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Industry actor communication practices in submissions on ENDS policy in Australia

Supplementary Material

Table S1: Consultation and submission inclusion criteria

Consultation	Led by a state, territory, or federal government or parliament in Australia
	Held between May 2017 and May 2023
	Submissions were publicly available
	Terms of reference included one or more of the following:
	electronic nicotine delivery system(s)
	ENDS
	electronic cigarette(s)
	e-cigarette(s)
	vape(s)
	vapo(u)ris(z)ed nicotine products
	vapo(u)ris(z)er(s)
	vapo(u)r device(s)
	vapo(u)r product(s)
	heated tobacco product(s)
	heat-not-burn
	smoke(-)free
	vaping
	vaper(s)
Submission	Submitted by:
	ENDS or tobacco manufacturer
	ENDS or tobacco retailer
	ENDS or tobacco manufacturer or retailer associations
	Organisation or individual that had at any point:
	- worked for the tobacco or ENDS industries
	- received monetary or non-monetary gratuities from the tobacco or
	ENDS industries (or any organisation funded by these industries)

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Code	Source
Practice	
Misuse of Evidence	Deductive ^a
Making unsupported factual assertions	Inductive
Promotion of weak evidence	Deductive ^a
Use of anecdotal evidence	Inductive
Citing studies or authors with a conflict of interest or industry funding	Deductive ^{bc}
Citing dubious sources	Deductive ^c
Presenting qualitative research as hypothesis-testing	Inductive
Presenting editorials or opinions as evidence	Inductive
Modelling or simulation studies	Inductive
Secondary citations	Inductive
Citing market research	Inductive
Other	Inductive
Evidential landscaping	Deductive ^{abd}
Excluding relevant evidence	Deductiveabd
Claiming there is more evidence to support a point than is cited	Deductive ^a
Presenting positive evidence only	Deductive ^a
Citing evidence for an irrelevant point	Deductive ^b
Promoting alternative evidence	Deductiveabd
Mimicked scientific critique	Deductiveabd
Adopting the litigation (vs scientific) model	Deductiveabd
Inaccurately reporting funding or affiliations	Inductive
Stating support for evidence-based approaches	Deductive ^a
Claiming authorities are ignoring evidence	Inductive
Seeking methodological perfection	Deductiveabd
Lack of rigour	Deductiveabd
Stating lack of evidence	Deductive ^a
Claiming studies were flawed without specifying how	Inductive
Misleading citation of evidence	Deductiveabd
Misquoting	Deductive ^{abd}
Selective quoting	Deductiveabd
Misleading inferences	Inductive
Misinterpretation	Deductive ^{abd}
Denying evidence	Inductive
Misrepresentation of strong evidence	Deductive ^a
Logical fallacies, flawed arguments	Deductive
Bandwagon fallacy	Inductive
Appeal to hypocrisy	Inductive
Ad hominem or attribution of motives	Inductive
False equivalence	Deductive
Diversion	Inductive
Straw man	Deductive
Self-contradiction	Inductive
Arguments	Inductive
Denying the effectiveness of strategies	Deductive ^a
Making unsubstantiated claims about the adverse effects of ENDS control	Deductive
Increase or shift risk of problems	Deductive ^a
Will make it harder for people who are currently smoking to quit	Inductive
Will drive people back to smoking	Inductive
	Inductive
Benefits the tobacco or pharmaceutical industries Increase uptake of cigarettes	Inductive

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Black market	Deductive ^{bcf}
Increased risk of harm	Inductive
Encroachment on human/business rights, freedom of choice	Deductive ^g
Hardship for businesses	Deductive ^{af}
Other	Inductive
Excessive regulatory burden	Deductive ^a
Economy (negative impact)	Deductive ^{abcf}
Punishing smokers or ignoring the needs of smokers	Deductive ^f
People will be driven to purchase unregulated or dangerous ENDS	Inductive
Exacerbate social inequity	Inductive
Closure of businesses	Deductive ^a
Imposition on those using vaping "responsibly"	Deductive ^a
Job loss	Deductive ^{af}
Criminalising ENDS users or vendors	Deductivef
ENDS users will be financially disadvantaged	Inductive
Loss of tourism appeal	Deductive ^a
Promoting alternative approaches that favour vested interests	Deductive ^a
Targeted approaches	Deductive ^a
Responsible sales	Deductive ^a
Compulsory product safety standards	Inductive
Design factors	Deductive ^a
Education	Deductive ^a
Law enforcement	Deductive ^a
Treatment services or interventions	Deductive ^a
Other	Inductive
Retailers as experts (instead of medical/pharmaceutical professionals)	Inductive
Risk-proportionate regulation	Inductive
Industry self-regulation or co-regulation	Deductive ^a
Monitoring	Inductive
Advertising and marketing regulations	Inductive
Equivalent restrictions to combustible cigarettes	Inductive
Promoting taxation	Inductive
Promoting personal responsibility	Deductive ^a
Making unsubstantiated claims about the benefits of a consumer model	Inductive
Save lives or reduce harm	Inductive
Reduce smoking or cigarette sales	Inductive
Economy, small business	Inductive
Drive down organised crime	Inductive
Increase quality or safety of devices	Inductive
Job creation	Inductive
Save users of ENDS money	Inductive
Reduce illicit tobacco use	Inductive
Better for tobacco control than currently supported measures	Inductive
De-criminalise users of ENDS	Inductive
Making unsubstantiated claims about the ineffectiveness of policy proposals	Deductive ^f
Other	Inductive
People will just buy from overseas or the internet	Inductive
Young people will do what they want either way	Inductive
Control will make ENDS more appealing to youth	Inductive
Emphasising complexity	Deductive ^a
Stafford et al. (2020): ^b Hatchard et al. (2014): ^c Evans Reeves et al. (2014): ^d Illuca	

^aStafford et al. (2020); ^bHatchard et al. (2014); ^cEvans-Reeves et al. (2014); ^dUlucanlar et al. (2014); ^eWaa et al. (2017); ^fUlucanlar et al. (2016); ^gHiilamo et al. (2015).

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Table S3: Communication practices and industry arguments identified in submissions, stratified by industry actor type

	Submitter type							
Code	Retailers	Advocacy orgs.	Manufacturers	Industry/trade	Legal/consulting	Unspecified	Other	
	<i>n</i> = 85	n=32	<i>n</i> = 23	assoc.	firms, individuals	n = 8	<i>n</i> = 6	
				n = 22	n=20			
Practice	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Misuse of Evidence	81 (95)	32 (100)	23 (100)	21 (95)	20 (100)	4 (50)	6 (100)	
Making unsupported factual assertions	75 (88)	32 (100)	23 (100)	20 (91)	20 (100)	3 (38)	6 (100)	
Promotion of weak evidence	64 (75)	29 (91)	18 (78)	15 (68)	20 (100)	2 (25)	5 (83)	
Use of anecdotal evidence	57 (67)	14 (44)	5 (22)	8 (36)	9 (45)	2 (25)	4 (67)	
Citing studies or authors with a conflict of interest or industry funding	14 (16)	28 (88)	18 (78)	14 (64)	19 (95)	0 (0)	1 (17)	
Citing dubious sources	9 (11)	20 (63)	15 (65)	5 (23)	14 (70)	0 (0)	2 (33)	
Presenting qualitative research as hypothesis-	0 (0)	9 (28)	4 (17)	0 (0)	4 (20)	0 (0)	0 (0)	
testing								
Presenting editorials or opinions as evidence	0 (0)	4 (13)	4 (17)	1 (5)	6 (30)	0 (0)	0 (0)	
Modelling or simulation studies	0 (0)	6 (19)	4 (17)	1 (5)	4 (20)	0 (0)	0 (0)	
Secondary citations	1(1)	3 (9)	5 (22)	1 (5)	4 (20)	0 (0)	0 (0)	
Citing market research	0 (0)	0 (0)	6 (26)	0 (0)	0 (0)	0 (0)	0 (0)	
Other	0 (0)	1 (3)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	
Evidential landscaping	36 (42)	26 (81)	19 (83)	13 (59)	15 (75)	1 (13)	3 (50)	
Excluding relevant evidence	30 (35)	21 (66)	18 (78)	11 (50)	13 (65)	1 (13)	3 (50)	
Claiming there is more evidence to support a point than is cited	30 (35)	20 (63)	18 (78)	11 (50)	12 (60)	1 (13)	3 (50)	
Presenting positive evidence only	1(1)	3 (9)	1 (4)	0 (0)	2 (10)	0 (0)	0 (0)	
Citing evidence for an irrelevant point	3 (4)	16 (50)	11 (48)	3 (14)	5 (25)	0 (0)	0 (0)	
Promoting alternative evidence	4 (5)	10 (31)	7 (30)	1 (5)	3 (15)	0 (0)	0 (0)	
Mimicked scientific critique	22 (26)	27 (84)	20 (87)	15 (68)	15 (75)	0 (0)	3 (50)	
Adopting the litigation (vs scientific) model	6 (7)	22 (69)	17 (74)	11 (50)	14 (70)	0 (0)	1 (17)	
Inaccurately reporting funding or affiliations	0 (0)	18 (56)	3 (13)	2 (9)	8 (40)	0 (0)	0 (0)	
Stating support for evidence-based approaches	8 (9)	19 (59)	16 (70)	7 (32)	7 (35)	0 (0)	1 (17)	
Claiming authorities are ignoring evidence	17 (20)	11 (34)	5 (22)	3 (14)	7 (35)	0 (0)	0 (0)	
Seeking methodological perfection	0 (0)	7 (22)	3 (13)	0 (0)	5 (25)	0 (0)	0 (0)	
Lack of rigour	0 (0)	3 (9)	0 (0)	0 (0)	3 (15)	0 (0)	1 (17)	
Stating lack of evidence	1(1)	3 (9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	

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Claiming studies were flawed without specifying	0 (0)	3 (9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)
how							
Misleading citation of evidence	16 (19)	28 (88)	16 (70)	14 (64)	17 (85)	1 (13)	2 (33)
Misquoting	14 (16)	25 (78)	13 (57)	10 (45)	11 (55)	1 (13)	1 (17)
Selective quoting	7 (8)	21 (66)	13 (57)	8 (36)	12 (60)	0 (0)	1 (17)
Misleading inferences	2 (2)	15 (47)	13 (57)	5 (23)	12 (60)	0 (0)	2 (33)
Misinterpretation	2 (2)	8 (25)	3 (13)	1 (5)	8 (40)	0 (0)	0 (0)
Denying evidence	18 (21)	19 (59)	11 (48)	4 (18)	10 (50)	2 (25)	1 (17)
Misrepresentation of strong evidence	0 (0)	3 (9)	2 (9)	0(0)	1 (5)	0(0)	0 (0)
Logical fallacies, flawed arguments	70 (82)	31 (97)	21 (91)	20 (91)	19 (95)	3 (38)	6 (100)
Bandwagon fallacy	49 (58)	24 (75)	18 (78)	17 (77)	16 (80)	1 (13)	3 (50)
Appeal to hypocrisy	33 (39)	22 (69)	7 (30)	9 (41)	14 (70)	0 (0)	2 (33)
Ad hominem or attribution of motives	24 (28)	18 (56)	3 (13)	2(9)	14 (70)	2 (25)	2 (33)
False equivalence	18 (21)	24 (75)	9 (39)	3 (14)	8 (40)	1 (13)	3 (50)
Diversion	22 (26)	5 (16)	7 (30)	6 (27)	3 (15)	2 (25)	4 (67)
Straw man	14 (16)	14 (44)	3 (13)	0(0)	8 (40)	1 (13)	0 (0)
Self-contradiction	3 (4)	10 (31)	1 (4)	0 (0)	6 (30)	0 (0)	1 (17)
Arguments							
Denying the effectiveness of strategies	78 (92)	32 (100)	23 (100)	22 (100)	20 (100)	4 (50)	6 (100)
Making unsubstantiated claims about the adverse	70 (82)	32 (100)	20 (87)	19 (86)	14 (70)	3 (38)	6 (100)
effects of ENDS control							
Increase or shift risk of problems	40 (47)	24 (75)	12 (52)	8 (36)	11 (55)	3 (38)	4 (67)
Will make it harder for people who are currently	26 (31)	17 (53)	11 (48)	6 (27)	5 (25)	3 (38)	3 (50)
smoking to quit							
Will drive people back to smoking	20 (24)	12 (38)	7 (30)	0 (0)	2 (10)	2 (25)	3 (50)
Benefits the tobacco or pharmaceutical industries	7 (8)	11 (34)	1 (4)	2 (9)	6 (30)	1 (13)	0 (0)
Increase uptake of cigarettes	3 (4)	2 (6)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)
Other	2 (2)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	2 (33)
Black market	37 (44)	15 (47)	9 (39)	13 (59)	5 (25)	1 (13)	5 (83)
Increased risk of harm	34 (40)	22 (69)	10 (43)	7 (32)	7 (35)	1 (13)	3 (50)
Encroachment on human/business rights, freedom	21 (25)	20 (63)	8 (35)	6 (27)	3 (15)	2 (25)	2 (33)
of choice	~ /	· · ·		× /		. /	
Hardship for businesses	25 (29)	4 (13)	2 (9)	6 (27)	0 (0)	0 (0)	3 (50)
Other	16 (19)	8 (25)	5 (22)	5 (23)	5 (25)	1 (13)	3 (50)
Excessive regulatory burden	15 (18)	9 (28)	7 (30)	4 (18)	4 (20)	0(0)	1 (17)

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	17 (20)				0 (10)	0 (0)	0 (22)
Economy (negative impact)	17 (20)	5 (16)	3 (13)	7 (32)	2 (10)	0 (0)	2 (33)
Punishing smokers or ignoring the needs of	4 (5)	12 (38)	6 (26)	2 (9)	4 (20)	0 (0)	0 (0)
smokers		6 (1 Q)				0 (0)	
People will be driven to purchase unregulated or	9 (11)	6 (19)	1 (4)	3 (14)	1 (5)	0 (0)	2 (33)
dangerous ENDS						_ ····	
Exacerbate social inequity	2 (2)	7 (22)	2 (9)	2 (9)	3 (15)	0 (0)	3 (50)
Closure of businesses	12 (14)	3 (9)	1 (4)	0 (0)	0 (0)	0 (0)	2 (33)
Imposition on those using vaping "responsibly"	6 (7)	3 (9)	1 (4)	2 (9)	1 (5)	0 (0)	0 (0)
Job loss	10 (12)	1 (3)	0 (0)	1 (5)	1 (5)	0 (0)	1 (17)
Criminalising ENDS users or vendors	1(1)	7 (22)	1 (4)	2 (9)	0 (0)	0 (0)	0 (0)
ENDS users will be financially disadvantaged	4 (5)	3 (9)	0 (0)	1 (5)	0 (0)	1 (13)	2 (33)
Loss of tourism appeal	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Promoting alternative approaches that favour vested	67 (79)	30 (94)	23 (100)	19 (86)	16 (80)	4 (50)	5 (83)
interests	~ /	. /		. /			. /
Targeted approaches	47 (55)	17 (53)	21 (91)	14 (64)	13 (65)	3 (38)	4 (67)
Responsible sales	37 (44)	10 (31)	11 (48)	8 (36)	10 (50)	3 (38)	2 (33)
Compulsory product safety standards	19 (22)	12 (38)	20 (87)	8 (36)	9 (45)	1 (13)	1 (17)
Design factors	9 (11)	5 (16)	13 (57)	2 (9)	4 (20)	1 (13)	1 (17)
Education	8 (9)	7 (22)	6 (26)	3 (14)	3 (15)	0(0)	1 (17)
Law enforcement	10 (12)	4 (13)	7 (30)	3 (14)	1 (5)	0 (0)	3 (50)
Treatment services or interventions	0 (0)	0(0)	1 (4)	0(0)	0 (0)	0 (0)	0 (0)
Other	41 (48)	18 (56)	17 (74)	13 (59)	10 (50)	2 (25)	4 (67)
Retailers as experts (instead of	35 (41)	6 (19)	2 (9)	7 (32)	1 (5)	2 (25)	1 (17)
medical/pharmaceutical professionals)	~ /	× /		× /	~ /	~ /	× /
Risk-proportionate regulation	8 (9)	18 (56)	13 (57)	4 (18)	8 (40)	0 (0)	0 (0)
Industry self-regulation or co-regulation	19 (22)	5 (16)	15 (65)	5 (23)	2 (10)	1 (13)	1 (17)
Monitoring	16 (19)	6 (19)	12 (52)	4 (18)	5 (25)	1 (13)	1(17)
Advertising and marketing regulations	10 (12)	10 (31)	12 (52)	2 (9)	8 (40)	0 (0)	1 (17)
Equivalent restrictions to combustible cigarettes	8 (9)	7 (22)	3 (13)	$\frac{2}{2}(9)$	3 (15)	0(0)	0(0)
Promoting taxation	2(2)	2 (6)	0(0)	$\frac{1}{0}(0)$	2(10)	0(0)	0(0)
Promoting personal responsibility	$\frac{1}{1}(1)$	$\frac{2}{3}(9)$	0 (0)	0 (0)	0(0)	0(0)	0(0)
Making unsubstantiated claims about the benefits of a	44 (52)	25 (78)	17 (74)	17 (77)	9 (45)	1 (13)	3 (50)
consumer model	(52)	20 (10)	• (' ')	• ('')		. (15)	5 (50)
Save lives or reduce harm	20 (24)	16 (50)	10 (43)	10 (45)	6 (30)	1 (13)	1 (17)
Reduce smoking or cigarette sales	15 (18)	16 (50)	10 (43)	14 (64)	5 (25)	1(13) 1(13)	3(50)
Readed Smoking of ergulette sules		10 (50)	10 (75)	11(07)	5 (25)	1 (15)	5 (50)

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Economy, small business	23 (27)	10 (31)	1 (4)	12 (55)	2 (10)	0 (0)	2 (33)
Drive down organised crime	5 (6)	10 (31)	5 (22)	6 (27)	0 (0)	1 (13)	2 (33)
Increase quality or safety of devices	8 (9)	6 (19)	4 (17)	5 (23)	0 (0)	0 (0)	1 (17)
Job creation	11 (13)	2 (6)	0 (0)	2 (9)	1 (5)	0 (0)	0 (0)
Save users of ENDS money	0 (0)	2 (6)	1 (4)	2 (9)	1 (5)	0 (0)	1 (17)
Reduce illicit tobacco use	0 (0)	4 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Better for tobacco control than currently supported	1(1)	1 (3)	0 (0)	1 (5)	1 (5)	0 (0)	0 (0)
measures							
De-criminalise users of ENDS	1(1)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Making unsubstantiated claims about the	14 (16)	6 (19)	5 (22)	6 (27)	4 (20)	0 (0)	3 (50)
ineffectiveness of policy proposals							
Other	8 (9)	4 (13)	5 (22)	3 (14)	1 (5)	0 (0)	3 (50)
People will just buy from overseas or the internet	2 (2)	1 (3)	0 (0)	3 (14)	3 (15)	0 (0)	0 (0)
Young people will do what they want either way	3 (4)	2 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Control will make ENDS more appealing to youth	2 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Emphasising complexity	0 (0)	0 (0)	2 (9)	0 (0)	0 (0)	0 (0)	0 (0)

Note. Significance testing not conducted due to small samples sizes.