PAIRWISE COMPARISONS

Phenytoin (PHT) versus phenobarbital (PB). PB was more effective than PHT [0.8 (95% CI: 0.69-0.88) versus 0.53 (95% CI: 0.39-0.67), p = 0.002254324].

Study	Proportion	95%-CI					
PHT							
Brevoord et al, 2005	0.30	[0.19; 0.42]	-	-			
Agarwal et al, 2007	0.84	[0.71; 0.93]				-	_
Tiamkao & Sawanyawisuth, 2009	0.46	[0.29; 0.63]		1			
Alvarez et al, 2011	0.59	[0.46; 0.70]		_	1	-	
Ismail et al, 2012	0.26	[0.13; 0.44]					
Tiamkao et al, 2013	0.22	[0.10; 0.38]	-				
Chitsaz et al, 2013	0.60	[0.32; 0.84]			1		
Chakravarhi et al, 2015	0.68	[0.45; 0.86]		_	-		
Mundlarmuri et al, 2015	0.68	[0.53; 0.80]			1	_	
Gujjar et al, 2017	0.70	[0.51; 0.85]				+	
Random effects model	0.53	[0.39; 0.67]		-			
Heterogeneity: I ² = 85% [75%; 91%]							
PB	0.77	10.50.0001					
Malamiri et al, 2012	0.77	[0.58; 0.90]					
Su et al, 2016	0.81	[0.65; 0.92]					_
Lee et al, 2016	1.00	[0.69; 1.00]					
Random effects model	0.80	[0.69; 0.88]					
Heterogeneity: $I^2 = 0\% [0\%; 87\%]$	- 0.22 df - 1./-	< 0.01)		$\overline{}$			\neg
Test for subgroup differences: χ_1^2	= 9.33, at = 1 (p ·	< 0.01)	0.2	0.4	0.6	0.8	4
		,	0.2	0.4	0.0	0.6	

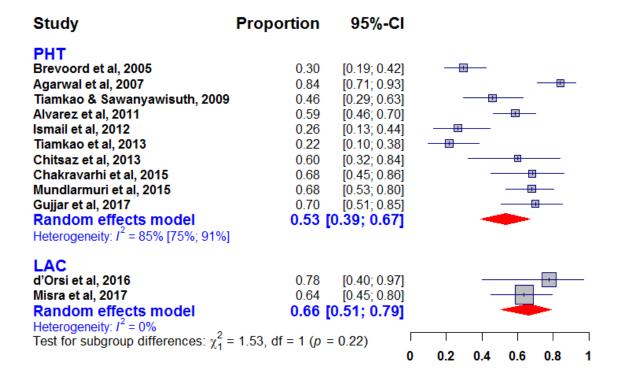
Phenytoin (PHT) versus valproate (VPA). VPA was more effective than PHT [0.71 (95% CI: 0.61-0.79) versus 0.53 (95% CI: 0.39-0.67), p = 0.04339366].

Study	Proportion	95%-CI					
PHT							
Brevoord et al, 2005	0.30	[0.19; 0.42]	_	-			
Agarwal et al, 2007	0.84	[0.71; 0.93]			_	-	_
Tiamkao & Sawanyawisuth, 2009	0.46	[0.29; 0.63]		-	-		
Alvarez et al, 2011	0.59	[0.46; 0.70]	_	_ =	-	-	
Ismail et al, 2012	0.26	[0.13; 0.44]		+			
Tiamkao et al, 2013	0.22						
Chitsaz et al, 2013	0.60	[0.32; 0.84]				_	
Chakravarhi et al, 2015	0.68			_			
Mundlarmuri et al, 2015	0.68						
Gujjar et al, 2017	0.70					+	
Random effects model	0.53	[0.39; 0.67]		-			
Heterogeneity: $I^2 = 85\%$ [75%; 91%]							
VPA							
Agarwal et al, 2007	0.88	[0.76; 0.95]					-
Olsen et al, 2007	0.73	[0.56; 0.86]				-	
Yu et al, 2007	1.00	[0.78; 1.00]					-1
Tiamkao & Sawanyawisuth, 2009	0.75	[0.43; 0.95]		_			_
Alvarez et al, 2011	0.75	[0.62; 0.85]		_		-	
Chen et al, 2011	0.50				•	_	_
Malamiri et al, 2012	0.90	[0.73; 0.98]			_		-
Tiamkao et al, 2013	0.47	[]		1		_	
Chitsaz et al, 2013	0.73			_			_
Mundlarmuri et al, 2015	0.68				, —		
Su et al, 2016	0.44			-	 	_	
Misra et al, 2017	0.70					-	
Random effects model	0.71	[0.61; 0.79]			•		
Heterogeneity: $I^2 = 69\%$ [43%; 83%]							
Test for subgroup differences: χ_1^2	= 4.08, df = 1 (p)		ı			'	-
			0 0.2	0.4	0.6	8.0	1

Phenytoin (**PHT**) versus levetiracetam (**LEV**). There were no statistically significant differences in effectiveness between PHT and LEV [0.53 (95% CI: 0.39-0.67) versus 0.62 (95% CI: 0.5-0.73), p = 0.3537387].

Study	Proportion	95%-CI	
PHT			
Brevoord et al, 2005	0.30	[0.19; 0.42]	
Agarwal et al, 2007	0.84	[0.71; 0.93]	
Tiamkao & Sawanyawisuth, 2009	0.46	[0.29; 0.63]	- • -
Alvarez et al, 2011	0.59	[0.46; 0.70]	
Ismail et al, 2012	0.26	[0.13; 0.44]	
Tiamkao et al, 2013	0.22	[0.10; 0.38]	
Chitsaz et al, 2013	0.60		
Chakravarhi et al, 2015	0.68	[0.45; 0.86]	
Mundlarmuri et al, 2015	0.68	[0.53; 0.80]	
Gujjar et al, 2017	0.70	[0.51; 0.85]	
Random effects model		[0.39; 0.67]	
Heterogeneity: $I^2 = 85\%$ [75%; 91%]			
LEV			
LEV	0.05	[0.55, 0.00]	
Knake et al, 2008	0.85	[0.55; 0.98]	
Berning et al, 2009	0.36	[0.19; 0.56]	
Eue et al, 2009	0.48 0.62	[0.31; 0.66]	
Gámez-Leyva et al, 2009	0.62	[0.35; 0.85] [0.38; 0.65]	
Alvarez et al, 2011 Standish et al, 2011	1.00	[0.66; 1.00]	
Atmaca et al, 2015	0.70	[0.35; 0.93]	
Chakravarhi et al, 2015	0.70	[0.36; 0.79]	
Mundlarmuri et al, 2015	0.78	[0.64; 0.88]	
Lee et al, 2016	0.70	[0.10; 0.65]	
Gujjar et al, 2017	0.82	[0.60: 0.95]	
Random effects model		[0.50; 0.73]	
Heterogeneity: $I^2 = 66\%$ [36%; 82%]	0.02	[0.00, 0.10]	
Test for subgroup differences: χ_1	= 0.86 df = 1 (n	= 0.35)	
rest for subgroup amoronous. χη	5.50, di 1 (p	0.00)	0.2 0.4 0.6 0.8 1
		•	

Phenytoin (PHT) versus lacosamide (LAC). There were no statistically significant differences in effectiveness between PHT and LAC [0.53 (95% CI: 0.39-0.67) versus 0.66 (95% CI: 0.51-0.79), p = 0.2161124].



<u>Phenobarbital (PB) versus valproate (VPA).</u> There were no statistically significant differences in effectiveness between PB and VPA [0.8 (95% CI: 0.69-0.88) versus 0.71 (95% CI: 0.61-0.79), p = 0.1604479].

Study	Proportion	95%-CI					
PB							
Malamiri et al, 2012	0.77	[0.58; 0.90]				-	-
Su et al, 2016	0.81	[0.65; 0.92]			_	4	_
Lee et al, 2016	1.00						-
Random effects model	0.80	[0.69; 0.88]				-	
Heterogeneity: $I^2 = 0\% [0\%; 87\%]$,					
VPA							
Agarwal et al, 2007	0.88	[0.76; 0.95]					-
Olsen et al, 2007	0.73	[0.56; 0.86]					•
Yu et al, 2007	1.00	[0.78; 1.00]					====
Tiamkao & Sawanyawisuth, 2009		[0.43; 0.95]		_		-	_
Alvarez et al, 2011	0.75				_	-	
Chen et al, 2011	0.50			—		. —	
Malamiri et al, 2012	0.90	. , .					+
Tiamkao et al, 2013	0.47	[0.23; 0.72]		1	 	_	
Chitsaz et al, 2013	0.73			_			_
Mundlarmuri et al, 2015	0.68	. , .			-	_	
Su et al, 2016	0.44			-			
Misra et al, 2017	0.70				—	1	
Random effects model	0.71	[0.61; 0.79]			-		
Heterogeneity: $I^2 = 69\%$ [43%; 83%]	1	• '					
Test for subgroup differences: χ_1^2	= 1.97, df = 1 (p	= 0.16)					
	,	´ 0	0.2	0.4	0.6	8.0	1

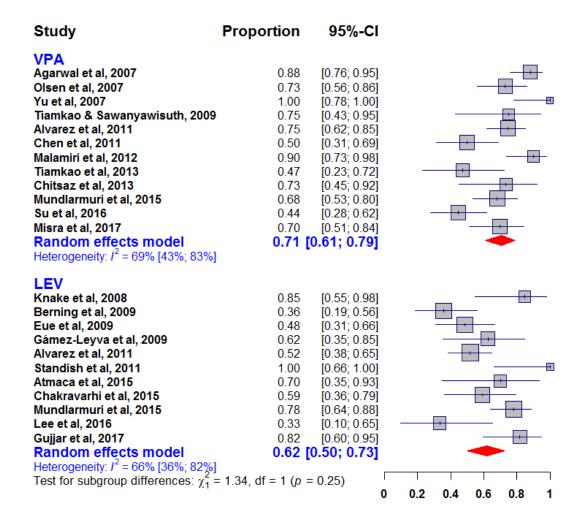
Phenobarbital (PB) versus levetiracetam (LEV). PB was more effective than LEV [0.8 (95% CI: 0.69-0.88) versus 0.62 (95% CI: 0.5-0.73, p = 0.01816672].

Study	Proportion	95%-CI					
PB							
Malamiri et al, 2012	0.77	[0.58; 0.90]				-	
Su et al, 2016	0.81	[0.65; 0.92]			_	7,1	_
Lee et al, 2016	1.00	[0.69; 1.00]					-1
Random effects mode	I 0.80	[0.69; 0.88]				-	
Heterogeneity: $I^2 = 0\%$ [0%;	87%]	•					
LEV							
Knake et al, 2008	0.85	[0.55; 0.98]		_			
Berning et al, 2009	0.36	[0.19; 0.56]		_	_		
Eue et al, 2009	0.48	[0.31; 0.66]		-	_		
Gámez-Leyva et al, 2009	0.62	[0.35; 0.85]			_		
Alvarez et al, 2011	0.52	[0.38; 0.65]			1		
Standish et al, 2011	1.00	[0.66; 1.00]			_	_	
Atmaca et al, 2015	0.70	[0.35; 0.93]				-	
Chakravarhi et al, 2015	0.59	[0.36; 0.79]			1	_	
Mundlarmuri et al, 2015	0.78	[0.64; 0.88]		_	_	-	
Lee et al, 2016	0.33	[0.10; 0.65]		<u> </u>			
Gujjar et al, 2017	0.82	[0.60; 0.95]					
Random effects mode		[0.50; 0.73]				-	
Heterogeneity: $I^2 = 66\%$ [36%]		4 (0.00)					\neg
Test for subgroup difference	es: $\chi_1 = 5.58$, df =		0.0	٠,	0.0	0.0	
		0	0.2	0.4	0.6	8.0	1

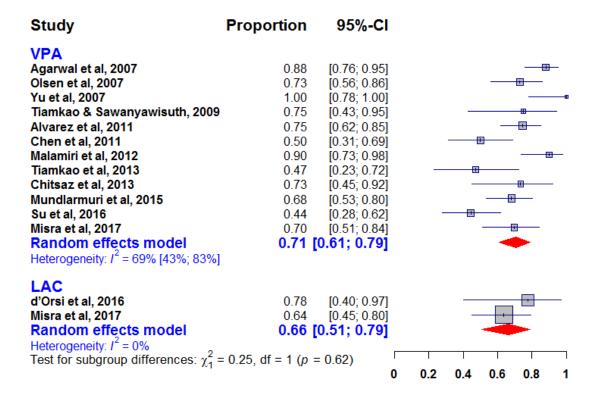
<u>Phenobarbital (PB) versus lacosamide (LAC).</u> There were no statistically significant differences in effectiveness between PB and VPA [0.8 (95% CI: 0.69-0.88) versus 0.66 (95% CI: 0.51-0.79), p = 0.1035499].

Study	Proportion	95%-CI					
PB							
Malamiri et al, 2012	0.77	[0.58; 0.90]				-	
Su et al, 2016	0.81	[0.65; 0.92]			_		_
Lee et al, 2016	1.00	[0.69; 1.00]					
Random effects model	0.80	[0.69; 0.88]				-	
Heterogeneity: $I^2 = 0\%$ [0%; 8	37%]	•					
LAC							
d'Orsi et al, 2016	0.78	[0.40; 0.97]				1	
Misra et al, 2017	0.64	[0.45; 0.80]		_	-		
Random effects model	0.66	[0.51; 0.79]					
Heterogeneity: $I^2 = 0\%$							
Test for subgroup difference	s: $\chi_1^2 = 2.65$, df =	1 (p = 0.10)					
	***	0	0.2	0.4	0.6	8.0	1

<u>Valproate (VPA) versus levetiracetam (LEV).</u> There were no statistically significant differences in effectiveness between VPA and LEV [0.71 (95% CI: 0.61-0.79) versus 0.62 (95% CI: 0.5-0.73), p = 0.247034].



<u>Valproate (VPA) versus lacosamide (LAC)</u>. There were no statistically significant differences in effectiveness between VPA and LAC [0.71 (95% CI: 0.61-0.79) versus 0.66 (95% CI: 0.51-0.79), p = 0.6170751].



<u>Levetiracetam (LEV) versus lacosamide (LAC).</u> There were no statistically significant differences in effectiveness between LEV and LAC [0.62 (95% CI: 0.5-0.73) versus 0.66 (95% CI: 0.51-0.79), p = 0.6467674].

Study	Proportion	95%-CI	
LEV			
Knake et al, 2008	0.85	[0.55; 0.98]	
Berning et al, 2009	0.36	[0.19; 0.56]	
Eue et al, 2009	0.48	[0.31; 0.66]	
Gámez-Leyva et al, 2009	0.62	[0.35; 0.85]	
Alvarez et al, 2011	0.52	[0.38; 0.65]	
Standish et al, 2011	1.00	[0.66; 1.00]	
Atmaca et al, 2015	0.70	[0.35; 0.93]	
Chakravarhi et al, 2015	0.59	[0.36; 0.79]	
Mundlarmuri et al, 2015	0.78	[0.64; 0.88]	
Lee et al, 2016	0.33	[0.10; 0.65]	
Gujjar et al, 2017	0.82	[0.60; 0.95]	
Random effects mode	l 0.62	[0.50; 0.73]	
Heterogeneity: $I^2 = 66\%$ [36%]	5; 82%]		
LAC			
d'Orsi et al, 2016	0.78	[0.40; 0.97]	
Misra et al, 2017	0.64	[0.45; 0.80]	-
Random effects mode	l 0.66	[0.51; 0.79]	
Heterogeneity: $I^2 = 0\%$		•	
Test for subgroup difference	es: $\chi_1^2 = 0.21$, df =	1 (p = 0.65)	
		0	0.2 0.4 0.6 0.8 1