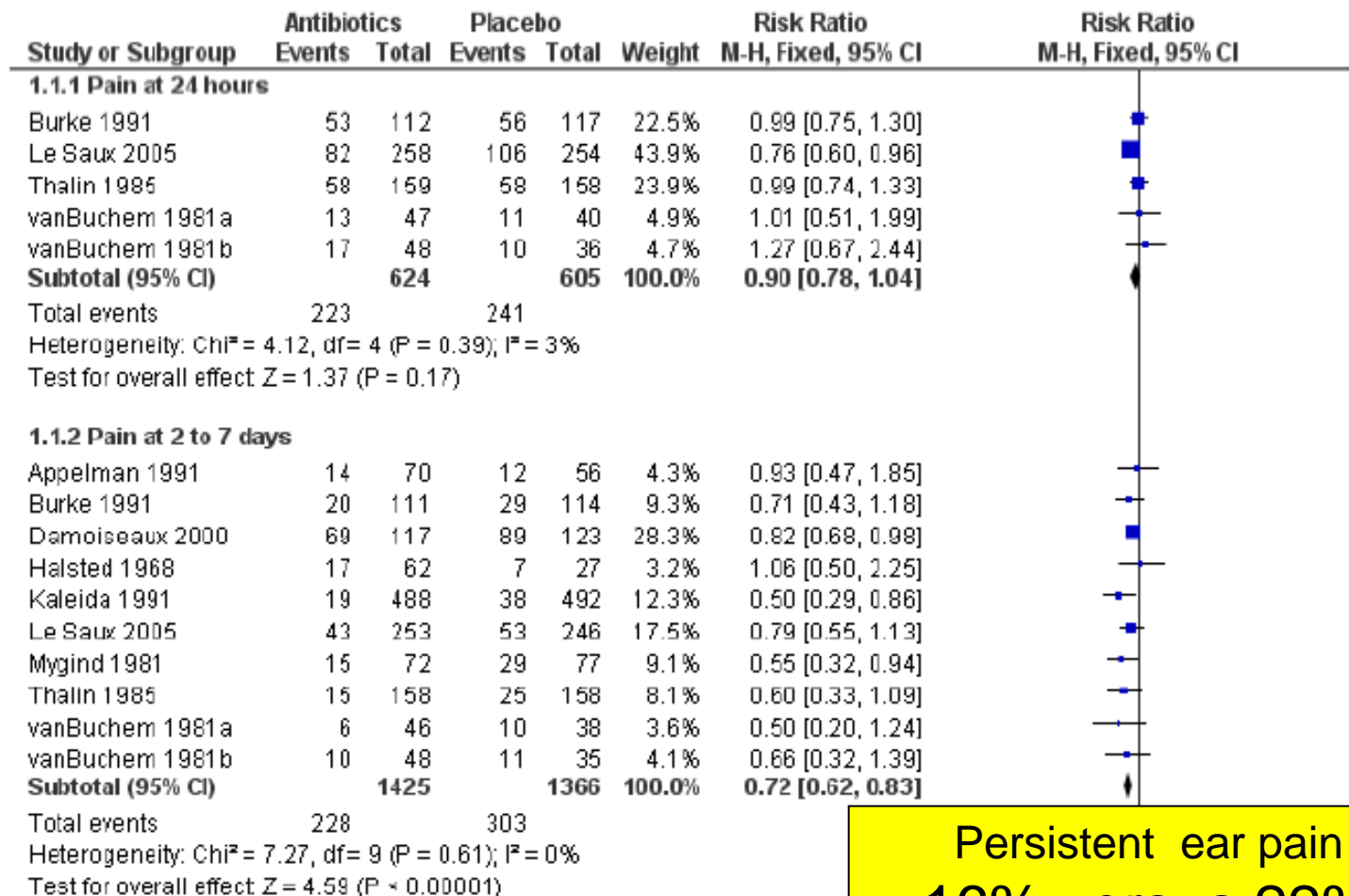
Clinical success
53% versus 65%

Coker et al, 2010, JAMA

Cochrane Review, Australia

1 – Antibiotic versus placebo

1.1 Pain

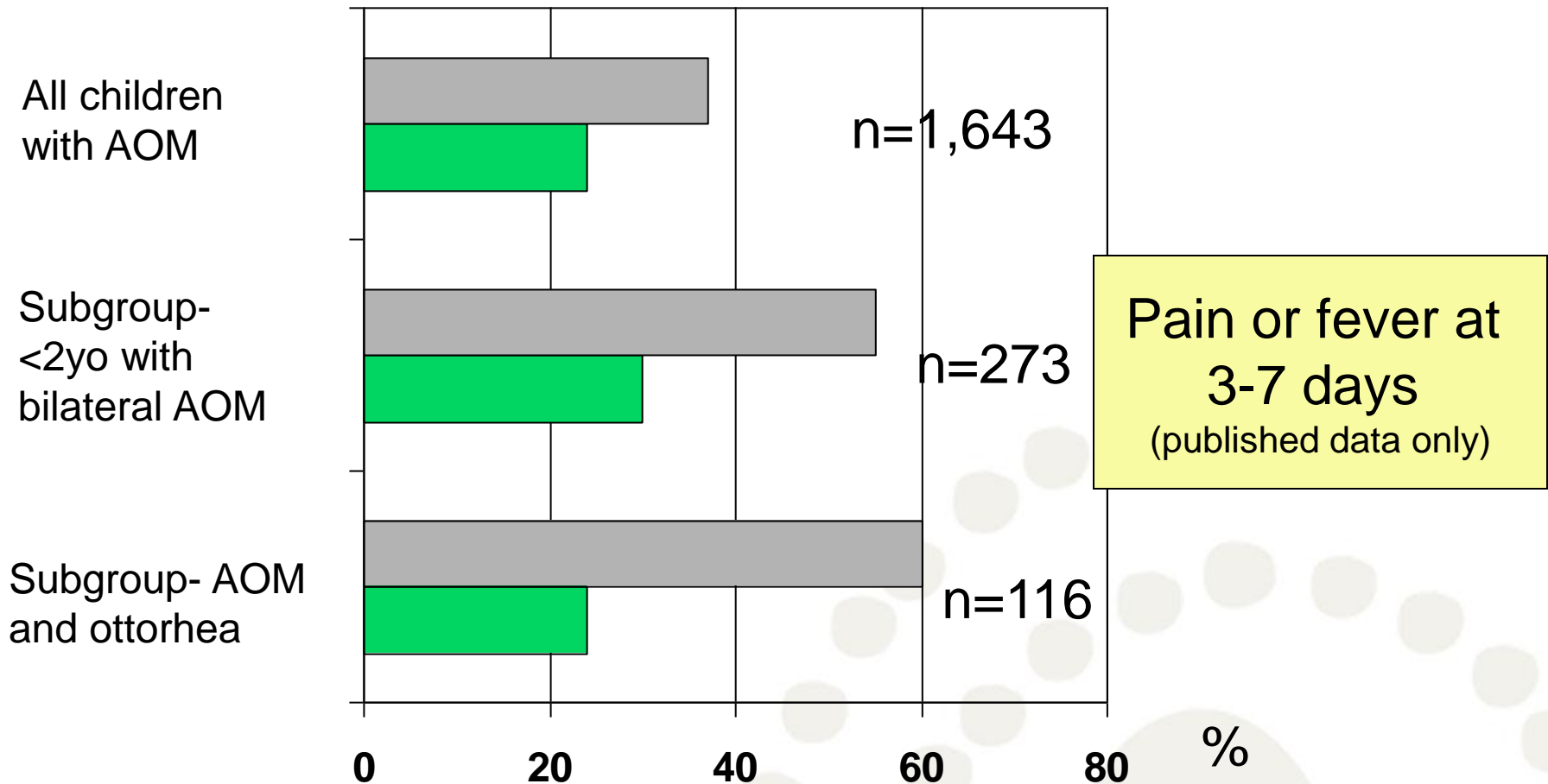


Persistent ear pain
 16% versus 22%

0,001 0,1 1 10 1000
 Antibiotics better Placebo better

Antibiotics for AOM- IP Data

Antibiotics vs placebo



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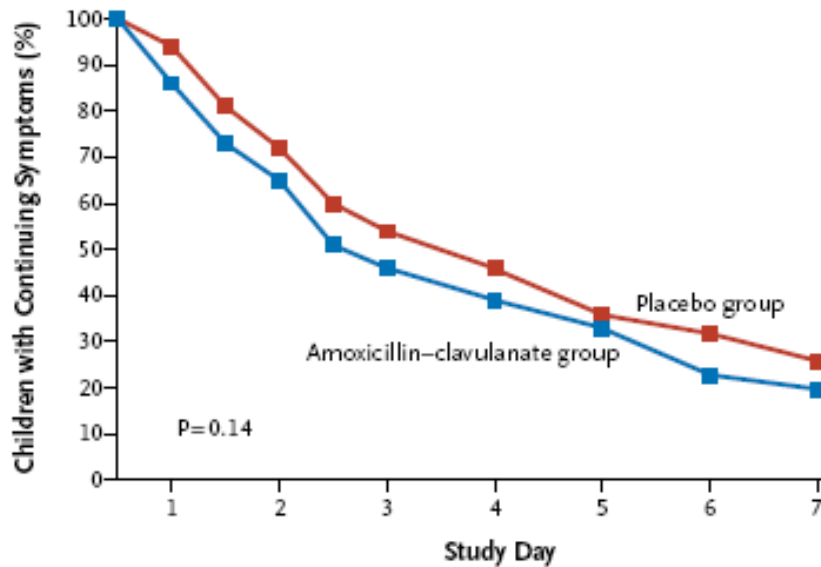
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Treatment of Acute Otitis Media in Children under 2 Years of Age

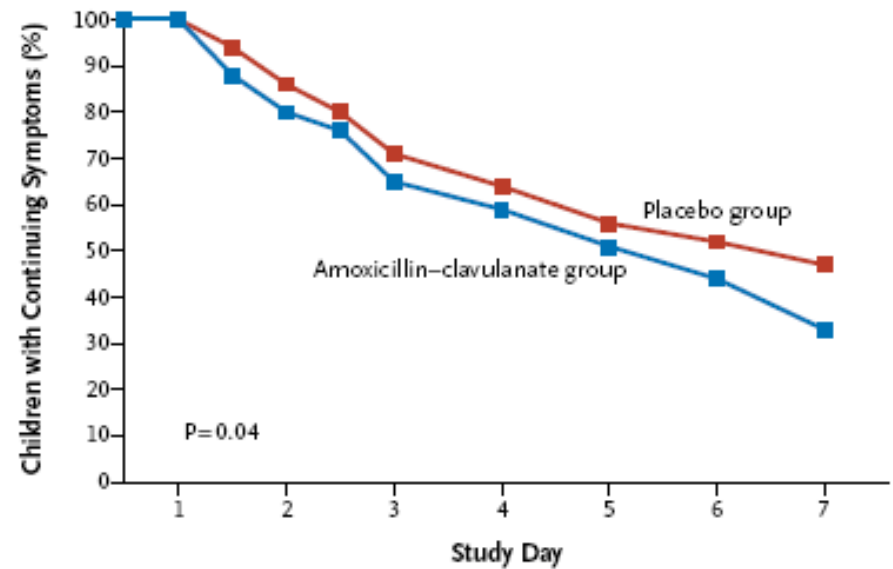
Alejandro Hoberman, M.D., Jack L. Paradise, M.D., Howard E. Rockette, Ph.D., Nader Shaikh, M.D., M.P.H., Ellen R. Wald, M.D., Diana H. Kearney, R.N., C.C.R.C., D. Kathleen Colborn, B.S., Marcia Kurs-Lasky, M.S., Sonika Bhatnagar, M.D., M.P.H., Mary Ann Haralam, C.R.N.P., Lisa M. Zoffel, C.R.N.P., Carly Jenkins, R.N., Marcia A. Pope, R.N., Tracy L. Balentine, R.N., and Karen A. Barbadora, M.T.

Time to minimal symptoms

A First Recording of AOM-SOS Score of 0 or 1



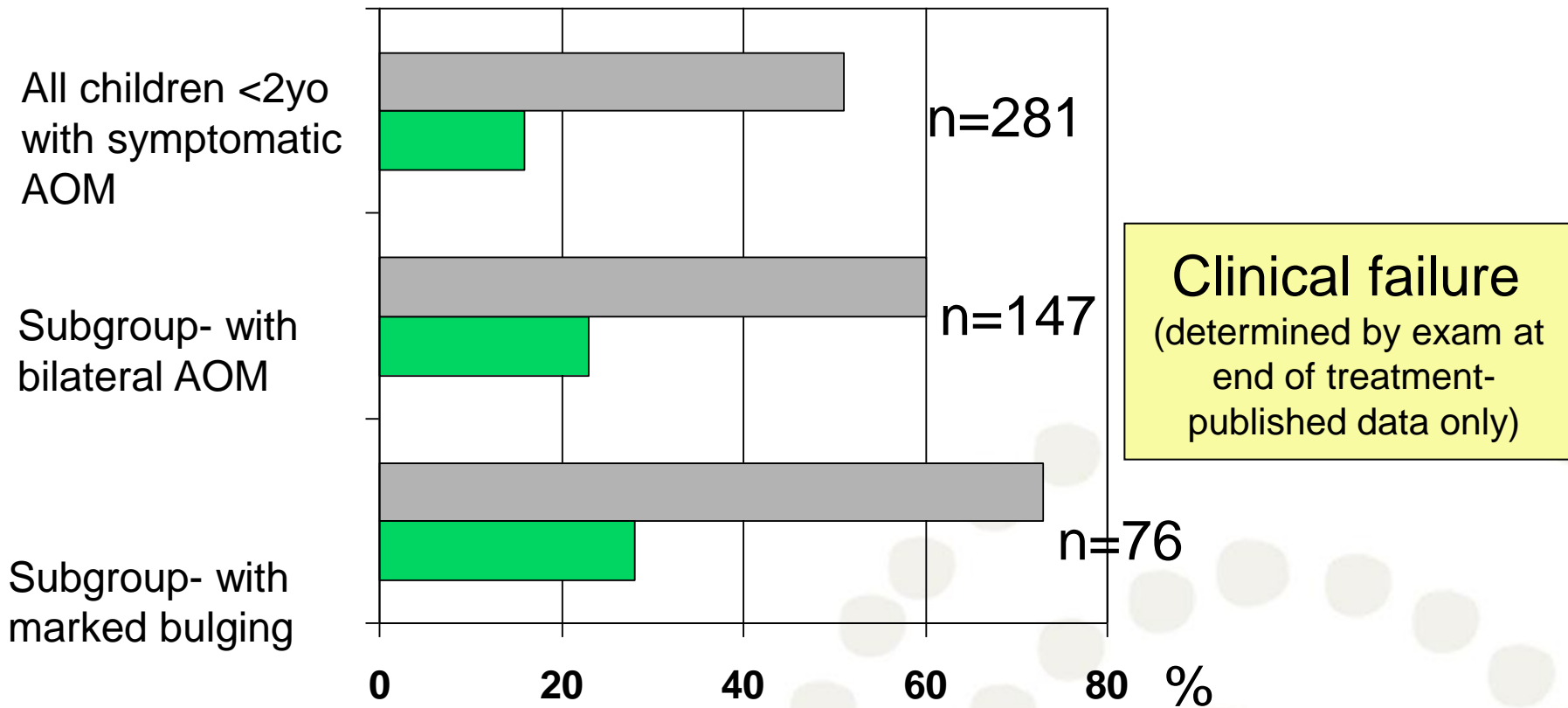
B Second Recording of AOM-SOS Score of 0 or 1



Hoberman et al, 2011, NEJM

Antibiotics for AOM

Amoxicillin clavulanate 90mg/kg for 10d vs placebo



Hoberman et al, 2011, NEJM

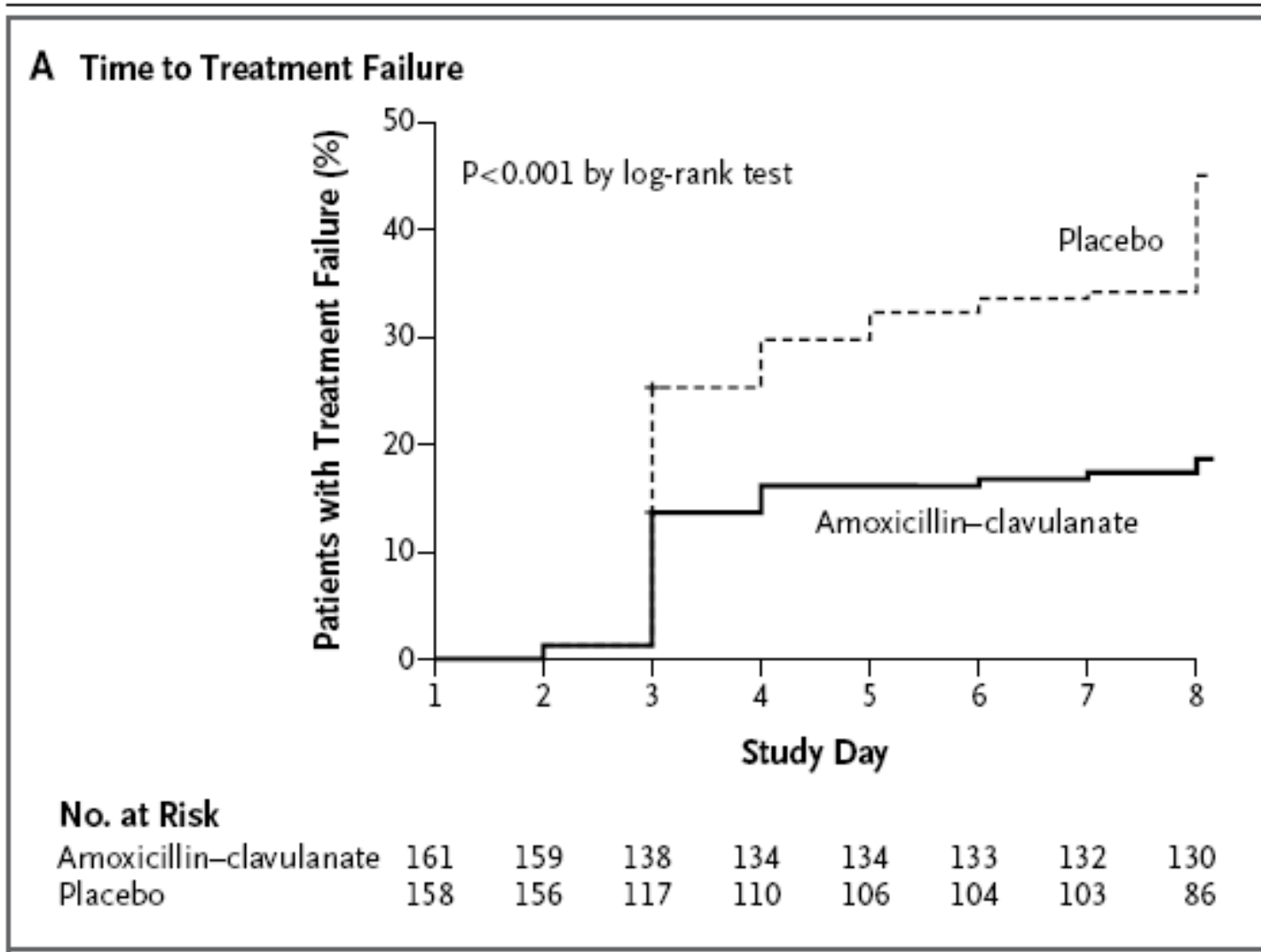
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ORIGINAL ARTICLE

A Placebo-Controlled Trial of Antimicrobial Treatment for Acute Otitis Media

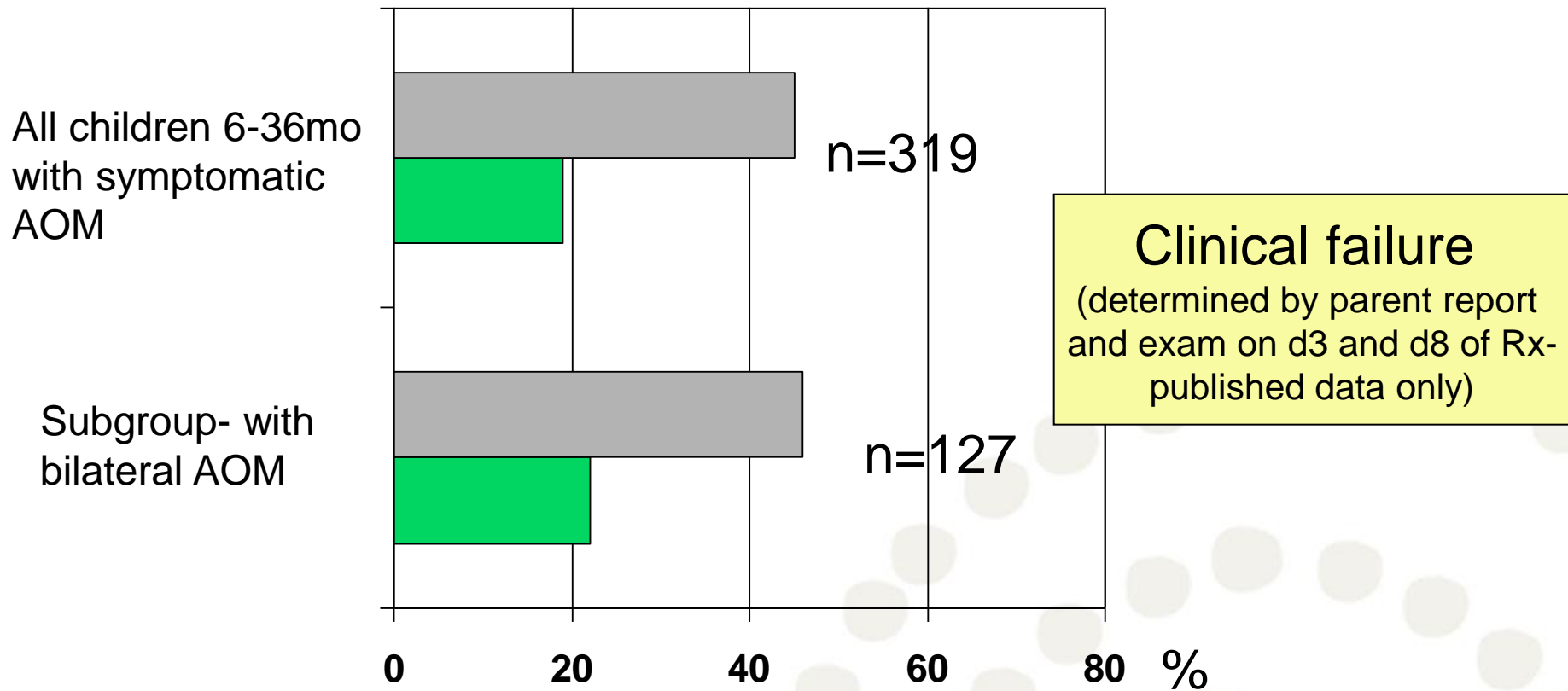
Paula A. Tähtinen, M.D., Miia K. Laine, M.D., Pentti Huovinen, M.D., Ph.D., Jari Jalava, Ph.D., Olli Ruuskanen, M.D., Ph.D., and Aino Ruohola, M.D., Ph.D.

Time to treatment failure



Antibiotics for AOM

Amoxicillin clavulanate 40mg/kg for 7d vs placebo



Tahtinen et al, 2011, NEJM

The next question.....

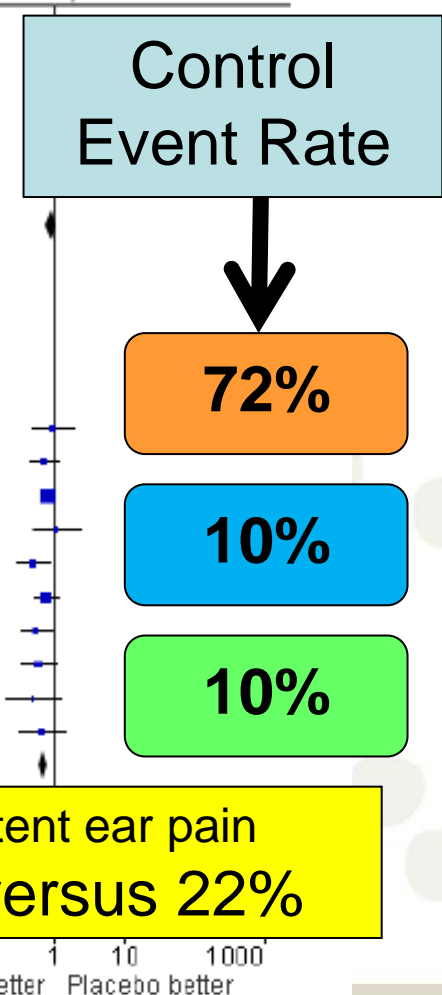
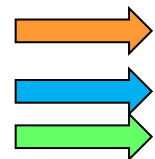
Among young children with a clinical diagnosis of AOM, does scheduling a review appointment (compared with review on demand), reduce the risk of persistent symptoms or perforation of TM at 7-14 days?

Cochrane Review, Australia

1 – Antibiotic versus placebo

1.1 Pain

Study or Subgroup	Antibiotics		Placebo		Weight	Risk Ratio	Risk Ratio
	Events	Total	Events	Total		M-H, Fixed, 95% CI	M-H, Fixed, 95% CI
1.1.1 Pain at 24 hours							
Burke 1991	53	112	56	117	22.5%	0.99 [0.75, 1.30]	
Le Saux 2005	82	258	106	254	43.9%	0.76 [0.60, 0.96]	
Thalin 1985	58	159	58	158	23.9%	0.99 [0.74, 1.33]	
vanBuchem 1981a	13	47	11	40	4.9%	1.01 [0.51, 1.99]	
vanBuchem 1981b	17	48	10	36	4.7%	1.27 [0.67, 2.44]	
Subtotal (95% CI)		624		605	100.0%	0.90 [0.78, 1.04]	
Total events	223		241				
Heterogeneity: Chi ² = 4.12, df = 4 (P = 0.39); I ² = 3%							
Test for overall effect Z = 1.37 (P = 0.17)							
1.1.2 Pain at 2 to 7 days							
Appelman 1991	14	70	12	56	4.3%	0.93 [0.47, 1.85]	
Burke 1991	20	111	29	114	9.3%	0.71 [0.43, 1.18]	
Damoiseaux 2000	69	117	89	123	28.3%	0.82 [0.68, 0.98]	
Halsted 1968	17	62	7	27	3.2%	1.06 [0.50, 2.25]	
Kaleida 1991	19	488	38	492	12.3%	0.50 [0.29, 0.86]	
Le Saux 2005	43	253	53	246	17.5%	0.79 [0.55, 1.13]	
Mygind 1981	15	72	29	77	9.1%	0.55 [0.32, 0.94]	
Thalin 1985	15	158	25	158	8.1%	0.60 [0.33, 1.09]	
vanBuchem 1981a	6	46	10	38	3.6%	0.50 [0.20, 1.24]	
vanBuchem 1981b	10	48	11	35	4.1%	0.66 [0.32, 1.39]	
Subtotal (95% CI)		1425		1366	100.0%	0.72 [0.62, 0.83]	
Total events	228		303				
Heterogeneity: Chi ² = 7.27, df = 9 (P = 0.61); I ² = 0%							
Test for overall effect Z = 4.59 (P < 0.00001)							



Sanders et al, 2012.

The answer.....

- Question not directly addressed in RCTs.
- However, in RCTs that report both symptoms and otoscopic signs, the results are often different.
- Clinical review of child appears to be associated with much higher rate of clinical failure and likelihood of additional antibiotic prescription.
- Until better evidence is available, it may be reasonable not to schedule a review but ask parents to return if: i) pain gets worse or symptoms persist for 7 days; or ii) TM perforation occurs. For AOMwIP, treat with antibiotics, schedule review, and prepare for long-term antibiotics.

Thank you

To all the families who have participated in the Menzies research studies over the past 25 years.



For more information.....

<http://www.healthinonet.ecu.edu.au/>